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ORIGINAL LECTURES.

LECTURES DELIVERED
IN THE
PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

LECTURE I.—ON LEUCOCYTES.

THE term practical physiology is not a new one to the students of University College. As, however, it is now likely to assume a greater importance than hitherto in Medical studies, it is desirable to define for ourselves, if not for others, the meaning we intend to assign to it.

By physiology we mean the study of the physical and chemical processes which are peculiar to living beings. There are, I think, two senses in which this study can be made practical. It may be practical either as regards its mode or purpose, and I think we are entitled to take the adjective in either sense. Thus, we may understand instruction in practical physiology either to mean instruction in the methods by which the subject is to be worked at, or in its application to practical ends. Good precedents may be found in support of either definition. Thus, "practical physics" has been lately taken by Professor Kohlrausch as the title of a book of exercises intended for students in the physical laboratory; while, on the other hand, practical mechanics is always understood to mean the application of mechanics to practical purposes. The weight of evidence is, I think, in favour of our understanding practical physiology in the former of these senses, and I am myself very strongly disposed to prefer taking it so; for I am well persuaded that, the more we regard physiology as a subject based from first to last on experiment, and the more closely we bring our methods of work into relation with those adopted in the laboratories of chemistry and physics, the better for us and for our science.

But there is another aspect of the question which has an immense importance, and which I desire never to lose sight of, so long as I am occupied in teaching physiology here. My object in life and yours is not to study physiology, but pathology. I work here, and I want you to work, for the purpose of applying your knowledge to Medicine. The methods of observing healthy functions that you learn here are all applicable to diseased functions, and are, indeed, the only methods by which our knowledge of disease can be advanced. I should, therefore, like, if it were possible, to make this course a course not merely of physiological exercises, but of physiology applied to Medicine. At present, this is not practicable, for there is so much for you to learn that is purely physiological, and, so to speak, elementary, and the time is so short, that if we were to go on to the application of our lessons, we should fail in learning either the one or the other. At a later period, it may be possible to include more pathology in the course than I can attempt to do this year. For the present, I will content myself with selecting my subjects of demonstration (for it is obvious that we cannot go through the whole of physiology in thirteen meetings) with reference to their practical bearing, and in teaching you, as far as I can, methods that may actually be used at the bedside. Bear in mind that, for the scientific study of Medicine, there are two work-places—the laboratory and the Hospital ward. Hitherto, in this country, the laboratory has been entirely neglected. Medical men have visited the laboratory for learning chemistry, but, generally speaking, both it and its methods have been forgotten from the moment that the student has turned his attention from the theoretical to the practical, so that the number of those who have either brought the products of the wards into the laboratory, or the methods of the laboratory into the wards, is very limited.

It is desirable to improve the existing means of Medical study in both these respects—first, by offering to young clinical workers the opportunity of laboratory research; and, secondly, by facilitating the use of our Hospital beds for purely scientific studies—that is, for studies having for their end the increase of Medical knowledge. In other words, we want to make the studies in the laboratory more conducive to practical ends, and the studies in the wards more available for scientific ends, than they have been hitherto; for it is only by this combination of the practical with the scientific, that Medicine, which is a scientific art as well as a practical science, can be advanced.

The purpose, therefore, of the present course is the study and observation of the mechanical and chemical changes which take place in living beings, and particularly those which occur in that one living being whose diseases it is our business to study, and, if possible, to prevent or cure.

Now, the simplest of the mechanical and chemical changes which constitute life are those which are seen in the individual structural elements to which we have hitherto been in the habit of giving the name "cell." Following, therefore, the natural method—*i.e.*, taking first that part of the subject which is simplest, and can be best understood without any complete knowledge of the rest—I proceed at once to demonstrate to you the phenomena of cell life in the higher animals. Here, or elsewhere in this course, we shall not occupy ourselves with dead anatomical facts, which you are assumed to be already acquainted with, but shall devote ourselves entirely to living movements. We shall take for study two types of cell or corpuscle—the locomotive and contractile corpuscle, or leucocyte, which will form the subject of the present lecture; and the stationary corpuscle, of which we have the best examples in those of cartilage and of ordinary connective tissue.(a)

OBSERVATION I.—STUDY OF THE LOCOMOTIVE CORPUSCLE IN THE LIVING STATE.

Living leucocytes may be studied either in tissues or in liquids. For a first view of them I recommend the blood of the newt as the most instructive object. The best method of demonstration is to construct a temporary "cell" of the kind I show you. It consists of a ring of soft putty, which rests on the centre of a glass slide. The quantity of blood required is extremely small. It is best taken from the abdominal vein with the aid of a capillary tube like those employed for containing vaccine, by means of which it is to be transferred to the centre of a clean cover-glass sufficiently thin to be used with the highest powers. Then take up the cover-glass with a pair of forceps and invert it over the "cell"—that is, with its edges resting on the wall of soft putty, and the drop of blood hanging from its under surface. In this way the "cell" is converted into an air-tight chamber, in which the hanging drop of blood will evaporate only so far as to saturate the very inconsiderable volume of air which is enclosed. To prevent even this amount of evaporation, and consequent change in the density of the plasma, it is desirable to place a drop of water on the floor of the "cell"—*i.e.*, on that part of the slide which is enclosed by the putty wall. For, the first lesson to be learned in the art of observing vital phenomena is, that, in so far as possible, all the physical conditions—as, for example, those of temperature, moisture, and pressure—should be the same during the time of observation as they were when the object of research still formed part of the living animal. In the moist chamber we are about to use, the blood is nearly, but not quite, in its natural condition. Its temperature is only slightly altered, but the surface of the drop is in contact with air saturated with aqueous vapour, whence, in accordance with the laws of diffusion, the serum will lose density; but as this will take place very slowly, it will not perceptibly interfere with the result.

FIG. 1.

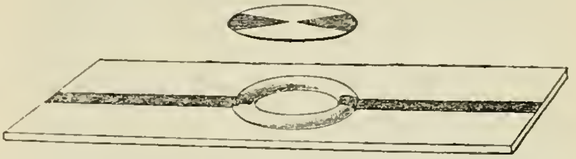

FIG. 1.—A "putty cell" arranged for applying the electrical stimulus to leucocytes or other living structural elements. In addition to the particulars referred to in the text, the thin glass is partly covered on its under surface with tinfoil, while two strips of the same material run from the ends of the slide along the middle of the upper surface, in a manner to be described further on.

Let us now examine our blood-drop. The first fact that we observe is that it has coagulated; and if we examine the clot we shall find, from its cylindrical contour, that it has been ormed, not on the cover glass, but in the capillary tube in which it was first received, and of which it is a cast or mould. Hence we learn that the blood of the amphibia coagulates the very moment that it is removed from contact with the living vein.

(a) I beg the reader to take notice at the outset that these lectures will represent not merely the observations which I have addressed to the whole class, but the directions and instructions given to individual students while engaged in the laboratory. This explanation is necessary, because I shall frequently have occasion to refer to experimental facts which could not be seen by a class. I am strongly of opinion that a course of practical physiology must be delivered conversationally. Its end is to show rather than to teach, and many of the facts shown cannot be exhibited to a large number of persons at a time.

FIG. 2.

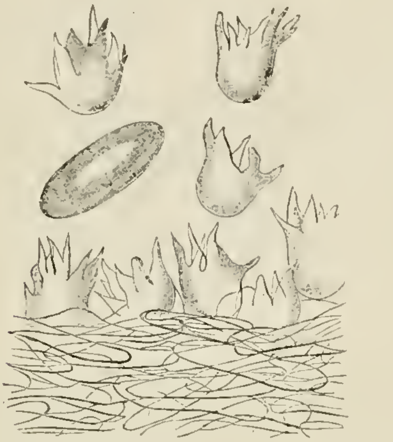

FIG. 2.—Leucocytes migrating from a blood-clot (700 diam.) diagrammatic.

If we now direct our attention to the edges of the drop, we shall see that the red clot, in which we can with difficulty make out the contours of the corpuscles, is surrounded by a margin of perfectly transparent liquid (serum), in which float a few coloured blood corpuscles, which have escaped from the meshes of the contracting fibrine. At first you see scarcely anything more. Soon, however, you observe little bulgings here and there of hyaline substance, projecting beyond the irregular coast-line of red clot which you have under observation. These projections rapidly increase in size, and soon separate themselves and float free in the clear serum. They are amœboid leucocytes. They consist, as you see, of apparently homogeneous substance, in which neither granule nor nucleus can be distinguished; but their forms are most remarkable. If they are observed during the act of migration, it is seen that their contour is always more or less smooth and rounded on one side, shaggy and irregular on the other; that the rounded surface is directed towards the clot, while the shaggy surface looks away from it; that the shagginess is due to the existence of a number of conical processes, the forms of which, however, are constantly changing. To study these processes well, it is desirable to use a good objective, such as the $\frac{1}{12}$ of Ross, but even with ordinary powers it is possible to see all that is essential.

As the process of emigration goes on, the number of leucocytes outside the edge of the clot of course increases, until at last it is bordered by a dense layer of leucocytes, among which it is soon seen that, although by far the greater number have the characters above described, there are others which have neither processes nor amœboid movements. Some of these are distinguished from the others merely by their rounded contour and by their quiescence; others also differ in respect of the substance of which they consist, and particularly in their being filled with granules which refract light strongly. Of the latter I have nothing to say, for nothing is positively known; but of the others we shall see that they are in all probability identical with the Proteus-like forms, only differing because the majority are in a state of rest.

OBSERVATION II.—LORTET'S EXPERIMENT.

Let us now study the movements of leucocytes by other methods. Next, perhaps, to those which depend on direct observation, there is no experimental proof which can be given more satisfactory than that which was devised some years ago by my friend Professor Lortet, of Lyons. It consists in inserting underneath the skin of a rabbit or other mammalian animal the swimming-bladder of a fish, previously filled with a so-called indifferent fluid—that is, with a fluid which, if it do not contain the materials for the growth of living tissue, does not, at least by its chemical action, interfere with the maintenance of its vital properties. Such a liquid, *par excellence*, is solution of common salt, of the strength commonly used in laboratories—viz., $\frac{3}{4}$ per cent. This bladder, which was inserted in a guinea-pig yesterday, when it contained nothing but salt and water, and was perfectly transparent, is now full of an opaque, thick liquid, which, as you may easily satisfy yourselves by microscopical examination, is crowded with leucocytes. What is the significance of this fact? According to the heterogenists, it means simply that osmosis has taken place between the liquid inside and that outside of the membrane; that organic, immediate principles have found their way into the saline solution; and that, in the liquid so altered, leucocytes have sprung up spontaneously. The reasons why we do not accept this explanation are—first, that we know of no instance in which a cell or tissue element comes into existence in this way; and secondly, that the leucocytes may be actually seen in thin microscopical sections in bladders which have been previously employed in this experiment, if the membrane is carefully prepared and hardened, insinuating themselves (by means, no doubt, of invisible pores) through the membrane.

The experiment may be varied in a number of ways without altering the result, provided that the membrane employed be of such a nature as to allow of diffusion, and the contained liquid indifferent. I regard it as of importance as showing—first, that the migration of leucocytes is not dependent on difference of pressure between the liquids inside and out, but merely on a property enjoyed by the leucocyte itself; and secondly, that leucocytes are capable of passing along channels so narrow, that they are not merely indistinguishable, either by the unassisted eye or the microscope, but are also impermeable to water; for you will see that, if I take this fresh swimming-bladder and fit it to a tube, and then connect the tube with a water-tap, not a drop will escape, although I subject its inner surface to a pressure of several feet of water, which I may gradually increase until I burst the membrane. Again, if I reverse the conditions, and place saline solution containing leucocytes in the bladder, and, after immersing it in similar liquids not containing any corpuscles, subject the bladder to pressure, no leucocytes will pass from the one liquid to the other. The reason, of course, is that the leucocytes which, when they passed in, were alive, have now been for some time dead.

OBSERVATION III.—PROFESSOR VON RECKLINGHAUSEN'S EXPERIMENT.

The next experiment is one which derives, I might almost say, a historical interest from its being the one which led von Recklinghausen to his discovery of the amœboid movements of pus corpuscles. It is described in his well-known paper, "Ueber Eiter-und Bindegewebskörperchen," published in Virchow's *Archiv* in 1863—a paper which may be truly said to have begun a new era in cellular physiology; partly because it taught us to study the appearances of living cells rather than those of cells already dead and disfigured by destructive reagents, such as water and acetic acid, and partly because many of the notions we at present entertain as to the nature of cell life are mostly founded on the facts recorded in it.

In this frog the cornea has been removed and placed in one of the subcutaneous lymphatic sacs. At the same time that the cornea was introduced into the lymph sac, five to ten drops of water containing aniline-blue in granules of microscopical fineness were injected with a syringe. The lymph sac, which in the frog is lined with an epithelial membrane very similar to that of the pleuro-peritoneal cavity, has become inflamed, and consequently distended, with a liquid containing innumerable leucocytes—in other words, pus corpuscles. I now remove the cornea with the fine forceps from the cavity in which it has been contained. The cornea is still to the naked eye nearly as transparent as it was before transportation to its new position; but if we place it under the microscope, and compare it with another cornea just taken from the living eye, you will see that the cornea corpuscles, which in the living cornea are absolutely invisible, even with the best microscope, are here distinct, showing that the cornea, although it looks transparent, is not really so, and that the substance of the corpuscles, which ought to affect light in exactly the same degree as the intermediary substance, is somewhat turbid. For the purpose of our experiment, this fact is of great value. What we want to see is whether the leucocytes, which exist in such numbers in the liquid contents of the lymph sac, show any tendency to pass into the cornea and permeate its substance. We know that the cornea is porous in a sense much more complete than the membrane of the swimming-bladder of a fish, for the "corneal tubes"(b) may be injected. Do the leucocytes penetrate into these cavities? It is easy to satisfy oneself that they do. If the cornea is placed with its convex surface downwards, and the microscope focussed so as to see first the epithelium of the anterior surface, and then the various layers of stellate corpuscles, it is easy to determine, as regards each stratum of corneal tissue in succession, whether it contains new elements; for the corpuscles are characteristic in their form, and so different from anything else that they cannot possibly be mistaken. In such an examination of the cornea as we have before us, it is easy to assure oneself that at every level there are leucocytes, and, consequently, that these must have migrated into it from the surrounding liquid. The proof is rendered much more satisfactory by the previous injection of the aniline. The purpose of this injection is to put a mark, as it were, on the leucocytes which have floated free in the liquid, and so enable the observer to recognise them in the cornea. If the aniline granules are sufficiently small, the leucocytes take them into their interior just in the same way as amœbæ do, and of course carry them along with themselves in their intra-corneal migration. The fact that leucocytes, each containing one or two aniline granules, exist in the very centre of the cornea, once seen, is very convincing. To derive, however, all the instruction it is calculated to convey, you must spend hours over it, and repeat it several times. Nothing can be more interesting than to observe the peculiar form which the "wandering corpuscles" assume as they squeeze their way, often appearing in contact with the proper elements, along the interstices of the tissue.

(b) Bowman: Lectures on the Parts concerned in the Operations on the Eye. London. 1849.

OBSERVATION IV.—EFFECTS OF TEMPERATURE ON MAMMALIAN LEUCOCYTES.

The next observations we have to make will have for their object the illustration of the changes which occur in leucocytes when they are subjected to a temperature different from that which naturally exists in the bodies of warm-blooded animals. The vital phenomena we have been studying continue (as has already been said) only so long as the cell is surrounded by the conditions which are natural to it. To illustrate this, all that is necessary is to repeat the observation made at the outset on the blood of the newt, only substituting for it mammalian blood. Let us, then, place a drop of human blood into the moist cell just in the same way as before. The blood coagulates, though not so rapidly; in the surrounding liquid we see a few leucocytes. One or two of them show indistinct amœboid movements; but before we have had time to learn their nature the movement ceases, and the leucocytes assume what I may call the conventional spheroidal form in which they are commonly represented in the books. In short, they are dead; the reason being that, for the maintenance of the life of mammalian leucocytes, a temperature nearly approaching to that of the body is absolutely necessary. To meet this requirement, various contrivances have been devised, all of which have for their purpose to maintain the stage of the microscope at a temperature of 98° to 100° Fahr. By this means the object-glass is kept a little below the normal temperature; for it is found that, while the slightest excess of temperature is highly dangerous to the life of a cell, it will bear without any injury several degrees of defect.

The earliest contrivance is that of Professor Max Schultze, of Bonn, which I now show you. It may be described as consisting of an extra stage of brass, which rests on the proper stage of the microscope, separated from it by a layer of some non-conducting material. This stage is prolonged in front into two arms of the same metal, to the end of each of which a small gas flame is applied; in its centre—*i.e.*, immediately under the object—there is a thermometer bulb, the scale of which is so placed that it can be read by the observer without difficulty. This instrument (made by Geissler, of Bonn) answers most purposes exceedingly well, although it is difficult to maintain the temperature exactly. In the hands of its inventor it has yielded admirable results. Still better than this is the instrument I now show you, the warm stage of Professor Stricker, of Vienna. It consists, as you see, of a brass box closed everywhere, excepting that at either end there is a small aperture, to which a vulcanite tube is fitted. Of the two tubes, one brings water from a pan in which it is kept at boiling temperature, the other conveys it away to waste. The quantity which passes is regulated with the greatest exactitude by the ingenious contrivance you see here, in which the rate of flow varies according to the height of the exit tube E, or rather according to the difference of level between it and the surface of the water contained in the pan. This apparatus, which is made by Mr. Hawkesley, of Blenheim-street, works admirably; let us apply it to our present inquiry. You observe that the brass box has a hole in the centre, which is mainly intended for the transmission of light from the reflector. It also, however, serves the purpose of a putty cell, for it is permanently closed with a glass plate below, and it is easy to lay on the upper opening a second cover-glass, on the under surface of which you have placed your drop of blood, as before. The stage has been already regulated as regards temperature, and the thermometer stands at 98° Fahr. Let us now see what happens. Everywhere you observe active leucocytes, the motions of which, however, are not so much like those of amœbæ as of the monera with which Mr. Huxley has of late made us acquainted. If the temperature were allowed to fall, their movements would become more sluggish, but would not cease, and on again restoring it they would recover their former activity. The effect of raising it, however, above 98° Fahr. is, as you see, very different. Let us go up at once to 107° Fahr. The leucocytes after a little draw in their arms, and before you have had time to consider what has happened, they will have shrunk up to globular, motionless masses—*i.e.*, once more to the conventional white blood corpuscles of the books. From this state they cannot be recovered. It is not suspended animation, it is death.

FIG. 3.

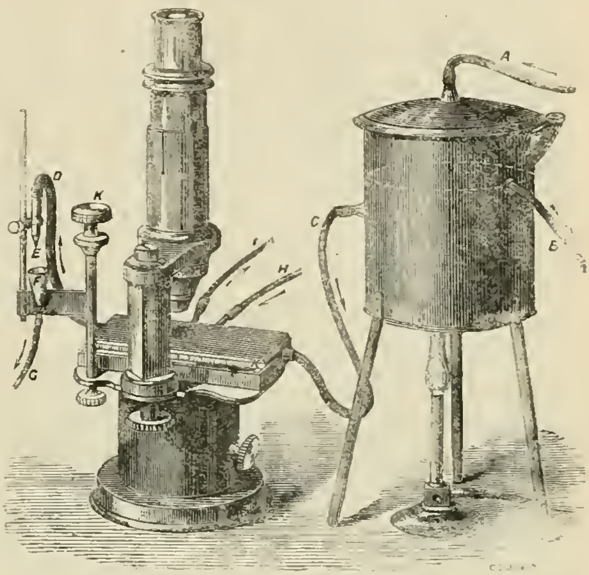

FIG. 3.—Prof. Stricker's warm stage. In the vessel A B C hot water is maintained at a constant level (indicated by the dotted line) and at boiling temperature. A, supply tube; B, waste tube; C, tube leading to the stage; D, tube by which the hot water leaves the stage, terminating in a conical dropper, E; F, funnel for collecting the drops which fall from E; G, waste. The rate of flow is determined by varying the height of E, by means of the sliding screw on which it is supported. It admits of more exact adjustment by means of a fine screw which works in the axis of the vertical column, on which the escape tube is supported. This column is firmly fixed in the stage of the microscope; its axial screw terminates above in a milled head, K.

FIG 3 BIS.

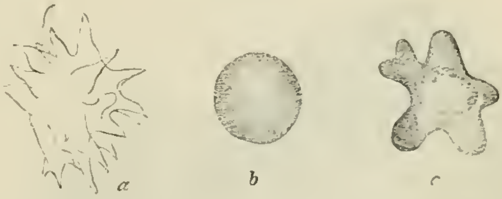

FIG. 3 BIS.—*a*. An amœboid leucocyte; *b*, a dead leucocyte; *c*, a leucocyte which, after having been acted on by the electric stimulus, has begun to resume its movements.

To illustrate this subject further, let us return to our first experiment. Here is a putty cell into which a drop of newt's blood was placed yesterday. First you see that the margin of the clot is beset with grey-looking bodies, which, although they present an appearance so different from that which they presented before, you have no difficulty in recognising as dead leucocytes. Though here and there are some which have a sinuous outline, as if to remind us that they were once amœboid, most are spherical. They are in such numbers that they form a grey border sufficiently wide to be seen with the naked eye, or at all events with a lens, around the clot.

Observation V.—Action of the Electrical Stimulus on Leucocytes.

As in physics we assume that for every movement or change there is an exciting cause, so also in physiology living matter is no more capable than dead matter of moving of itself. The word spontaneous, as applied to the origin of movement or change, has no very intelligible meaning, and cannot be used unless you put before it the adverb "apparently." When a muscle contracts, we understand that something different from itself acts upon it; so, when a leucocyte changes its form, it is acted on by a stimulus. It is our ignorance of the nature of this stimulus which constitutes the main difference between the case of the leucocyte and that of the muscle. If we call the one spontaneous and the other irrito-contractile, we do little more than conceal our ignorance by the use of long words.

There are two sources from which we may derive material assistance in our attempt to understand the movements of leucocytes, viz.: from the comparison of their movements with those of the lowest forms of independent animal life—the amœbæ and monera; and from the observation of the effects of stimuli.

Of all stimuli, the most suited for the purpose is the electrical stimulus, partly because we are well acquainted with its action on other kinds of contractile substance, and partly because we can vary its intensity at will. For the purpose of applying it to a corpuscle, we again have recourse to the putty cell, which we arrange in such a manner that the induced current from the secondary coil of an induction apparatus may be caused to pass through the drop of blood on the under surface of the cover-glass. The way in which this is accomplished will be best understood by looking at the diagram (see Fig. 1). The upper surface of the glass slip is seen to be partly covered by two strips of the thinnest tinfoil, each of which extends from one of the ends of the slide towards the ring of putty in the centre. Each of the tinfoil strips is of sufficient length to reach over the putty ring without extending into the space which it encloses. Further, the under surface of the cover-glass is also partly covered with strips of tinfoil, the shape of which is shown in the sketch. The points of these strips are separated at the centre of the cover-glass by an interval of one-twentyfifth of an inch. It will be readily understood that when the cover is brought down upon the putty ring the metallic connection between one end of the slide and the other is complete, with the exception of the space just indicated; and that if the ends are connected with the secondary coil of the apparatus, and a liquid is placed in the way before directed between the two points on the under surface of the cover-glass, the induced currents will pass through it alternately in opposite directions, and act upon it. As the apparatus we are about to use is in frequent requisition for physiological purposes, I will describe it to you before we proceed to the experiment.

The instrument you see represented in the diagram; but for our present purpose it is necessary to modify the ordinary arrangement—first, by depressing the lower of the screws, *f*, so that neither may be in contact with the horizontal spring, *h*; secondly, by removing the collateral wire, *g*. (In Fig. 5, it is shown already removed.)

Fig. 4.

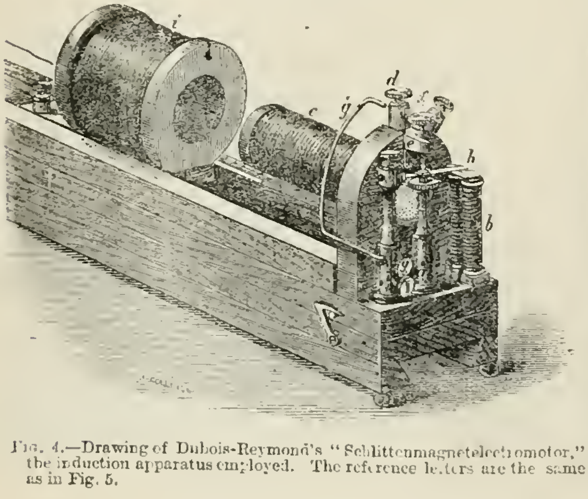

Fig. 4.—Drawing of Dubois-Reymond's "Schlittenmagnetelectromotor," the induction apparatus employed. The reference letters are the same as in Fig. 5.

Fig. 5.

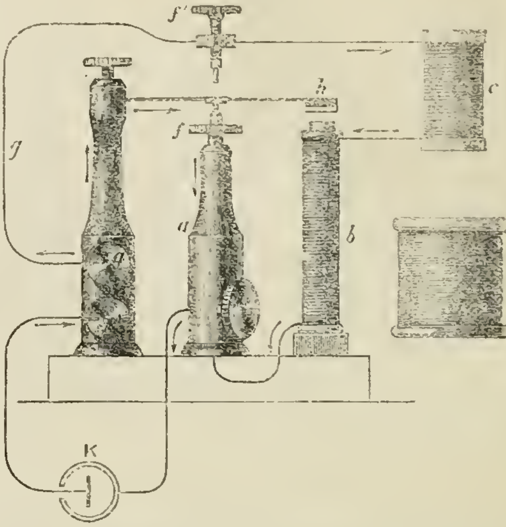

Fig. 5.—Diagram shewing the arrangement for interrupting the primary current in Dubois's instrument as improved by Helmholtz. The arrows show the direction taken by the current when the apparatus is used in the ordinary way. The current from the copper end of the battery divides at *g* into two branches, which meet again in *f'*. One of these is continuous, and is conveyed along the wire, *g*: the other interrupted, passing through the horizontal spring, *h*. From *f*, the current is transmitted round the primary coil, *c*, to the electro magnet, *b*, whence it returns to the battery through *a*.

N.B. All of the illustrations are original excepting Fig. 5, which is copied from Prof. Rosenthal's Electricitatslehre. In this figure both of the screws marked *f* should be represented lower, so that the upper should be in contact, the lower out of contact, with the horizontal spring, *h*. This being the case, the moment the current passes, as above indicated, the anchor of soft iron, *h*, is drawn down and the current broken, to be immediately restored by the return of the spring to its former condition.

Further, a Dubois's key is interposed in the course of the induced current between the secondary coil and the microscope, the only purpose of which is to enable the experimenter to close or open the secondary current at will.

The apparatus being thus arranged, a leucocyte in the field of the microscope is selected for observation, while an assistant presses with the forefinger of one hand the spring, *h*, against the upper of the two screws, *f'*, so as to make the primary current continuous, and then, with the other hand, closes the secondary circuit with the key. When it is desired to excite the selected corpuscle, the assistant, by depressing the spring, breaks the primary current, consequently on which a direct induced current of momentary duration and high tension passes through the coil. The assistant, still keeping the spring down, opens the secondary circuit, while the observer takes note of the changes produced in the corpuscle by the shock to which it has been subjected. The reason why this plan of operating is adopted will be explained in next lecture.

Melbourne Hospital.—At the weekly meeting held on October 18 last, Dr. Barker presented a letter from a majority of the honorary Medical staff, asking that prescription tickets might be placed over the beds in the Hospital, chiefly on the grounds that it would be highly advantageous to students, and would lessen the probability of mistakes in dispensing. The letter was signed in support of the request by Drs. Barker, Black, Motherwell, and Wilkie; and Messrs. Howitt, Fitzgerald, and Rudall. Dr. Robertson, and Messrs. Garrard, Gilbee, Thomas, and James appended their names as preferring the existing system; and Dr. Cutts declined to express any opinion at all. The Chairman ruled that the letter was out of order, inasmuch as the subject had been finally dealt with at a former meeting. Dr. Barker having obtained possession of the document, said, since the letter was not received, he would, at all events, take care it was printed. This being regarded as a threat, Dr. Barker was called upon to withdraw it, and he ultimately consented to give up the original document on receiving a copy of it.

ORIGINAL COMMUNICATIONS.

SHARK-BITES IN THE HOOGHLEY.

By J. FAYRER, M.D., C.S.I., F.R.S.E.,
Professor of Surgery, and Senior Surgeon, Medical College Hospital, Calcutta.

In the *Medical Times and Gazette* of June 20, 1868, I gave an account of a case of shark-bite, which had occurred in Calcutta, and had come under my care in the Medical College Hospital. Such cases, I regret to say, occur annually, and they will continue to do so until some simple measures, such as might easily be taken, are resorted to for their prevention.

The particular shark (*carcharras Gangeticus*) is a fierce and bold creature; he dashes in among the crowds bathing at the ghât, and though he seldom—if ever, under these circumstances—succeeds in carrying off his prey, yet inflicts a dangerous, often a mortal, wound.

These accidents appear to have become more common of late years, since the practice of throwing bodies into the river has been discontinued, and those of the poorer classes have been entirely burned at the municipal charge. Near the great burning-ghâts, where the sharks no doubt used to find their prey in abundance, in the half, or only very partially, burned bodies then thrown into the river, but where they no longer find them as they are now burned, the accidents most frequently occur, and one or two bathing-ghâts near that spot have furnished more victims than the others. The water at this time of the year (for it is chiefly in the months of April and May, when the river contains much salt water, that the accidents occur) being unusually muddy, the sharks are not seen as they glide in among the legs of the bathers, and it is only when the shrieks and sudden immersion of one of their fellow-bathers give the alarm, that they are aware that the enemy is in their midst. The noise, the splashing, and shouting, as well as other aid given to the sufferer, save him from being carried off, but not from a severe—if, indeed, not a mortal—wound.

As I have before noticed, no precautions are taken to prevent this annual loss of several lives. The mere staking off a portion of the ghât, as is done in the Soonderbuns, against alligators would be sufficient; but simple as the expedient is, it is not resorted to. The people go on bathing at the same places perfectly unconcerned. Indeed, shortly after a person has been bitten the ghât is again fully occupied with bathers. Every year during these two months cases occur, and they are generally brought to the Medical College Hospital. I give the notes of four other cases, two slight and two more severe, as they are not uninteresting in a Surgical point of view.

Case 1.—H. E. S., aged 39, a Hindoo trader, living near Hatkolah Ghât, admitted on May 18 with four irregular, lacerated wounds of a triangular form on the right ham, two being opposite the other two. They were about three-quarters of an inch deep. He said that when up to his middle bathing at the ghât with a number of others, he was suddenly seized and as suddenly released. He made his way out of the water and found the four bleeding wounds. They were dressed simply, and the next morning he left the Hospital for his home, and probably did well, as we heard no more of him. He had a fortunate escape, for it is seldom that a man escapes out of a shark's grip with such slight injury.

Case 2.—M., aged 40, a Hindoo confectioner, residing at Soobah Bagar, was admitted on May 11 with three wounds on the anterior aspect of the left thigh. They were situated about three inches above the knee; one was large, above two inches long, the others were near it and were somewhat smaller. They were lacerated, irregular wounds, as though the flesh had been torn by a sharp-pointed instrument. He was seized when bathing, as in the first case. The water about three feet deep and muddy, he did not see the shark, and was only aware when pulled off his legs that the voracious creature was near him. In this, as in the former case, the shark did not retain its hold as the man was immediately rescued by two friends. After admission the wounds were dressed with carbolic oil. He had slight fever and the margins of the wounds sloughed; but they ultimately took on a healthy action, and on July 6 he was discharged quite recovered.

Case 3.—B., aged 40, an Ooryah coolie, residing at Koomertolla, Calcutta, was admitted on June 1, with an extensive wound of his right foot and leg. About half an hour before admission, he was bathing with others at the ghât, standing mid-deep in the muddy Hooghley water, when he was suddenly seized and drawn down by a shark. He was caught and rescued by his friends, who pulled him out of the shark's jaws, and brought him, much exhausted by loss of blood and shock, to the Hospital. The foot was nearly torn away at the ankle-joint, and the soft parts about the foot and leg extensively lacerated—those on the leg extending high up the limb. One tooth had made an isolated, deep-punctured wound in the calf of the leg. Immediate amputation was performed. He rallied under chloroform, and bore the operation, which was performed an inch below the tubercle of the tibia, well. The incisions were made in the method I usually adopt, and there was very little blood lost. Three ligatures only were required—a very uncommon occurrence in an amputation in Calcutta, where, owing to profuse bleeding from numerous small vessels, many ligatures are generally needed. Nothing remarkable occurred during the progress of the case, and he was discharged cured on September 21, with a wooden leg.

Case 4.—C., aged 40, a Hindoo shopkeeper of Ultadinghee, near Calcutta, was admitted on June 20 with a severe injury of the left arm, caused by a shark-bite. He was bathing, as usual, at one of the ghâts, and was stooping immersed in the water, when the creature seized him by the arm, extensively lacerating and stripping the soft parts from the limb. The bones were not actually exposed, nor were the joints opened, but the limb had been so much disorganised that gangrene had set in. It appears that the shark seized him twice—first by the forearm, and then, again, immediately by the arm. The injury had been inflicted the day before admission. Owing to the extensive injury and the consequent gangrene, his condition was very low. Immediate amputation was performed high up, within three inches of the head of the bone, by double flaps. In this case ten ligatures were required. He suffered subsequently from irritative fever, the formation of abscesses in the stump and about the bone, but the bone itself remained sound. Ultimately, the wound cicatrised, and he was discharged on September 21, with a good stump.

Calcutta.

NOTES OF A CASE OF PEMPHIGUS,

IN WHICH THE DISEASE WAS CONTRACTED BY INOCULATION FROM AN ERUPTION UPON THE TEATS OF A COW.(a)

By EDWARD BALLARD, M.D.,
Medical Officer of Health for Islington.

J. S., AGED 21, of a good constitution, is servant to a gentleman in Islington, who keeps four cows, three of Alderney and one of Ayrshire breed. They had foot and mouth disease several months ago, but had long ago quite recovered. There was no calf on the premises. In the middle of August they were simultaneously(?) attacked with an eruption upon the udders and teats, which did not affect their general health, and lasted a few days. The eruption, from the description, was vesicular, the blebs being oval, and about the size of a haricot bean, or smaller. On August 16, J. S. gave a physic-ball to a horse which had a cold, and on withdrawing his hand was slightly bitten on the dorsum of the right hand, over the distal part of the metacarpal bone of the index-finger. The skin was broken, and blood flowed. The man put on no protective covering, but the same day proceeded to milk the diseased cows. About a week after (following the man's account), the bitten spot exhibited a bleb upon it, and a few blebs of a similar character appeared upon the skin just around it. In the course of another week, or later, when these blebs were fading, a fresh and large crop of similar blebs appeared upon the two forearms and the dorsum of both hands. There must have been a hundred of them altogether, of varying sizes, from that of a split pea to that of a shilling, some so close as to have become confluent. They contained at first clear fluid, which subsequently became opaque, and, from their purple colour, evidently mixed with blood. A few appeared upon the knees, legs, and buttocks. He now felt ill; there was much inflammatory swelling, vomiting (it is said) of some bloody matter, and fever; but from first to last there was no rigor. When the blebs broke and discharged, there was a faint odour from the surface. On September 6 he consulted a Medical man for the first time, and Mr. Pointer, of Seymour-street, Euston-square, saw him. This was on a Tuesday. On the Sunday before, he had been very ill, and, it is said, passed some blood from the bowels, and was giddy. As this crop of blebs began to shrivel, a fresh crop appeared upon the face and neck, and a few on the hairy scalp; and with this the face became swollen, as in small-pox, and the eyes closed. The man's mouth and throat also presented blebs, the tongue was much swollen, and there was difficulty in swallowing. Bloody matter flowed from the nose. On September 30, Mr. Pointer observed over the whole surface of the trunk and extremities and between the blebs a red papular eruption, with tingling, which lasted a few days and disappeared, leaving no marks. He vomited a good deal from September 29 to October 2, and could not keep food on his stomach; the vomited matters were not seen. The urine is said to have been very red, as if it contained blood, but it was not preserved for examination. All day on October 1 he was complaining of great pain in the lower part of the abdomen and right iliac region, and the next day he passed two very fetid stools, said to be "as black as your hat." Mr. Pointer saw one stool, which he regarded as "melœnic." This gave him great relief, and since then there has been no fresh eruption of blebs or papules. There has been little or no cough throughout the illness.

(a) Paper read before the Association of Medical Officers of Health on December 17, 1870.

October 8.—I saw him for the first time to-day. He was in bed, but his strength was not materially reduced, although he says he has lost flesh during his illness. He was now convalescent. Several of the blebs on the arms were large, and flat, and shrivelling, still containing fluid, and of a purplish colour; others were represented only by flat, irregular, broken-looking scabs, partly looking like dry paste, and partly brown, and containing dried blood. They had the same characters everywhere. In some places the situation of the blebs was occupied by superficial sores or excoriations, cracked, and bleeding. Nothing observably amiss upon the mucous membrane of mouth and throat. Urine clear, natural, and free from albumen. No fever. On examining his arms, I found two good vaccine cicatrices. Says he has never had chancre or any form of venereal disease. The only pain complained of now was a rheumatic or muscular pain in left side of neck and left shoulder.

Mr. Pointer, who took me to see the case, called it "pemphigus." The term is not inapplicable, inasmuch as Hebra asserts that "no other disease is attended with the formation of bullæ over a large surface and in successive outbreaks." That author, however, makes no mention of the hæmorrhages and gastro-intestinal disturbances which attended this case. Gastro-enteric disturbance, however, is not rare in the course of pemphigus, but I have met with no account of the disease which mentions hæmorrhage from the bowels; neither have I been able to lay my hand on any details of a case in which pemphigus—an eruption of bullæ in crops—has originated in inoculation from the cow. Pemphigus in the human subject is not held to be a contagious or inoculable disease; yet the history of this case seems to point distinctly to such an origin. It is to be regretted that no veterinary Surgeon saw the cows from whom the malady was contracted. This man was out and about, a fortnight after my visit.

On November 26 he called on me to show himself. The site of the blebs was indicated by stains, not depressed, and of dusky red colour. On the neck and arms the surface of these stains was dotted with very minute, white, elevated points, apparently containing a puriform fluid. He says they itch occasionally.

Knowing the thorough acquaintance with the eruptive diseases of cows possessed by Mr. Ceely, of Aylesbury, I sent him the above notes, begging for any information upon the subject which his extensive experience could furnish. In his reply he says: "I have read with very great interest your notes of the case of the man infected from a vesicular eruption on the teats and udders of some cows. The local and constitutional effects therein described are severer than I have ever witnessed, though I have often seen them severe. I have no doubt the disease in the cows was of the character we often witness here in our dairies. It generally originates in *one* cow, and is *rapidly* communicated to others by the same milker, and from one or other animal to the milker's hands. Here it has been sometimes designated the 'white or blister pock;' but most commonly it is still confounded with the true vaccine. It is the disease which for a time perplexed Jenner in his earlier inquiries, when he found persons supposed to have been infected by the so-called cow-pox really unprotected. He eventually solved the mystery, and ascertained the true nature of both. According to my own observations, this *pemphigoid*, vesicular, or bullous eruption is the result of congestion of the mamma, however induced. It is especially frequent in heifers—animals with their first calf—arising from rapid distension of the organ, or neglected or imperfect manipulation; in the cow, from congestion induced by similar causes, catarrh, or fever. The degree of acridity of the fluid contents of the vesicles seems to be mainly influenced by the intensity of the congestion, the inflammation resulting being of the diffused or erysipelatous form. But when the local and constitutional symptoms in the animal are mild, or the latter unobservable, the effects on man are subject to much variety. In drawings 2, 3, and 4 (referring to some beautiful coloured drawings forwarded) you will see different degrees of local severity. In No. 5 the effects, both local and constitutional, were severe, although the same fluid, inoculated at the same time on the dorsum of my own hand, produced the normal mild effects on the cow. The local effects on the animal (as on man) are promptly induced. In less than twenty-four hours the inoculated part indicates perfect infection, and the disease runs rapidly through a dairy. In this respect—the rapidity of its progress and the shortness of its duration—it differs from true vaccinia, which, I need not say, is more formal, tardy, and prolonged. The local inflammation of the organ attending the former is comparatively trivial, while of the latter it is most commonly severe and enduring, as well as destructive. The course of the disease is the same as in man. Both cows and man are repeatedly susceptible of the infection. I have successfully inoculated myself on the dorsum of the hand five times, without any constitutional disturbance on either occasion, the local affection subsiding in a week.

"The exanthemata of the cow are very interesting, as many of them closely resemble those of man. They are papular, squamous, vesicular, bullous, pustular, etc. I send you a few drawings of some of those I have observed. The verrucous vesicle is very curious. On the occasion of this drawing, the disease extended by infection, in the course of three weeks, through a small dairy, giving rise to no constitutional disturbance in the animals, and but slight irritation to the hands of the milkers. I have no doubt that the fluid of the vesicles and bullæ of aphtha epizoötica might, by careful inoculation, be communicated to man. It is certainly a contagious disease among cows, sheep, and pigs, and has been communicated to man through the use of milk. As the milker's occupation is temporarily suspended in this disease, we rarely meet with infected hands. I have several times successfully inoculated myself with the fluid contents of the vesicles of herpes oris, arising from catarrhal inflammatory and febrile diseases, *including scarlatina.*"

Referring now to the drawings which Mr. Ceely kindly forwarded to me, and especially to those alluded to above:—No. 2 was a drawing of the "white or blister pock" on the hand of a milker, in the mild form and in the declining stage. There are pocks represented upon the hand, each with a central spot of commencing incrustation, and about the full size of a vaccine vesicle. Mr. Ceely has appended the memorandum that, "but for the exploration of the vesicle with the lancet, and the date of the eruption, an inexperienced observer might be in doubt as to its character." No. 3, again, represents a casual inoculation of a milker's hand. The more purple colour and rotundity of some of these vesicles approach more nearly to those in my case, but the size was not nearly so great. No. 4 also represents a casual infection. The bullæ, as represented in the drawing, were oval, and about the size of a haricot bean; on the palmar surface of the index finger is represented one long blister-looking vesicle, or what might rather be called a vesication, extending the whole length of the two proximal phalanges, the whole hand being swollen and reddened. This case resembled mine in so far that the bullæ were not confined to the hand, but appeared also on the face and body, with much fever and constitutional disturbance. No. 5 shows the results of inoculation from No. 4 on the arm of a man. The vesicles are about the size of vaccine vesicles, and have a central dark spot, as if from early central commencing incrustation. They are very much like the casual pocks in No. 2. No. 7 shows the same disease on the cow, in which the fluid in the vesicles was bloody. The size is nearer that of the vesicles in my case, and, except that the colouring is deeper, they resemble them more closely than those in any other of the drawings.

I am under a deep obligation to Mr. Ceely for the permission to use his note and drawings for the purposes of this paper.

E. Hering, in his book "Ueber Kuhpocken an Kühen" (p. 151), describes the disease in the cow under the name of "Wasser-pocken" or "Wind-pocken"—the var. vaccin. bullosa of Günzel, and gives a plate of it, in which a central spot, apparently of commencing incrustation, is shown. He says the pocks "are distinguished by their size and structure. They are mere non-cellular elevations of the epidermis, and may be emptied entirely, or in great part, by puncturing them. They break out in variable number upon the udder and teats, in the form of little vesicles, which within twenty-four hours attain the size of a pea, bean, or wild cherry, and the circumference of a kreuzer or 6-kreuzer piece; have neither areola nor central depression, but are rather hemispherical or acuminated, have a white or yellowish colour, and either contain a thin, yellowish lymph or thick, mucous, creamy pus. They readily burst; but under other circumstances their contents seem to be speedily reabsorbed, when they contract; and as they still look entire, and like full bladders, one wonders on pricking them to find them empty ("wind-pocken"). After from three to five days they form a large scab of the thickness of paper, of a light brown, but more rarely of a blackish colour, which soon falls, without leaving any scar. The animals exhibit no fever, and do not fall off their feed; but the udder is often tender, and the secretion of milk somewhat diminished. In most cases nothing amiss, except the eruption, is observable in the animals." He identifies the disease with the great white blisters described by Jenner in the same way as Mr. Ceely does. Dr. Heintz is quoted by the same author, as having observed a variety of this disease in which the vesicles were of a red colour; they were broken by the act of milking, and then formed a black scab. Hering regards the "wasser-pocken" as the analogue of chicken-pock in the human subject. If, as appears probable, the eruption on the cows from which my case was infected was this disease, the result of the inoculation would appear to contradict this view.

Jenner, in his "Further Observations on the Variolæ Vaccinæ" (p. 6), thus describes a case of infection from the blister-pock. I may well conclude what I have to say by quoting his remarks. It occurred in the person of a girl, a milker, about 13 or 14 years of age, who lived with a farmer, who kept about eighteen cows:—"The nipples and udders of three of the cows were extensively affected with large white blisters. These cows the girl milked daily, and at the same time assisted with two others in milking the rest of the herd. It soon appeared that the disease was communicated to the girl. The rest of the cows escaped the infection, although they were milked several days after the three above specified had these eruptions on the nipples and udders, and even after the girl's hand became sore. The two others who were engaged in milking, although they milked the cows indiscriminately, received no injury. On the fingers of each of the girl's hands there appeared several large white blisters, she supposes about three or four on each finger. The hands and arms inflamed and swelled, but no constitutional indisposition followed. The sores were anointed with some domestic ointment, and got well without ulcerating.

"As this malady was called the cow-pox, and recorded as such in the mind of the patient, she became regardless of the small-pox; but on being exposed to it some years after, she was infected, and had a full burthen.

"Now, had any one conversant with the habits of the disease heard this history, they would have had no hesitation in pronouncing it a case of spurious cow-pox—considering its deviation in the *numerous* blisters which appeared on the girl's hands; their termination without ulceration; its not proving more generally contagious at the farm, either among the cattle or those employed in milking; and considering, also, that the *patient felt no general indisposition, although there was so great a number of vesicles.*

"This is, perhaps, the most deceptious form in which an eruptive disease can be communicated from the cow, and it certainly requires some attention in discriminating it. The most perfect criterion by which the judgment may be guided is, perhaps, that adopted by those who attend infected cattle. These white blisters on the nipples, they say, *never eat into the fleshy parts* like those which are commonly of a bluish cast, and which constitute the *true cow-pox*, but that they affect the skin only, quickly end in scabs, and are not nearly so infectious."

Jenner refers such spurious eruptions to change from poor to nutritious diet and over-distension of the udder, and goes on—

"Whether a disease generated in this way has the power of affecting the constitution in any peculiar manner, I cannot presume positively to determine. It has been conjectured to have been a cause of the true cow-pox, though my inquiries have not led me to adopt this supposition in any one instance; on the contrary, I have known milkers affected by it, but always found that an affection thus induced left the system as susceptible of the small-pox as before."

It has appeared to me not inappropriate, when describing a case so unique in its severity as this one, to quote thus largely from observers who have distinguished the eruption. My case appears to give a completeness to the history of the disease in man which it did not possess before, and to mark the affinities of the malady as it occurs in the cow.

OBSERVATIONS ON THE VARIATION IN THE PREVALENCE OF VENEREAL AFFECTIONS IN THIS COUNTRY.

By ROBERT LAWSON,
Inspector-General of Hospitals.

At a time when the operation of the Contagious Diseases Act, has led to so much discussion, and such various estimates have been formed of its influence on the frequency of venereal affections, it may prove both interesting and useful to point out a feature in their prevalence which appears to have been completely overlooked hitherto. I allude to a variation in the number of attacks of these affections from year to year, not confined to limited localities, but experienced over great areas, and presenting the characters of an epidemic increase as much as the varying outbreaks of scarlatina or small-pox.

The statistical returns of diseases in the army afford the only evidence on this subject, so far as I am aware, embracing a sufficient number of years, and among a class of men under nearly the same conditions, suitable for elucidating this question. Of these, the admissions among the cavalry at home from the beginning of 1830, to March 31, 1847, and among the foot-guards, from April 1, 1837, to March 31, 1847, are available, and those for the various arms of the service on the home station from 1860 to 1868 inclusive. In the first-named period the cavalry were almost altogether employed at home; there was little variation in their strength, or in the average ages of their men, and the stations they occupied in Great Britain and Ireland were nearly the same throughout, though the various regiments served at them in succession. The foot-guards also presented no great change in numbers or ages, but they were almost all quartered in, or in the vicinity of, London. The admissions for venereal complaints, therefore, amongst the foot-guards may be taken to indicate the frequency of those affections among the classes with whom they associated in and about London; while those amongst the cavalry represent their frequency among the same classes in other parts of this country and Ireland.

Primary venereal affections have usually been returned in the army under the designations of *syphilis primitiva*, *ulcerum penis non syphiliticum*, and *gonorrhœa*, or their English equivalents. No fixed rule has been followed in distinguishing the two former, and the practice has varied so much with different Medical officers, that the number of them respectively, as given in the returns, cannot be taken as trustworthy indications of the relative frequency of the two forms, but, taken together, they show with certainty the varying prevalence of primary venereal sores for the periods mentioned. As to gonorrhœa, no change has occurred, and explanation here is not required.

Table I., *showing the admissions per* 1000 *of mean strength for primary venereal sores, secondary syphilis, and gonorrhœa, among the foot-guards and cavalry serving at home, each year for the period ending* 1847.

Years.	Foot-Guards. Primary sores.	Foot-Guards. Secondary syphilis.	Foot-Guards. Gonorrhœa.	Cavalry. Primary sores.	Cavalry. Secondary syphilis.	Cavalry. Gonorrhœa.
1830... ...	—	—	—	71·6	7·5	59·9
1831... ...	—	—	—	96·2	9·6	62·2
1832... ...	—	—	—	79·9	8·9	53·5
1833... ...	—	—	—	95·2	8·0	56·9
1834... ...	—	—	—	80·5	7·2	46·9
1835... ...	—	—	—	74·9	6·6	49·0
1836-37 ...	—	—	—	63·1	5·7	55·7
1837-38 ...	106·8	13·1	58·9	62·1	6·5	68·5
1838-39 ...	143·2	8·0	39·5	73·7	5·1	77·5
1839-40 ...	126·2	9·6	94·9	82·0	6·4	74·4
1840-41 ...	133·7	4·6	69·6	60·1	7·7	60·6
1841-42 ...	153·5	9·4	63·8	69·9	7·7	65·9
1842-43 ...	150·6	11·2	76·5	78·3	8·0	69·7
1843-41 ...	217·3	17·4	45·5	108·1	10·6	61·3
1814-45 ...	134·9	15·6	36·6	92·8	8·7	76·1
1845-46 ...	139·9	21·9	37·1	79·4	10·6	66·8
1846-47 ...	101·8	14·2	49·5	83·9	13·9	63·8
General mean	140·9	13·4	54·8	79·6	8·1	62·4

On comparing the the ratios for primary sores among the cavalry, it is found there was a great rise in 1831, a considerable fall in 1832, and another rise in 1833, after which the admissions declined to 1836-37. In 1838, they again rose, culminated in 1839-40, and the following year reached their lowest point. In 1841-42, another rise commenced, which reached the highest point in 1840-44, and then fell till 1845-46. Among the foot-guards, there was a large increase in 1838-39 over the previous year, but in 1839-40 the ratio among them fell considerably, though, in the country generally, as shown by the cavalry, the increase went on into the following year. In 1840-41, the guards again showed a somewhat higher ratio, which went on increasing until 1843-44, and then fell till 1846-47. While this was proceeding, it did not become apparent in the country generally until 1841-42, though the maximum was reached in the same year as in London. Gonorrhœa presented considerable variation in frequency as well, but it was more irregular, and neither its maxima nor minima coincide with either the maxima or minima of primary sores, so that it seems regulated by a law distinct from that to which their fluctuations are subject.

Table II., *showing the millesimal ratios of the admissions from primary venereal sores, secondary syphilis, and gonorrhœa each year, among the troops of all arms, on the home station, from* 1860 *to* 1868 *inclusive.*

Years.	Primary sores.	Secondary syphilis.	Gonorrhœa.
1860	112·5	27·9	106·7
1861	110·3	30·0	102·3
1862	98·5	33·4	115·4
1863	95·1	33·9	100·5
1864	78·5	30·2	89·1
1865	74·9	25·5	88·8
1866	68·2	21·1	83·7
1867	88·8	28·1	115·9
1868	81·8	31·6	117·0

From this it is clear the frequency of primary sores diminished gradually from 1860 to 1866, since which time it increased again. As the numbers for 1867 and 1868, like those for the previous years, embrace the admissions at the stations where the Contagious Diseases Act then came into force, the ratios for these years are really lower than they should have been, had a similar increase taken place at these stations to what was experienced throughout the country.

A feature was observed in the rise which took place between 1865 and 1867 which deserves special notice, and which tallies with the remark made above as to the indications of a rise having become perceptible at London a year before it was experienced elsewhere to the north and west. This will be apparent from the following facts:—

Table III., *showing the millesimal ratios of admissions for primary venereal sores among the troops at the principal military stations in Great Britain and Ireland, where the Contagious Diseases Act was not in force, for the years* 1865, 1866, *and* 1867.

Stations.	1865.	1866.	1867.
Dover	67	90	132
Shorncliffe	68	57	42
Canterbury	77	117	119
Colchester	107	170	145
Warley	97	79	74
London { Household Cavalry ...	50	58	45
London { Foot-Guards	162	178	171
Isle of Wight	32	11	59
Winchester	72	46	52
Pembroke Dock	83	31	28
Manchester	127	92	177
Preston	85	75	87
Edinburgh	112	58	63
Cork	86	49	72
Fermoy	44	36	70
Limerick	71	48	117
Curragh	97	77	104
Dubliin	150	126	129
Belfast	46	74	89

These numbers show that the admissions at the first six stations, from London eastward, with the exception of Shorncliffe and Warley, were considerably more numerous in 1866 than the previous year; while at all those to the west and north of London the ratios were lower in 1866 than in 1865, with the exception of Belfast; but, in 1867, they all showed an increase over 1866, except Pembroke Dock.

The obvious inference from these data is, that in addition to simple exposure to contagion, which has hitherto been the only recognised source of venereal affections, there must be a factor of more general operation, which determines the greater prevalence of primary sores from time to time over a very large area; and, so far as the evidence detailed above goes, the influence of this seems to have become apparent in the south-east of England, in every case, the year before it was perceived in the remainder of Great Britain and in Ireland. That venereal sores should present the character of epidemicity was scarcely to have been expected, but its existence here having been established, there can be no doubt that it exists elsewhere as well. The military returns for foreign stations, however, are not so well adapted for bringing out this peculiarity as those for the troops at home, for the frequent changes of regiments, and the greater variation in the ages of the men, introduce elements of variation which mask the ordinary progress of the disease, while their influence cannot be eliminated with certainty. A recent illustration of the principle here advocated is contained in the remarks on the report of the Sanitary Commission of Bengal for 1869, in the *Medical Times and Gazette* of 24th December (p. 738), where it is stated that while the admissions from the whole class of venereal affections among the European troops in 1867 amounted to 166 per 1000, in 1868 they rose to 200, and in 1869 remained at 199 per 1000, and that the increase was not confined to a few stations, but embraced the whole country.

It may be asked whether the epidemic cause influences the "syphilitic" sores, to the exclusion of the "non-infecting," or *vice versa*; or whether it influences both. It has been mentioned above that the separation of these forms was not made on clearly defined principles, consequently the numbers in the returns cannot be accepted as satisfactory evidence as to their relative frequency. More trustworthy information may be derived from the admissions for secondary syphilis, though even these present peculiarities which require elucidation. Thus, while the foot-guards, in the ten years ending 1847, had an average annual ratio of admissions for venereal sores of 140·9, there were only 13·9 for secondary syphilis; and the cavalry, in the seventeen years ending 1847, had ratios of 79·6 and 8·1 respectively, while from 1860 to 1868 the whole troops on the home station, with an average ratio of admissions not very much greater than that of the cavalry previous to 1847, had one for secondary syphilis more than thrice as great. Or if the foot-guards and cavalry, for the period terminating in 1868, be taken by themselves, the average for the former is—for venereal sores 153·1 per 1000, and for secondary syphilis 33·2; while for the cavalry the ratios are 101·6 and 39·4 respectively, showing, as with the troops generally, a greatly increased number of attacks of the constitutional form of the disease, while the primary sores are not much more prevalent.

Three reasons may be assigned for this increase in the cases of constitutional syphilis, viz.: 1st, a more accurate diagnosis of late years than formerly; 2nd, a change in treatment in the primary forms of the disease; 3rd, an actual increase in the numbers of infecting sores. There has certainly been a greater discrimination exercised by Medical officers in the army of late years in designating their cases, and this will account for a portion, though but a small one, of the increase. The treatment of the primary sores has altered considerably; mercury is less often used, and the dieting in the majority of instances has been greatly increased. The exact influence of these changes there is no means of separating from the general result, though it is right to notice them here. Making every allowance for the united effects of these two causes, however, there is still evidence that there is considerable variation in the frequency of the attacks of constitutional syphilis from year to year. Thus, in 1860 (Table II.), the millesimal ratio of admissions among the whole force at home was 27·9; it rose to 33·4 in 1862, and remained much the same in 1863, after which it fell gradually to 21·1 in 1866, coincident with the minimum of admissions for primary sores. In 1867 the increase in the primary sores was accompanied by a very decided advance in the admissions for constitutional syphilis, which became still more numerous the following year. The same peculiarity is found in Table I.: the millesimal ratio of admissions for constitutional syphilis among the cavalry in 1830 was 7·5, in 1831 it rose to 9·6, from which it descended year by year with great regularity to 5·7 in 1836-37; next year there was a slight increase, which disappeared in 1838-39, when the ratio was 5·1 only; this gradually rose to 10·6 in 1843-44; the following year there was a retrogression, but in 1845-46 it again rose to its previous height, and in 1846-47 reached 13·9, the highest point among the cavalry in the seventeen years. In the foot-guards in London the fluctuations were much the same; the ratio of admissions was considerably lower in 1838-39 than the previous year; there was a slight increase in 1839-40, followed by a minimum in 1840-41; after this the cases became more numerous each year till 1843-44, and, as in the cavalry, fell off slightly in 1844-45, and attained their maximum in 1845-46, but fell the following year (with a great reduction in the primary sores), while in the cavalry, with an increase in the latter, the constitutional cases increased also. These variations, though for the most part small, having extended over several years with remarkable regularity, and those among the cavalry scattered over Great Britain and Ireland coinciding with the corresponding facts for the foot-guards in London, leave no doubt that they are not attributable to chance, but must have taken place in virtue of a general law, to which all local and personal causes were subordinated.

It is clear that as there were considerable fluctuations in the attacks of secondary syphilis from year to year, the primary sores which gave rise to these must have varied in frequency also; but, inasmuch as the secondary cases did not observe any fixed or nearly constant ratio to the primary sores, the aggregate of these must include a varying proportion of both infecting and non-infecting sores, so that both forms are influenced by the general factor which has been referred to above. It will be seen in Tables I. and II. that the maximum of constitutional cases does not always occur in the same year with that of primary sores, but frequently later; this is no doubt partly due to men who have contracted the primary disease in one year coming under treatment for the constitutional affection the following year, or from a few presenting themselves there a second time; but it would also show that, with a rapid increase in the number of primary sores, the non-infecting form was relatively more frequent than at a later period in the cycle, when the infecting formed a larger percentage of the whole. This point, however, requires further investigation.

CLINICAL OBSERVATIONS ON RICKETS.(a)

By C. CURRIE RITCHIE, M.D.,

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INFANCY is pre-eminently the period of acute diseases; and these, in a large majority of instances, owe their great fatality to the fact that their natural course is interfered with by some diathetic influence.

The four great diatheses of childhood are the strumous, the tubercular, the rachitic, and the syphilitic. Of these, "Rickets is, without question, the most common, the most important, and in its effects the most fatal, of the diseases which exclusively affect children."—(Jenner.) The fact that this disease is not confined to any one class of society, but pervades the wealthier as well as the humbler ranks—that it is one of the most easily preventible of diseases—and that it can generally be readily cured, if seen in the early stages—makes any addition to our knowledge on the subject of value.

The characteristic anatomical changes in a well-marked case of rickets are, doubtless, familiar to all; but I wish now to refer chiefly to the earliest indications, to the least-known phenomena, and to the treatment of the disease from a Medical point of view.

The observations embodied in the following remarks were made chiefly on children who came under my care as out-patients at the Hulme Dispensary, followed up, in some cases, at their homes, together with a few cases in private practice; and extend over the year between November, 1869, and November, 1870.

Speaking of the frequency of rickets among the wealthy classes of Manchester, according to his own observation, Dr. Merei(b) says: "I firmly believe that the said proportion (17 out of 86, or, roughly, 1 in 5) cannot be much above the real rate, when applied to the whole of the wealthy ranks." And he was informed by a friend, who saw large numbers of sick children at one of the dispensaries, that he calculated that 20 to 25 per cent. of all the children he saw there presented some rachitic symptoms.

With the view of testing the accuracy of these observations, I took notice of all the children who were brought to the Hulme Dispensary during the year just named, observing the number of rickety children, and the age at which they first came under observation. The following table shows the result:—

Age.	Male.	Female.
Under 6 months	5	2
Between 6 and 9 months . .	8	10
" 9 " 12 " . . .	28	19
" 12 " 18 " . . .	36	24
" 18 " 24 " . . .	27	22
Third year	16	9
Fourth year	5	4
Fifth year	3	1
	128	91

Total number of rickety children under 5 years of age	219
Total number of children under 5 years of age under treatment	728

From this table it will be seen that, out of 728 children under 5 years of age, 219 were rickety—as nearly as possible 30 per cent.; and, taking the total number of children under 2 years of age, fully 32·5 per cent. were found to be rickety. These numbers would have been considerably increased had care not been taken to exclude all those children who were re-admitted under my care during the course of the year; in some cases, re-admission took place three or four times.

These statistics do not materially differ from those collected by observers elsewhere. Thus, Ritter(c) found 31 per cent. of the children under 5 years of age rickety, in the Medical Poliklinik at Prague; and Dr. Gee found that 30·3 per cent. of the children under 2 years of age were rickety who came under his observation at the Hospital for Sick Children in London, during the year 1867.(d) As many of these children had been under treatment before I saw them, some of them for months, it is impossible with accuracy to determine the exact time of their becoming rickety; but I think we have ample grounds for concluding with Vogel and Ritter that rickets seldom begins later than the first year of life. True, many cases appear to do so; but my own experience leads me to agree with Dr. Gee,(e) who says that late rickets is almost always that form "which takes on, late, a tendency to increase; the children become slightly rickety under 12 months, yet they cut a few teeth, and are able to stand, or even to walk; then, some time in the second year, the rickets increases, and the children are taken off their feet."

It is maintained by Virchow and others that rickets may be congenital; and Guérin states that he has observed three cases in which this affection was present at the time of birth. No English observer, however, has seen such a case, and most writers disbelieve the existence of congenital rickets. How, then, does rickets begin? After a series of symptoms common to various disorders of nutrition, three phenomena are usually observed, which, as Sir William Jenner(f) says, "at once mark the nature of the disease, render the diagnosis easy, and enable us to predicate that the bone affection will show itself." These are—profuse perspiration, especially at night, about the head and neck, sometimes also of the upper part of the chest; desire on the part of the child to lie cool at night, evinced by his constantly throwing off the bed-clothes; general tenderness over the body.

The perspiration is frequently the cause of Medical aid being summoned: it is so profuse that it will run down the child's face in streams, and soak the pillow. In one case which I saw, the sweating was entirely confined to the right side of the head, neck, and chest, extending to a level with the fourth rib. The osseous deformity in this case was most marked on the left side, and there was visible pulsation of the right carotid artery, with fulness of the superficial veins of the entire scalp. When sweating occurs in other infantile derangements, it is not of this local character, and comes on usually after there is great impairment of the child's health. Thus, in struma or tuberculosis in children, sweating is frequently observed. The general tenderness and pains of rickets are attributed by Ritter to the result of emaciation, and Vogel considers them periosteal; my own experience points to their being most frequently muscular. The muscles may be wasted and flabby, although there is no apparent emaciation; and if examined under the microscope, their fibres are seen to be pale and soft, almost transparent, having the transverse striæ very feebly marked; there is no trace of fatty degeneration.

It is an interesting point of contrast with tuberculosis, that whereas in rickets the muscles may apparently be of their normal size and form, while the patient is unable to walk or to support himself, in tuberculosis they may not be above half the size, and yet the child is as active as if in health.

As the disease advances, this muscular debility increases, so that the patient may be unable to turn in bed, or raise himself. He lies perfectly motionless, perhaps, if undisturbed, for hours together.

In some cases these "predicatory" symptoms are but slightly marked; under such circumstances, before the appearance of the bone-changes, it is sometimes very difficult to distinguish rickets from tuberculosis. In two cases which came under my notice, it would have been impossible, but for careful observation of the temperature, to make this distinction. The subsequent appearance of osseous deformity confirmed the diagnosis.

(a) Being the substance of a paper read at a meeting of the Manchester Medical Society, December, 1870.

(b) "Disorders of Infantile Development and Rickets." London. 1855.

(e) "Die Pathologie und Therapie der Rachitis." Berl. 1863.

(d) "St. Bartholomew's Hospital Reports," vol. iv. 1868.

(e) *Ibid.*

(f) "A Series of Three Lectures on Rickets," *Med. Times and Gaz.* 1860.

What is the earliest discoverable alteration of the bones in rachitic children? The opinion advanced by Guérin,(g) that rickets commences in the lower extremities, then attacks the pelvis, extending finally to the trunk, head, and arms, has now been demonstrated to be erroneous. Vogel(h) credits Elsässer with having pointed out the earliest sign of rickets in his discovery, in 1843, of cranio-tabes, or soft occiput. This condition, however prevalent in Germany, is rarely met with in this country. It consists of a number of concavities or depressions, scattered over the whole of the posterior surface of the head; they are thinned portions of the occipital bone, about the size of a lentil to that of a bean, and feel "like cartridge paper," or "like an inflated dried bladder." I have never met with a case presenting this peculiarity during three years' attention to this subject.

My own observation leads me to consider beading of the ribs —the appearance presented by their enlarged ends under the skin—the first unequivocal sign of rickety bone-change. This appearance so attracted the attention of Boot, one of the three Physicians originally commissioned to investigate this disease, about the year 1645, that he proposed the name "tabes pectorea," before Glisson named it "rachitis." Beading of the ribs may be found, according to Dr. Gee,(i) "occasionally in infants of only three or four weeks old; at three or four months of age, rickets is really common." The earliest age at which I have met with beading of the ribs is three months; in that case, the mother first observed sweating of the child's head and neck about a fortnight before I saw her.

The only other change in the osseous system that I would now refer to is the delay in the closure of the anterior fontanelle. Normally, this takes place before the completion of the second year; but, in rickets, it often remains wide open for three or four years. I have seen it still unclosed at five years of age. Often, after it is completely closed, a slight flattening may be felt over it, indicating late closure.

An important diagnostic mark between the open, rickety fontanelle and the expanded, hydrocephalic skull consists in the fact that in hydrocephalus the fontanelle is elevated, more open, and, if much accumulation of fluid, the bones are more widely separated at the sutures, which are not bounded by a thickened osseous ridge; there is, too, greater disproportion between the skull and the face, the enlargement being more regularly globular; while in rickets, the fontanelle is invariably depressed, partly from the debility, and partly from osseous thickening of its boundaries. These conditions may, however, co-exist.

A blowing murmur heard over the anterior fontanelle, synchronous with the arterial pulse, has been set down as one of the signs of rickets. I heard it in about one in three cases where the anterior fontanelle was open. This, taken in connection with the fact that it is sometimes heard where no rickets exists, renders it utterly useless as a diagnostic sign.

Sir William Jenner has well shown that rickets is infinitely the most common cause of late dentition, which may be present when the rickety deformity is very slight. This effect on dentition is peculiar to rickets, among diseases of nutrition. I have seen several cases where, at three years of age, only six teeth had appeared. Sometimes teeth which have already appeared become black, and decay, owing, as Vogel has shown, to insufficient development of the enamel; in other cases, as in a lad of 5, who came under my care, the whole of the teeth drop out undecayed.

This modification of dentition is due to the arrested growth so characteristic of rickets, and which continues after the termination of the constitutional disease; hence the stunted stature of those who have been rickety. Wishing to trace, if possible, rickety deformities into adult life, I examined 133 persons above fifteen years of age who applied consecutively for advice at the Dispensary, 17 of whom were found to present unmistakable traces of rachitic deformity.

Not having seen any observations on the temperature of rickety children, and being at a loss as to the diagnosis between rickets and tuberculosis in two cases, as I have previously stated, I was led to observe the morning and evening temperatures of eleven children for eight days. These were all cases of uncomplicated rickets, and were taken by the same thermometer, the bulb of which was retained in the rectum for five minutes at each observation. The ages of the children ranged between ten months and three years, and the morning temperatures were all taken after breakfast, between 9 and 10 a.m., and the evening temperatures all between 9 and 10 p.m. The respirations and pulses were not taken, as they are subject to so many variations in children, and, besides, they seem to bear no definite relation to the normal temperature. The mean result of the eighty-eight morning observations thus obtained was 99·13° Fahr., and of the eighty-eight evening observations 97·44° Fahr.

On comparing these results with the average results of the normal temperature of children by Roger(k) and Finlayson,(l) we find that the morning temperature is lower in rickets by 0·54° (after adding to his axillary temperature, 0·7°, the difference between rectal and axillary temperature) according to the former, and by 0·28° according to the latter observer. We also find that, as in the normal, there is a varying fall in the evening temperature in rickets—a most important diagnostic from tuberculosis, in which, as has been shown by Ringer(m) and others, there is not only no evening fall, but there is a positive evening rise. This may be either higher, relatively, than the morning temperature, which may be nearly normal, or both may be high, with evening exacerbations, or both may be high, with exacerbations not confined to any one portion of the day.

Diminution of temperature is a diagnostic mark, also, of certain convulsive disorders in children—notably laryngismus stridulus. It is to Elsässer, I believe, that we are indebted for having pointed out the intimate connexion that exists between laryngismus and rickets. It is also noticed by Merei, Jenner, Gee, and others. In a series of careful observations by Dr. Gee,(n) on 102 cases of convulsions in children, he found that 24 cases were dependent on cerebral disease, 17 on various general causes, such as acute specific diseases, scarlet fever, and so forth, and of the remaining 61, 56 were in rickety children. The same observer found 48 out of 50 cases of laryngismus, of which he took notes, to be "unquestionably rickety." These facts bear obviously on the question of treatment.

So frequent is the co-existence of bronchial catarrh with rickets, that one observer, Friedleben,(o) thought it was the fore-runner and special cause of rickets, through an altered condition of the blood, produced by disturbed respiration. The frightful mortality of bronchitis, hooping-cough, etc., among rickety children is due to the mechanical resistance to the entrance of air into the vesicular structure of the lung, afforded by the mucus accumulated in the bronchial tubes, which the child is unable to expel from weakened inspiratory power. This is due to two causes—to the enfeebled muscles of inspiration, and to the softened ribs. Hence, also, the invariable occurrence in a marked case of rickets of pulmonary collapse and emphysema. The collapse is directly consequent on the recession of the ribs during inspiration, and occurs in a sort of groove along the anterior margins of the lungs; its situation corresponds to the inward projection of the ribs at their junction with the cartilages. This groove separates the healthy lung from its emphysematous free margin, produced by the thrusting forward of the sternum during inspiration. "White patches," such as we find on the adult visceral pericardium, are also present in many cases of rickets (Jenner). They are found a little above the apex of the left ventricle, where it impinges against the fifth rib, and the junction of its thickened internal end with its cartilage. If there be great deformity, these "white patches" will sometimes be found also on the spleen. They consist of fibrous tissue, and may be smooth or villous on the surface; their occurrence in rickety children goes far to confirm the "attrition theory" of their formation.

The only other symptom of rickets I would now notice is the condition of the viscera. So long ago as the days of Whistler and Glisson, the condition of the liver and spleen had attracted notice; little attention had been given to the subject subsequently, however, till Sir William Jenner published his oft-quoted Lectures. He pointed out the changes which take place in the spleen and lymphatic glands specially, but also in the liver and kidneys. He showed that, just as in the osseous system, we never find a single bone rickety and all the rest unaffected, so with the glandular system: when affected, the whole system is involved. He described the enlargement which often takes place as being due to a kind of albuminoid infiltration, which, however, differed from the lardaceous or amyloid infiltration of Virchow in the absence of the characteristic reaction with iodine and sulphuric acid. Sometimes the splenic and glandular affection precedes the bone-changes, which may be slight, while the gland affection is well marked.

(g) "Mémoire sur le Rachitis." Paris. 1857.
(h) "Lehrbuch der Kinderkrankheiten." Erlang. 1863.
(i) *Loc. cit.*

(k) "Archiv. Gén. de Médécine." 4e serie, tome v., p. 294.
(l) *Glasgow Medical Journal.* February, 1869.
(m) "On the Temperature of the Body as a means of Diagnosis in Phthisis and Tuberculosis." London. 1865.
(n) "St. Bartholomew's Hospital Reports," vol. iii. 1867.
(o) "New Sydenham Society Year Book." 1871. P. [illegible].

More recent observations on this subject by Dr. Dickinson(p) show that the supposed albuminoid infiltration is really not an infiltration, but a mere irregularity of growth, in which hypertrophy of the fibroid or epithelial elements takes place. This is conjoined with a deficiency in the amount of earthy constituents, showing the oneness of the affection by the strictly analogous condition which is found in the bones—viz., increased cell structure (preparatory to the process of ossification) and deficiency of earthy salts. In the liver, Glisson's capsule, and in the spleen the trabecular element is hypertrophied. Unlike the lardaceous disease, this rickety hypertrophy seems to produce no interference with any function of the affected glands, and under favourable circumstances yields readily to treatment.

Dr. Dickinson further points out that rickety organs lack the peculiar bacony translucency which characterises lardaceous infiltration, and that the bloodvessels seem to be unaffected in rickets. He considers this condition peculiar to childhood, especially to the first four years of life.

The following case, in which the spleen, liver, and probably kidneys, were affected, shows how amenable it is to treatment:—A female child, aged 3½ years, was brought to me on January 2, 1870, suffering from abdominal enlargement. She had been reared on the bottle till the age of nine months, then got farinaceous food in addition; had walked at eighteen months, but was now unable to walk; had got teeth very early, but now all the teeth in the upper jaw were decayed down to the crown; had complained for many months of feeling tired on the least exertion; could not bear to be touched; perspired very much about the head, and tossed off the bed-clothes. Her aspect is that of a well-nourished child, but she is intensely anæmic—her cheeks being of the colour of a tallow candle, and her gums, lips, and buccal mucous membrane having only the faintest tinge of pink; has well-marked beading of the ribs, and a slight degree of "pigeon-breast." Abdomen prominent; muscles of abdominal wall flabby; spleen enlarged—its outline can be traced through the parietes—it extends from just within the edge of the lateral aspect of the thorax for three and three-quarter inches downwards and inwards, its inner border almost touching the umbilicus; liver also enlarged, extending below the ribs for two inches—edge feels harder and sharper to the touch than normal. Her appetite is poor—will eat nothing but eggs; motions "like dirty soap-suds, and have a fearfully bad smell;" passes very little water (only about three ounces in the last twenty-four hours): it contains no albumen or excess of phosphates.

She continued under treatment till August 13, at which time, nearly seven and a half months after she first came under observation, I note: "She has now become fat and rosy; has gained two pounds in weight within the last month. Spleen considerably diminished; is now almost entirely out of reach, and can just be felt close under the ribs. Liver extends only about half an inch below the ribs."

When the spleen is enlarged, we shall most readily detect it by placing the fingers of the right hand just below the twelfth rib and outside the mass of the lumbar muscles, while the fingers of the left hand are placed exactly opposite, pressure being made between them. If the spleen is not felt, it may be considered not to be enlarged, provided the hands have been properly applied.

The increase of the white corpuscles in the blood is comparatively slight in rickety spleen, as Dr. Dickinson pointed out; this I was enabled to verify in the above case.

The treatment of rickets requires as its essential condition the restoration of healthy nutrition—hence diet and hygienic measures are of the utmost importance. Regular feeding at stated intervals; abundance of milk with a fourth part of lime water, and the addition of a teaspoonful or two of cream to the half-pint; as the child gets older, a little beef-tea with bread, eggs, or light puddings; if potatoes be given, they must be finely mashed with a little meat gravy; after eighteen or twenty months, meat twice a day, or strong soup in small quantities—these are the chief dietetic indications.

Daily tepid chalybeate or salt water baths, plenty of warm woollen clothing, warm but well ventilated rooms, and as much dry open air (bracing sea-air to be preferred) as practicable, are points which will at once suggest themselves.

As to strictly medicinal treatment, it has for some time been the stereotyped phrase in our text-books—"There is no specific remedy for rickets." At one time it was thought that rickets was simply a condition in which there was a deficiency of phosphate of lime in the system, and accordingly that and other lime salts were largely administered for the specific purpose of supplying its alleged deficiency in the system.

A more recent effort in this direction is the introduction, by Dr. Sansom, of the sulpho-carbolate of calcium as a remedy in rickets. The direct compounds of carbolic acid having been found to be "very unstable, unpleasant, and for the most part insoluble," a new series of compounds of basic oxides of the metals with sulpho-carbolic acid—formed by the mixture of equivalents of sulphuric and carbolic acids—has been procured by Dr. Sansom. He says he has used "the calcium salt (which is one of the most soluble known) in rickets . . . . with uniformly good results, in doses of three to five grains, or more." With the view of testing the therapeutic value of this salt, I have used it for the treatment of rickets in twenty-six cases, for periods varying between six weeks and five and a half months. I generally began with three-grain doses, increasing by degrees up to ten grains, and have ordered it in the form of powder, with a little magnesia, or with sugar.

I regret to say, however, that I have not met with the successful results obtained by Dr. Sansom, as in only two cases did any real benefit seem to follow the administration of the sulpho-carbolate, and in these the hygienic and dietetic conditions were so glaringly vitiated, that I am convinced the improvement was justly due, not to the drug, but to the improved regimen.

Cod-liver oil is one of our most important remedies. Its efficacy is greatly enhanced by a combination with iron, as I have repeatedly verified, by experimenting with a series of cases under similar conditions. The phosphate of iron is the preparation which I have found most benefit from; it may be given either as the simple syrup, or, as I have found most useful, in the form of Parrish's compound syrup of the phosphates; in private practice, I have found children take it remarkably well with the cod-liver oil.

Of course, before administering cod-liver oil and iron, we must see that the motions have become healthy and the tongue clean. I have usually employed Sir William Jenner's plan for this purpose—viz., to give a single dose of an aperient, such as a teaspoonful of castor oil, or a little gray powder with jalap, even though the bowels should be rather loose—as the stools are frequently most offensive, from the acidity which is always present in these cases, and which is relieved by an occasional dose of rhubarb, with soda or magnesia.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

THE MIDDLESEX HOSPITAL.

CANCER OF AN IMPERFECTLY DESCENDED TESTICLE—REMOVAL OF THE DISEASED PART—RECOVERY.

(Under the care of Mr. HENRY ARNOTT.)

J. B., a farm-labourer, aged 50, came up to the Middlesex Hospital from Sussex, on September 20, 1870. He was a hale-looking man, a widower, with five children, had always enjoyed good health, and knew of no cancer in his family. The left testicle had never fully descended, although sometimes lying half-way down the scrotum, and he had always been accustomed to feel some pain at times in this testicle. Some sixteen months before admission, while stooping to tether a calf, the animal butted at him behind, and struck him severely on the perineum. Soon after this the pain in the testicle became more severe and frequent; the left side of the scrotum enlarged, and he consulted a Surgeon. His work prevented him from submitting to the prescribed treatment, and the pain subsiding he thought little of it for a year; but then, the pain increasing greatly, and being accompanied with much hardening of the part, he consulted the Surgeon again, and was sent to the Hospital.

On admission, the following note was taken of the condition of the parts:—There is a swelling about the size of a small cocoanut occupying the left half of the scrotum. The swelling extends up the cord, and there is some fulness in the abdomen where the cord disappears. There is evidently an accumulation of fluid in the tunica vaginalis, but one also feels in the position of the testis a large rounded hard mass, slightly lobulated, and feeling very much like the testis enveloped in a thick tunic of cartilage, which is partly open behind, and which extends for a considerable distance up the cord, apparently ceasing abruptly at the external abdominal ring. There is, however, a very considerable thickening extending along the cord until it fades in the abdomen, resembling much a hydrocele of the cord, and having a marked impulse with cough. There is no enlargement of the inguinal glands, nor can deep manipulation detect any fulness over the lumbar spine. The position of the patient has no appreciable effect on the tumour, nor can the fluid in the scrotum be forced into the abdominal cavity.

(p) *Medico-Chirurgical Transactions*, vol. lii. 1869.

On September 22, Mr. De Morgan and Mr. Lawson examined the patient, and at Mr. De Morgan's suggestion the scrotum was tapped, and three or four ounces of clear yellow fluid drawn off. No definite microscopic elements were found in this fluid, which seemed to be pure serum; and although the tumour could now be more distinctly felt, no fresh point was elicited. The questions as to the form of disease present, and the communication of the tunica vaginalis with the general peritoneal cavity, remained open, but it was judged right to attempt the removal of the tumour.

On October 4, therefore, chloroform was administered, and Mr. Arnott proceeded to remove the testicle in the ordinary manner. When cleared from the skin, the tumour was found to be continuous with the enlargement extending up the cord. This portion, evidently containing fluid, was punctured, and some six or eight ounces of clear yellow fluid escaped, leaving a cavity with greatly thickened walls. On this puncture being enlarged, the finger passed up easily into the abdominal cavity, the swelling consisting of a greatly thickened tube of peritoneum, which communicated with the thickened tunica vaginalis below. The spermatic cord was felt lying along the back of the canal, and it was tied by passing a nævus needle armed with stout cord round it, so as to include as little as possible of the thickened peritoneum with which it was incorporated. All below this point was then cut away, a strong solution of chloride of zinc sponged well into the wound, three or four carbolised silk ligatures applied, the wound closed with wire sutures, the threads brought out of the wound, and the whole dressed with carbolic acid oil and lotion.

The after progress of the case was uniformly favourable. The temperature was never raised two degrees, the man experienced no more pain, and the wound slowly healed, with slight suppuration. Complete convalescence was retarded by the stout ligature about the cord being prevented from coming away in the usual time. At the end of three weeks, as it seemed as tightly fixed as ever, a gradually increasing weight was fixed to its free end, and in a few days it came away. The wound afterwards rapidly granulated, and the man left the Hospital on November 22.

For some days before returning to the country, however, the patient complained of pain in the back, reminding him of his former sufferings, so that it is not unlikely that the disease was by this time beginning to affect the glands in front of the lumbar spine. Examined microscopically, the entire testis, including the epididymis, was found converted into a mass of soft cancer. Cells of very varied shape and size, and containing generally single oval nuclei, with bright nucleoli, were densely packed in the large meshes of a fine alveolar network of fibroid material. In most parts this network could only be seen after pencilling the section, but near the surface the oval meshes were smaller and more readily seen. The greatly thickened tunic, which had felt like a cartilaginous capsule, enclosing the testis, was found to be made up of the dense fibroid substance usually met with in tissues indurated by chronic inflammation, with a scanty amount of nuclear growth; and at the places where the cancer seemed to be limited by this tough capsule, traces of a substitution of the cancer for the inflammatory tissue could be seen, the fibroid substance forming the loose network, and large irregular cells taking the place of the small nuclei. The whole of the cancer in this region seemed to have been removed.

The case is of interest, as having been exceedingly difficult to diagnosticate, and as adding one more to the many instances now on record of cancer attacking an imperfectly descended testicle. The very singular thickening of the whole tube of peritoneum descending into the scrotum, and the unusual induration of the tunic investing the testis added materially to the obscurity of the case. The absence of all untoward symptoms after the operation, although the peritoneum had been so largely interfered with, is also worthy of note. In this respect the case seemed to resemble some of the operations on old herniæ, in which the freedom from peritonitis has been ascribed to the altered condition of the serous membrane from long-continued pressure, rendering it less liable to acute inflammation.

FRACTURE OF THE STERNUM, PELVIS, AND SPINE, RESULTING FROM A JUMP FROM A WINDOW—DEATH ON THE FOURTEENTH DAY—AUTOPSY.

(Under the care of Mr. DE MORGAN.)

M. B., a dress-maker, aged 28, was admitted into the Female Accident Ward, on May 8, 1870, having jumped from a window twenty feet from the ground while under the influence of alcohol. She fell heavily on the left side, and remained insensible for twenty minutes. On admission there was paralysis of the left leg, but only of motion; this seems to have increased very shortly after admission, as immediately after she was put into bed, the nurse saw her raise her left leg a little. There was no loss of sensation anywhere, and she was perfectly conscious; she could not pass her urine. A catheter introduced drew away urine mixed with blood, and she complained much of pain in the lumbar region and about the pelvis when pressure was made. Four days later, after the catheter had been used regularly, the urine began to pass away involuntarily, but not now mingled with blood. There was also some diarrhœa following the use of purgatives to procure movement of the bowels. The paralysis of the left leg remained unaltered; but there was no loss of sensation—if anything, there was hyperæsthesia of the skin over the whole left leg.

Three days afterwards, the diarrhœa continuing, the urine still dribbling away, and the paralysis remaining in the same state, the woman meanwhile getting rapidly weaker, there was noticed for the first time a projection at the junction of the manubrium with the second piece of the sternum—evidently a fracture which had not before attracted attention. The patient gradually lost strength, and died on May 22, fourteen days after admission.

The autopsy was made by Mr. Morris, the Surgical registrar, who made the following report:—Slight rigor mortis; lividity of posterior parts; slight commencing sores over nates; body generally well nourished; thoracic viscera healthy. Sternum: At the junction of the manubrium with the second portion of the bone was a transverse fracture. On examining from within, the body being opened from behind, the pleural lining was uninjured; but on scraping this away, pus oozed up from the broken edges of the bone. A small thin flat lamina of bone connected with the lining membrane was detached, and on removing this, a larger and more anterior piece was taken away, these two together forming nearly the thickness of the bone at the seat of fracture. Spine: The first lumbar vertebra was broken in three ways. Firstly, the left transverse process was quite detached from the rest of the bone; secondly, a vertical fracture of the body; and thirdly, a transverse or horizontal fracture, immediately below the substance between it and the twelfth dorsal. The broken surfaces of bone were carious, and the anterior intervertebral ligament partly separated and ragged-looking. The muscles on the left side of the spine and the gluteal showed signs of bruising and ecchymosis. The cord was uninjured, as were the nerves of the cauda; the dura mater sheath at the seat of fractured vertebra was slightly stained with blood-clot. Pelvis: The left ilium was fractured behind, the fissure extending from near the posterior superior spinous process downwards to the large notch. The pubis was fractured in two places on the left side, through the horizontal ramus from above into the obdurator notch, and downwards and backwards through the descending ramus. There was considerable cystitis, and both kidneys were found studded with small abscesses, the pelves and ureters being also inflamed and filled with creamy pus.

ST. MARY'S HOSPITAL.

CASES OF NEUROTIC DISORDER, WITH UNDULY LARGE URINARY EXCRETION, WITH CLINICAL REMARKS.

(By C. HANDFIELD JONES, M.B. Cantab., F.R.S.)

Case 1.—E. C., female, single, admitted February 11, 1870. Ill last eighteen months; laid up seven months. After a slight fall on her left side, she felt pain in that side going through it, aching in the left shoulder, and severe palpitation of the heart. Last seven months these symptoms have got worse; she has also lost flesh, her appetite has been very bad, and she has had nausea after all her food. Menorrhagia has existed eight months, the flow lasting a week sometimes. She feels very weak now. Pulse 120; weak; jerky; left rather larger than right. Is very nervous; her muscles are in a state of marked tremor, those of the hands especially. Respiration 50 per minute. Cheeks are flushed very much indeed; quite of a deep red. Temperature of right cheek, 96·8°. Good breathing heard in both backs and fronts. The lower lateral parts of chest are expanded, as in very deep inspiration. The circumference just below the mammæ is 27½ inches; the space from the top of the sternum to the xiphoid is 7½ inches; that from the clavicle to the lowest ribs is 14 inches on the left, about 12 on the right. The lungs are evidently large, and come down low in front, occupying the præcordial region. The heart is much displaced, beating in the epigastrium, and not in the normal site. Its sounds are clear, free from bruit; the first resembles the second. Breath very short if she exerts herself. Much flatulence. Urine not albuminous; sp. gr. 1017. A subcutaneous injection of only ♏v. of liq. opii sed. caused, March 2nd, considerable faintness, lowered the pulse for some minutes to 60, and made the face pale. Three days later the pulse was 150 or 160, small and weak; it gave the sensation to the finger of almost a continuous thrill. March 12.—Is rather better; sickness ceased; urine deposits a copious sediment of large crystals of uric acid and urates; sp. gr. 1042; contains no sugar; darkens extremely with nitric acid, and becomes nearly solid from crystallisation of nitrate of urea. The total urine of March 14 to 15 (twenty-four hours) was 24 oz., sp. gr. 1027; the total urea was 316 grains; the total uric acid 3 grains; total phosph. acid 45 grains. Her weight on 17th was 95 lbs. March 19.—Temperature 37·6° C. (99·7° F.). March 26. —Urine clear; deposits a large sediment of phosphates; sp. gr. 1082. April 27.—Weighs 103 lbs.; total urine, 32 oz.; sp. gr. 1017; total urea, 217 grains; total phosphoric acid, 39·7 grains; uric acid, 0. She left the Hospital soon after, in a somewhat improved state. On March 16 she was ordered opii gr. ½ t.d.; increased on 25th to opii gr. ¾ t. d.; and on April 15 to opii gr. ½ 4tis hôris. On the 17th the drug was omitted. She also took, from April 5 to 23, pot. bromidi gr. 25+aq. ʒj. quater die. No other remedies which she took before the opium was given had any noteworthy effect.

The prominent features of this case are excessive hyperexcitability of the sensory and motor nerve apparatus, dependent in some measure probably on the menorrhagia; extreme debility; excretion of urea and phosphoric acid in quantities too large, if not actually for her system when in health, yet certainly for the same when its vitality was seriously impaired, and very little food taken; and, finally, a notably diminished excretion coinciding with a gain of 8 lbs. in bodily weight. The latter change may be thought due to her having taken more food during the latter part of her stay; but I do not think that the increase was really effected in this way, for her appetite remained very poor during most of the time. The opium seemed to have the effect of lowering the specific gravity of the urine, and of increasing its quantity. The total amount of solids was, however, lessened, though the urinary water was increased. The result of the case was nothing brilliant, but affords some evidence, I think, that excessive renal excretion may be a marked feature of neuroses, and may aggravate the morbid condition, while improvement ensues on its being checked. The cause of the azoturia in most cases of the kind seems to be a paresis of the renal plexuses, allowing more tissue-change to take place than is normal. The centres which regulate secretion are involved with others in the pervading prostration, just as occurs in fevers, but those regulating temperature remain exempt. These cases seem to form an interesting link between the fevers and the neuroses. The weakness and smallness of the pulse, as is usually the case, were proportionate to its rapidity, and may be accounted for on the view that the ventricle did not relax sufficiently to fill itself with blood before it contracted again. The rapidity of the cardiac action may be referred with much probability to a paresis of its regulating nerves derived from the vagi. If the pulmonary filaments were in the kindred state of hyperæsthesia, it would go far to account for the distended state of the lungs, the inspiratory muscles being unduly stimulated to contract. This view assumes that emphysema was not the cause of the distension, which, however, may be erroneous. It seemed to me that there was more respiratory murmur than is heard in advanced emphysematous change.

BIRMINGHAM GENERAL HOSPITAL.

TWO CASES OF TREMOR: THE ONE ACTIVE (PARALYSIS AGITANS), THE OTHER PASSIVE.

(Under the care of Dr. J. RUSSELL.)

THE cases which follow present examples of two well-known forms of that peculiar alternate rhythmical action of muscles to which the appellation tremor or trembling is ordinarily given, although, as in the present instances, the movements often far transcend in severity the ordinary acts to which such a name is properly applicable.

In the first case, one of local paralysis agitans, the tremor was of the so-called *active* kind. It occurred indifferently, whether the muscles were under the influence of voluntary contraction or whether they were at rest so far as volitional impulse was concerned; the stimulus to movement was independent of ordinary motor effort. In the second case, the tremor was of the *passive* kind, taking place only during volitional effort; but was not limited only to those parts on which the stimulus of the will was directed; it affected a far wider range of muscles.

Both these cases alike afford evidence of instability of nerve tissue, and depend upon a depressed condition of nerve vitality in some part of the central organs. Their symptoms are due immediately to abnormal discharge of the nervous stimulus. Some remarks made in this journal (vol. ii. 1867, p. 642), by Dr. Hughlings-Jackson, upon the analogous condition of spasm as contrasted with choreic movement, seem to afford an excellent expression of the different ways in which such instability is manifested in each of the present cases respectively. Commenting on the proper function of nerve tissue, Dr. Hughlings-Jackson observes that this particular tissue is designed, in the first place, to store up force for future expenditure; then to expend such force in such a manner as to develope certain orderly movements; and, lastly, so to develope these movements as to maintain them in correspondence with special excitations, thereby bringing them into harmony with the whole system.

Now, in the first case, that of paralysis agitans, the first-mentioned condition of this compound function fails: there is no power to store up nerve force, which, therefore, is expended as quickly as it is generated; and the moment that emotional energy or volitional effort give birth to an augmented quantity of the force, there is nothing to prevent its immediate discharge, and increased violence in the tremors is the result. A curious converse statement, agreeing entirely with the representation just given, is made by Dr. Ball in a lecture on Shaking Palsy, reported in this journal on October 1 (p. 386), to the effect that on the approach of death the shaking ceases, generation of nerve force falling into abeyance. In the other class—that, viz., of passive tremors—illustrated by my second case, nerve force is stored up, and, under ordinary circumstances, the muscles are at rest so long as voluntary effort is not made; but when discharge of force is designed to take place, for the purpose of effecting some voluntary act, such discharge is not restrained within its intended limits, but occurs in a disorderly manner, and not in harmony with the operation of the entire system.

It is further to be remarked that an obvious difference may be observed as to the manner in which ordinary voluntary movements were effected by my two patients, and that this difference may possibly indicate a corresponding difference in the seat of the morbid change in each. The first patient was quite able to perform any voluntary act, notwithstanding his spasms; he retained the power of arranging muscular action for effecting purposive movements, thus separating his malady from chorea, in connexion with which it is sometimes spoken of; the second patient, on the contrary, retained very imperfect power of co-ordination; his voluntary movements were very disorderly. Referring again to Dr. Jackson, he remarks that the more complex the movements the wider and more varied must be the relations sustained by the units in the nerve-centre which effect such movements, and the higher in the motor tract must such centre of movement be situated; the most complex movements are those performed by the highest part of the motor tract in the cerebrum, where they are co-ordinated with the mental processes; the most simple, those performed by the nuclei of the nerves.

It may therefore be suggested that in my second patient the disease was higher in the motor tract than in my first; and it is to be observed that the injury to which he referred his illness was inflicted upon the occipital region of the skull.

Were it safe to trust the statement of the patient, as to the situation of the facial paralysis in the attack of hemiplegia, on the opposite side to that of the paralysis of the limbs—which may be doubted, though his account was singularly precise and positive—there might be supposed some reason for imagining that the pons or its neighbourhood was the seat of the mischief; though it must be admitted that confirmatory evidence is not afforded by other details.

I may refer to a similar ease, though more limited in the range of movement, reported by Dr. Broadbent (*Medical Times and Gazette*, July 9, 1870).

Case 1.—This was one of local paralysis agitans confined absolutely to the right upper extremity. The patient, aged 55, male; he was lefthanded, or was more probably ambidexter. The tremors were severe, most so in the forearm; then in the upper arm, where the triceps was most affected. The mode in which the tremor was distributed in the upper extremity appears to illustrate a statement which has been made, that connected muscular groups are represented by particular nerve centres: for it was to be observed that the movements were not confined to the upper and forearm, but involved the entire mass of muscles moving the arm—the great pectoral, the deltoid, the infra- and supra-spinous muscles of the scapula, and those between the scapula and the vertebral column, though to a much less extent than the intrinsic muscles of the arm. The movements originally began in the hand, perhaps most severely in the first finger. The man retained power of co-ordinating the affected muscles. The muscles generally were flabby, but those of the trembling arm contracted firmly, and answered well to faradisation. The upper arm, however, had lost three-quarters of an inch, and the forearm less than half an inch in girth. Cutaneous sensation was perfect; there was neither pain nor cramps.

The disease has been present a year and a half. It ascended the arm very gradually. During the first year he could command the tremors by placing his arm in a certain position, now he can no longer do this; but at times the movements intermit, especially when the mind is not directed to the limb. It is curious that the movements are lessened by fatigue; they are quieter in the evening, when he can sometimes write a little, though they come on as he dips his pen in the ink. They cease entirely during sleep, and completely during the passage of the continuous current; the cessation is immediate with the entry of the stream of electricity. They are most powerfully influenced by emotion, and by voluntary effort, even by thinking about the complaint. No cause whatever can be ascertained, nor has any benefit resulted from treatment. A continuous current from thirty cells has been employed perseveringly for three months, without any other advantage than that of arresting the tremors for the time. Chloral produces only temporary cessation.

Case 2.—T. H., aged 27. This patient presented the following remarkable abnormity of the motor functions:—Whilst in a state of perfect rest, the body and limbs were quite quiet; but muscular exertion of every kind—that of speaking as much as any other—brought on a succession of rhythmical, alternate movements, in the direction of flexion and extension, affecting the trunk, neck, and upper extremities—commencing gradually, but rapidly attaining such great violence as to shake the entire body; they were brought to an end by the body and limbs relapsing into a state of volitional inertness. The lower extremities were affected in a much slighter degree, but were not free, the walk having a peculiar springing character, and the patient occasionally falling. The movements were completely arrested by the patient assuming any posture which brought all the muscles into steady counteracting action, whilst they were induced by calling a particular set of muscles alone into play. Thus, in sitting, whilst under their influence, he would draw up his legs, bend his body well forwards, and flex his arms against his chest. Or he could stand erect, with his arms extended vertically above his head, or horizontally outwards, but not forwards. His food was cut up, and he fed himself by grasping the right wrist firmly with the left hand, at the same time resting his elbows on his knees, bending his body, and meeting his food half way with his mouth. Any arrangement of muscular action was impracticable; speech, which, like all other movement, produced the agitation, was panting and interrupted—word by word, syllable by syllable being jerked out separately by a distinct squeeze of the expiratory muscles. He drew in liquids by means of a tube which he carried with him. The facial muscles—those of mastication, of the tongue, palate, and eyeballs—were natural; respiration was normal. There were some remains of the left hemiplegia at the opening of his attack. Electro-motility was normal, as was sensation. Dr. Welch reported the optic disc healthy; heart and urine normal. He dates his illness from a blow four years ago, which threw him violently on his occiput, and stunned him for an hour. He had a large scalp wound, but there was no evidence of fracture. He was left with complete *left* hemiplegia, involuntary evacuations, and loss of articulation. He is very positive that his face was *drawn* to the *left* side, illustrating his assertion by pulling up the left angle of the mouth; the orbicularis palpebrarum was not involved in the paralysis. He was able to resume work in four months, though he has remained feeble in his left side. The spasmodic movements were gradual in their approach, but six months ago underwent sudden increase. He is very clear in asserting that he fed himself at supper, but on the following morning required to be fed, and has remained so ever since.

ROYAL INFIRMARY, EDINBURGH.

CASE OF ENLARGED CLITORIS AND COHESION OF THE LABIA IN A CHILD, TAKEN FOR HYPOSPADIAS—TREATMENT.

[Reported by Dr. J. R. Hardie.]

A. E., aged 7, was brought by her mother to Dr. Matthews Duncan, in order to ascertain his opinion with regard to her sex. The following were the appearances presented by the genital organs on examination:—Firstly, the clitoris was enlarged; it measured about one inch and a half, resembling the penis of a boy of about 7 years of age. Secondly, a short way behind and below the clitoris was an opening, through which the urine was discharged in a jet, as if from the urethra; it easily admitted an ordinary uterine sound. Thirdly, from this orifice to the anus there was no opening, nor any trace of one, the soft parts being closely adherent. The raphe of the perineum was continued up to the posterior border of the orifice described. Fourthly, on passing two sounds through the opening referred to, one was found to go upwards and forwards in the direction of the bladder; the other was carried further back, and then observed to glide upwards. Dr. Duncan conceived that the first instrument had passed into the urinary bladder, and the second into the vagina.

Treatment.—Dr. Duncan, with a straight bistoury, slit up the perineum from the opening before mentioned backwards in the mesial line to the extent of about one inch. The tissues divided were thick and vascular; some bleeding followed the operation. A piece of wet lint was inserted between the lips of the wound; the child's mother getting instructions to keep it in for a few days. As premised, the incision brought into view two orifices, one in front leading to the bladder, the other lying behind it and leading to the uterus, being the orifice of the vagina.

Remarks.—This case is remarkable, inasmuch as we have in the same subject a greatly enlarged clitoris, and cohesion of the labia in such a manner as to leave no trace of an entrance into the bladder or vagina, except in front, where an opening exists through which the urine is discharged. If a superficial or careless examination of such a case be made, one may fall into the error, which several eminent Medical men did in this case, of considering it one of hypospadias, and the child to be a male. The nature of the union of the labia in this instance differs somewhat from that which is usually met with, being firm, and resisting any attempts at separation by means of pressure on each labium at the same time. The majority of cases of this kind generally yield to pressure so applied, no further treatment being at any time required. There was no imperforate condition present in this case; its dissimilarity from other cases of a like kind arose from the largeness of the clitoris. It was this circumstance which misled the Physicians alluded to from a correct view of the case. A case of a similar nature was recently operated on by Dr. Duncan; it was sent to him from the Surgical department of the Hospital as a case of imperforate hymen. Here the orifice of the vulva was taken for that of the urethra, as in the former case. The labia were separated, and the normal condition of the vulva restored, simply by distracting pressure on either labium; there was no bleeding.

Trichiniasis.—Several cases of this formidable disease have occurred on board the German barque *Victoria*, which recently arrived at Hobart Town from Hamburgh, after a tedious voyage of 120 days. The disease in the present instance is supposed to have been occasioned by partaking of an infected ham.

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Medical Times and Gazette.

SATURDAY, JANUARY 7, 1871.

"PROGRESS! FREE THOUGHT! UNTRAMMELLED LIVES!" FOR WOMEN.

Goddess of Impudence, befriend us! Venus, too! (not that cold being once called Urania, who presided over chaste love and tame married life)—but thou, loosely girdled goddess, who wast worshipped at Paphos and Cnidos, help us, whilst we lay before the readers of the *Medical Times and Gazette* the efforts of thy disciples to give freedom to thy sex. Let us away with all the old musty notions that woman should be a stay-at-home, bashful, shamefast creature, pure in thought and speech, caring for her children, subject to her husband, faithful to one man till death them do part. For lo! in that land of freedom, where thy cousin Mercury inspires Erie stock-jobbers and Pennsylvania repudiators, have arisen prophetesses who teach women to see the folly of modesty and chastity; who will inure their cheeks so that no word shall be able to raise a blush; who will bring into broad daylight all that it has heretofore been thought decent to hide, and, as the moral poet Byron said, "not leave much mystery for the marriage night."

Be it known, then, to our unsophisticated readers, that the words at the head of this article—"Progress! Free Thought! Untrammelled Lives!"—form the motto of a weekly newspaper, intended, as the title also says, to "break the way for future generations," and published in New York at 10 cents per week, by two women, named Woodhull and Claflin—at least, they say they are women, and use the Christian names (we beg pardon for the word Christian; we mean the sexual prefix or fore-names) commonly adopted by women—Victoria C. Woodhull, and Tennie C. Claflin are their designations in full, and, as they say they are women, we will not presume to dispute their word.

Women, say our priestesses, have wrongs, and these must be righted. "Upon the relations of the sexes does the future condition of humanity depend." What, then, are the present relations of the sexes; and how are they to be modified for the benefit of future humanity? One point is, that religious authority must be discarded. So long, say our prophetesses, as there are persons who teach that "it is shame for women to speak in church," and that "it is the duty of wives to submit themselves to their husbands," so long may the advocates of the "Equality of Woman Question" expect to meet with a bigoted and stupid opposition. The Christian religion, then, is the first thing to be kicked out of the way in the footsteps of "progress" and enfranchisement of thought.

The next *item* is political. Women are to claim absolute equality with men at the hustings, and in every other social and political respect. "Why," it is asked, "are men only to be counted as citizens, and entitled to the suffrage?" "Why," it is asked, "this discrimination in the Constitution as against women? Why should it not have been against men instead? and why should not the women citizens of the United States, they being in the majority, rise up, and declare that they, instead of men, are the enfranchised class?" We say, too, Why not? and, as a novelty in these bad times, we suggest to the women that there would be some fun brought back to earth if the women would make a *coup d'état;* if they would get out of bed some night, seize the arms, displace sentries, get hold of the ships, fortresses, and Government offices, and instal themselves, as the true Gynæcratical Republic, with a female army, navy, and Congress.

But these are mere trifles. Political freedom is nothing. It is woman's *self* that needs emancipation—

"It is superlative nonsense," says a correspondent, "to talk of woman's rights, whilst ignoring her first, fundamental, only right—the right to herself. Individuality is the basis of all rights. Except as a free, self-owned individual, woman has no rights. . . . . Give the slave the ballot to protect herself or himself against the oppression of the master! The slave, as such, has no rights. Every woman has a right to the ballot; but womanhood (and there is no womanhood but free womanhood) must come first—the ballot instantly after."

Next, our readers will ask, What is this bondage under which womanhood is groaning? and what is meant by its enfranchisement? Let us hear what the Misses Woodhull and Claflin say:—

"Political equality cannot be granted to women without their also obtaining *sexual equality*, as a legitimate sequence. And just here is where all the 'hell-a-bell-loo' begins to show itself. If the enfranchised woman could still be compelled to remain the servile, docile, meekly-acquiescent, self-immolated and self-abnegated wife, there would be no difficulty about the voting. At the ballot-box is not where the shoe pinches, nor where the corn stings. It is at home, where the husband, as in pre-historic times of anarchy, is the supreme ruler, that the little difficulty arises; he will not surrender this absolute power unless he is compelled."

In another place, the prophetesses say—

"The days of arbitrary rule have departed. All things move by the more enlightened rule of equal-right. In one department alone does absolute sway still linger. Woman is subjugated still by man; woman, as a sex, is under the absolute sway of man as a sex. All rules of life are by him laid down for her to be guided, governed, and condemned by. We flatter ourselves that this America is a free country, in which all enjoy the rights of equality. Not a bit of it! Never were you more thoroughly, more radically, mistaken. There is no such thing as female freedom or female equality, before the law, in the land."

But whether or no man is to lord it in the political world, or to be master in his own house, matters not much; one thing is clear, that he must not lord it over his own wife. Women must be free in person, and the marriage-tie be reduced to a mere slip-knot, loosable at will—or, rather, at the woman's will; for these dear creatures, who begin by claiming equality of the sexes, soon let us know that "equality" means the supremacy of woman:—

"The ulterior result of the union of the sexes is reproduction of their kind; and we hold that in this matter woman should be the determining power, and whatever there is in present forms of marriage that militates against her supreme right in this respect, we again assert, should be changed. The progressive tendencies of the age have denounced the submission of woman to man; and the time, if not already come, will come shortly, in which, with or without the consent and approval of present customs and forms, she will no more submit that a law, no matter how sacredly held, shall bind her to bear children by a man who has taught her to abhor him, or whom she holds in disgust."

Marriage laws are to be abolished—and for this sufficient reason

If man and wife choose to stick to one another, who hinders them? If they do not choose, why should other people make them? Marriage will never be abolished by our prophetesses; but then marriage is too divine a thing to be interfered with by beastly man's law. Marriage means the union of congenial souls and bodies, when and so long as they like, and no longer—in fact, marriage should be what the American priestesses call "free love," and what in this benighted old world is often called fornication. "Free lovers" have really hitherto been too squeamish:—

> "I am of opinion," says a correspondent, "that the modesty of the 'Free lovers' has been carried to a point where it has 'ceased to be a virtue;' and our conservative friends must not be surprised if in future the marriage question should be discussed on both sides."

Dogs and cats, stamens and pistils, mix as they like; why not man and woman?—

> "What is marriage? Is it a legal union between a male and female of the race of animals known as Man; or does it have a wider and deeper significance? Are the 'unions' between the males and females of the types of animals below man, marriages, or are they something else? Are the 'unions' between the male and female species of plants, by which they reproduce and increase, marriages; or should they be designated by some other term? If these are marriages, who is there that will prepare some marriage law, not in harmony with natural law, that shall compel each of these to for ever remain mated, whether they would or no; and, by so being compelled, to ever remain respectable(?) members of their 'society'?"

If a husband and wife are tired of each other, and each likes somebody else, why should they not be indulged? Why reduce poor women to the necessity of poisoning their husbands in order to get rid of them? One of the priestesses says that she now knows a married woman who has six pressing suits for marriage from as many married men! What will be the result of such conditions? As was wisely remarked by one of our leading papers a few days since, "Much crime would be prevented were those who are determined not to remain husband and wife permitted to separate in quiet and peace."

Hence we see that the "untrammelled lives" which our priestesses claim for their sex will have the effect of doing away with adultery and fornication as crimes! It will have further results. Children will no longer trouble themselves to know (as wise children were once said to know) their own fathers. We are told in praise of the Oneida community that there there can be no orphanage. "Every infant has a hundred living fathers and mothers."

We should be doing an injustice to Misses Woodhull and Claflin were we to omit all notice of the ethico-physical theory of cuckoldom which is a part of their philosophy. Women, for the future, are to be arbiters of their own marital rights, and lords of their own sexual selves. But suppose the poor devils of men don't like it?—suppose they fret at the horny honours of their brow? Here sage philosophy comes to their aid, and, whilst the wife is amusing herself with a little "free love," the husband may console himself with an aphorism. Here it is:—

> "*Every human being gets, with rightful opportunity, just as much love as he is entitled to*—that is, just as much as he has the attractions to inspire. This is all he can get by any possible arrangement. He may get the appearance of more, by grasping, and constraining, and surrounding by harem walls, material or moral; but he gets the bogus article, and not the genuine."

The real cure for jealousy, is not to be jealous, but to allow the laws of woman's nature full scope. If she has a fancy for a lover, it is because she does not care for her husband, and taking away the lover will not make her love her husband one bit the more:—

> "*Repulsion* grows out of *grasping*, while *attraction* grows out of the *broadest concession of freedom*. By holding fast, one loses, while by giving away freely, one gets back continually: so great is the charm and excellence of freedom. Now, then, when this working of human nature comes to be known, jealousy, which it is admitted is *natural*, is seen to be *unwise*, because it defeats the very end it has in view."

In fact, jealousy, or a desire to limit a wife's enjoyment, is more than a mistake; it is a crime:—

> "If what we prize is the affections of another, we shall, if we are truly enlightened, begin by admitting—first, that that other has a perfect right to bestow his or her affections as he or she pleases; and secondly, that every other person has a perfect right to as much of his or her affections as he or she is capable of truly attracting; and thirdly, that he who would by any other means than his own attractions interfere with or limit either of these rights, is a spiritual thief or robber, and a proper object for his own contempt."

Here we must stop. We admit that the condition of women may be, in some respects, improved; they may be better educated, made somewhat more independent. But existing society, bad though it be, has some good points. A man can claim his own wife, and be master of his own home and father of the children who take his name. If universal suffrage, common unsectarian education, the freer union of the youth of both sexes in schools and colleges, the concession of political rights to women, and the adoption of masculine garb, are to be the preludes to such a reign of universal whoredom as Misses Woodhull and Claflin preach, we shall be wise not to pull about our social edifice too hastily till we are sure of something better.

LATIN IN DAILY LIFE.

After nearly 300 years of eclipse and decay, it seems that the study of Latin, to which all the educated part of the youthful community devotes so large a portion of time, is about to be restored to the use and familiarity of common life. The matter is one that concerns ourselves, who have a tradition that Medicine was once a "learned Profession," and a few words upon it may induce our readers to bestir themselves, and assist in a thoroughly practical and useful movement of reform.

Much as is said in praise of modern education, there is no doubt but that a knowledge of Latin—such as would enable a man to read an easy book, or to write a few simple sentences correctly—is more rare now than it was in the days of our fathers, and is daily becoming rarer. Do you ask proof? See what use of Latin has been given up within these few years! About three years ago the London Royal College of Physicians gave up the Latin Harveian Oration, and allowed it to be pronounced in English. About two years before, the Medical faculty of Paris allowed Graduation Theses in French to be substituted for Latin. The University of Edinburgh had made the same change a few years earlier. Forty years ago the prescriptions of Halford and Chambers were quoted as examples of easily flowing Latinity, in which the directions to the Apothecary respecting the bleeding, blistering, or dosing a patient were couched in terms of classical elegance, and were sure to be comprehended by the inferior functionary, such as the Apothecary then is supposed to have been. Now, it is quite certain that many Fellows of the Royal College of Physicians find it a fatigue to understand a Latin oration when spoken, and more fatiguing to write one; and it is quite certain that most Physicians in their prescriptions now confine themselves to a few well-worn cabalistical abbreviations, such as *4tâ q.q. horâ sumend.*, and that if they were to attempt to write full directions in Latin (a thing they could not do easily), chemists would find the greatest difficulty in interpreting them. Whether "*cyathus vinarius*" would be translated a "wine-glass," or a "glass of wine;" whether "*inter cibum*" would be rendered "at meals," or "between meals," would depend on the caprice of the chemist to whom the prescription was taken. So that there are two good reasons for writing prescriptions in English.

We could heap instance upon instance, if it were needed, to show that Latin is, and has been during this generation, passing out of familiar use. In Parliament, the quotations from

Horace, which used to grace the periods of Pitt or Canning, are now seldom heard. Quotations in ordinary books are mostly confined to a few proverbs or examples from a Latin grammar, and many of these are misspelt. Latin words, even in Medical books, are apt to be horribly degrammatised. We see such words as *spiculæ, labiæ, labium majorum* (for "greater lip"), "*si diarrhœâ urgeati*" (for "if the diarrhœa be troublesome"), and other and worse barbarisms. We know that in the last generation the popular botanical book was Smith's "*Flora Britannica*," in Latin; and when the Apothecaries' Society instituted lectures on botany, one of their members, Mr. Wheeler, a member of an accomplished Medical family, published a catalogue of Medical plants in Latin. It would be useless to go back a century and point to the Latin *Pharmacologia* of Richard Dale, Member of the Society of Apothecaries, which then held the place that Pereira or Garrod holds now. (We need not refer to Sydenham or Morton, the giants of the seventeenth century.) Lectures in Latin were delivered at colleges and universities. We have before us a student's notes of Latin lectures at Edinburgh in 1804. Prayers in Latin were said at St. Paul's, Winchester, Westminster, and all the public schools. At Winchester it was the rule that the scholars should converse in Latin and not in English. "*Patrium sermonem fugito, Latinum exerceto*," was one of the rules of the *Tabula Legum Pædagogicarum* at Winchester. But all these things are now past and gone. Physicians and apothecaries could not write, nor students read, books written in Latin; and if, at some schools, prayers are still said in Latin, we have ascertained for a fact that some at least of the scholars don't understand a word of them. The Anglican clergy (some of whom, kind souls! now propose to spend their superfluous energy in practising Physic) have let their religious formulæ, as they did their sacred edifices, "moulder," as Dr. Johnson said, "in unregarded dilapidation." Had they minded their own business, and kept up those standards of ancient learning and piety supplied by the statutable Latin prayers for endowed schools,(a) we should not now find clergymen and schoolmasters forced to compete for seats at a school-board with mere amateurs, politicians, and women.

There is no doubt, then, but that Latin has been and still is losing its place as a familiar language, and nowhere more than in the study and practice of Medicine. Of course there are reasons for this beyond the mere negligence of schoolmasters. Parents are apt to complain of time devoted to a study with (as it seems to them) no practical ends. No language can be used in daily life which has not life and the capacity of growth. New words are wanted for new things, and for new ideas of things. The Ciceronian phraseology, which is almost the only form of Latin taught by the Anglican clerical schoolmasters (who ignore mediæval Latin, even if ecclesiastical), is not well adapted to describe the composition of a glyster. The old bottles will not hold the new wine without rents and patches; hence, as things are, we are perfectly willing to acquiesce in the disuse of Latin as the language of modern science and philosophy, so far as students are concerned.

But, for all that, there are solid reasons in favour of keeping up and increasing a familiar knowledge of the language. Latin might be made a kind of universal language for scientific men. This is the proposition of the eminent physicist, Marey, the inventor of the sphygmograph, and author of the well-known treatise on "Motion in the Functions of Life." The study of Latin introduces the student to some of the most practical philosophy and grandest morality; to the knowledge of human nature. Especially is the study of human nature necessary for the Physician. It is of no use to know how to treat patients in Hospitals, unless he knows how to attract them in private life; and the study of Horace contributes somewhat to this. But, lastly, the Latin is the sister of the German, Greek, and Celtic, and mother of three fair daughters, the French, Italian, and Spanish; and every Physician ought to have a good knowledge of the French, and some knowledge of the other two Latin-derived languages. A knowledge of the mother ought to be an introduction to the daughters; and, if for no other reason than as a key to French, the Latin ought not to have been allowed to pass into disuse, and the study of it ought now to be revived and intensified.

But for the last 300 years the Anglican clerical schoolmasters have taken the most effectual means that their pupils, study Latin as they may, shall not have the smallest help from it in the study of French, and that all philological comparison shall be ignored and stifled. For this purpose they have taken care to pronounce Latin, not as its living daughters are pronounced, and as the people of Romance countries do now speak it, where Latin itself is still the vernacular, but as English is spoken—a language whose vowels are degraded and dislocated so as to be unlike any other. Hence the Latin is deformed; short syllables are made long, and the whole analogy with modern speech is lost. The word *mĭhĭ*, or *mĭchĭ*, is made into "*myhigh*;" "*ĕgo*" into "*ēgo*;" "*ăgo*" into "*aygo*;" "*rĕgo*" into "*reego*;" "*Da mĭhĭ panem*" is travestied into "*Day myhigh paynem.*" Eton boys, in their respectful and affectionate slang, so creditable to the chief place of education in England, speak of "a fellow's *payter*," meaning, his father. In fact, that connexion between mother and daughter which ought to make Latin a stepping-stone to French, and still more to Italian, and which would vindicate for Latin, now as ever, a primary place in modern scientific education, is ignored and left out of view—for we hold that language is as much a branch of science as chemistry is.

Bearing these things in mind, we hope that the army of Medical fathers of families, in sending their sons to school this month, will express to the masters their wish for a rational pronunciation of Latin. The more liberal and enlightened amongst the head masters of endowed schools are really awaking to the absurdities of what daily passes under their eyes, and there is some hope that English Latin, that relic of insular pride and ecclesiastical isolation and intolerance, will soon be a thing of the past.

THE WEEK.

TOPICS OF THE DAY.

The friends of the lady-students at Edinburgh have appealed to the Governors of the Royal Infirmary to rescind the recent resolution of the managers, which excluded women-students of Medicine from the wards of the Infirmary. The resolution of the managers has been re-affirmed by a majority at a meeting of the governors. The supporters of sexualism mustered strongly on the occasion—for the majority, which supported decency, seems to have been a small one, and a scrutiny has been demanded, which has not been yet taken. We are sorry to notice that at the meeting one of the lady-students, Miss Jex Blake, permitted herself to make imputations against Professor Christison and his assistant—imputations of which we will allow our readers to judge for themselves. It is very evident that the ladies in this case, as in many others in which they are concerned, play a certain game. They claim the right to say what they please, and think it very hard if their antagonists return the compliment. They call it indecent and immoral that women should employ male Physicians, but do not consider it indecent or immoral to take part in any physiological or anatomical studies in company with men. They claim freedom of thought and speech for themselves; but when Professor Christison, or the persons responsible for the management of an important Medical school, claim the same liberty in judging whether a large infusion of female students be desirable or not, they immediately raise outcries of "discourtesy," "bigotry," and "Professional jealousy." If the report in the *Edinburgh Courant* be true, the conduct of the Lord Provost, who presided at this meeting, was simply imbecile. Miss Jex Blake said—

(a) Anyone who will look at the Latin prayers for schools, published for 1s. 6d., under the title "*Sacra Academica*," (Rivingtons, 1865), will see what a mighty fall there has been.

"I will not say that the rioters were acting under order; but neither can I disbelieve what I was told by indignant gentlemen in the Medical classes, that this disagreeable scene would never have happened had not it, and the petition got up at the same time, been needed as a weapon against our admission to the Infirmary. This I do know—that the riot was not wholly or mainly due to men from Surgeons' Hall. I know that Dr. Christison's class assistant was one of the leaders of the riot, and that the foul language he used could only be explained on the supposition I heard asserted, that he was intoxicated. I do not say that Dr. Christison knew of or sanctioned his presence; but I do say that I think he would not have been there had he believed it would be displeasing to the Doctor that he should be so——

"Professor Christison: I must again appeal to you, my Lord. I think that the language which has been used regarding my assistant is language which no one would use at such an assembly as this, where a gentleman is not present to defend himself, whether it were true or not. (Applause.) I do not know whether it be true or not, but I know that my assistant is a thorough gentleman, otherwise he would not be my assistant. ('Hear, hear,' and applause.) I appeal to your Lordship whether such language as has been used is to be allowable. I appeal to you if there is any gentleman in this assemblage who would have used such language in regard to an absentee——

"Miss Jex Blake: If Professor Christison is willing, I am perfectly ready to say——

"Professor Christison: I wish nothing but that this foul language shall be put an end to.

"The Lord Provost: I don't know what it is. She is giving her opinion——

"Miss Jex Blake: I said before that the only excuse for the assistant was that he was alleged to be drunk."

The position of the Universities with regard to the conjoint Examination Board seems to us clearly defined. If they are invited to take part in the examinations, and to receive any share of the remuneration, they must submit their own students in Medicine to the ordeal of the examination as a necessary step to graduation. If the Universities refuse this condition, they can hardly complain if they are not requested to take any active share in conducting the national examinations. We should gladly see them represented by visitors at the Board; but the submission of their graduates to the examination test of the Board is necessary for the perfection of the one-portal system, and it is this alone which would render the co-operation of the Universities in the work of examining particularly desirable—for, practically, the very same examiners who would be nominated by the Universities would be eligible for election by one or other of the Medical Corporations.

The weekly mortality from scarlatina in London, which but a few weeks back was over two hundred, sank last week to 110; and the mortality from small-pox, which has been rapidly increasing, last week reached exactly the same level with scarlatina, there having been 110 deaths. Of these, 17 were returned from the west districts, 27 from the north districts, 5 from the central districts, 47 from the east districts, and 14 from the south districts. There were 12 fatal cases (nearly all of unvaccinated children) in the sub-district of St. John, Westminster, out of a total of 38 deaths from all causes.

We regret to observe that the Medical Department of the Privy Council have thought fit to remove the business of the vaccination station, known as the National Vaccine Institution, from Charlotte-street, Fitzroy-square, to Whitehall. To the Practitioners of Central London, the Fitzroy-square institution was a great convenience, as a supply of excellent vaccine lymph could always be obtained there on an emergency. Now, the Practitioner will be obliged to go to Whitehall, or write to the Medical Officer of the Privy Council, before he will be able to obtain a charge, whereby valuable time may be lost. We should have thought that, in the face of an epidemic of small-pox, it would have been the aim of the Government to multiply rather than diminish the depôts of vaccine lymph.

We hear that it is in contemplation to present a testimonial to the Scottish ovariotomist, Dr. Thomas Keith. What Mr. Spencer Wells has accomplished in England, Dr. Keith has done for Scotland. Each has taught his countrymen to regard ovariotomy as a thoroughly justifiable and salutary Surgical proceeding, which, with due care and under favourable circumstances, may be undertaken with high promise of success. Dr. Keith has completed his hundredth operation, and among these hundred cases the mortality has been nineteen. It is not to be wondered at, therefore, that the Profession in Scotland are proud of the success of their distinguished *confrère*, and that their feeling of admiration is taking a practical shape. It is intended to present Mrs. Keith with a portrait of her husband and a service of plate. Amongst the committee formed for carrying out this object are several of the Medical Professors of the University, and some of the most distinguished of the Profession in Edinburgh. Dr. Matthews Duncan is the treasurer, and Dr. Arthur Gamgee the secretary to the committee. We have no doubt that many of Dr. Keith's friends in England will thank us for this information.

The election of the officers and council of the Clinical Society will take place at the meeting, on January 13th. Dr. Gull is proposed as President, and the new Vice-Presidents are to be Dr. Owen Rees, Dr. Burdon-Sanderson, and Mr. Campbell De Morgan. Dr. T. King Chambers, Dr. Peacock, Mr. Erichsen, Mr. Prescott Hewett, and Mr. Henry Lee will continue to hold office as Vice-Presidents, and Dr. Headlam Greenhow as Treasurer. The gentlemen proposed as Members of Council, who did not hold that office last year, are Drs. Broadbent, W. Cholmeley, Handfield Jones, A. Meadows, Sydney Ringer, and Wilks, and Messrs. Callender and Sibley. The Members of Council who do not retire are Drs. Barclay, Langdon Down, Pavey, and Hermann Weber, and Messrs. Croft, Gascoyen, Christopher Heath, Berkeley Hill, Carsten Holthouse, W. B. Kesteven, C. F. Maunder, and Thomas Smith. Dr. Buzzard continues to hold the office of Medical Secretary, and Mr. George Lawson is proposed as Surgical Secretary.

We regret to hear that Mr. Solly has been induced by the state of his health to resign the Surgeoncy to St. Thomas's Hospital. We hope that a short retirement from the more active public duties of the Profession will speedily recruit him.

It is not common for members of the Medical Profession to apprize the public or allow the public to be apprized of their domestic or private affairs—in fact, it has been usual to keep a Medical man's name as much as possible out of publicity, except that publicity which is the honourable and necessary reward of efforts made to advance Medical science. But a new era is dawning on medicine. The public journals announce that Miss Elizabeth Garrett, M.D., member of the London School Board, is shortly to be married to Mr. James G. Anderson, of London and Morpeth, who took an active part in her election. We rejoice that Mr. Anderson is to be thus rewarded. But the announcement, from a Medical point of view, is exceptional, and we are old-fashioned enough to hope that it may remain so.

The coroner's jury, at the inquest on the body of Lord Henry Bentinck, who died suddenly on Saturday, decided that death took place from cold acting on a weak heart. Lord George Bentinck, deceased's brother, died suddenly, it will be remembered, from heart disease. Numbers of old people have died, during the recent twelve days' frost, from the effect of cold on an enfeebled heart.

Several cases of death from accidental poisoning are reported. A woman died from swallowing some "disinfecting fluid," in place of rum; and a person, in a very weak condition, has been poisoned by a large dose of tincture of squills, administered to her by mistake as medicine, through the carelessness of a messenger.

THE TWENTY-FIFTH ANNUAL MEETING OF THE PATHOLOGICAL SOCIETY—THE RETIRING PRESIDENT'S ADDRESS.

THE annual meeting of the Pathological Society, which took place on Tuesday, was full of interest. Amongst the specimens exhibited was one of a gall-stone shown by Dr. Murchison, which had been passed from a patient in whom it appeared for a time to have occluded completely the common bile duct, and in whom the whole of the bile seemed to pass through a fistulous passage, which opened externally. A point of interest in the case was the large quantity of bile thus excreted. The bile was carefully collected, and it was found that the patient passed from one to two pints of bile *per diem* through the opening, and sometimes as much as an ounce and a half in an hour. Blondlot found that the quantity of bile passed by a dog in twenty-four hours was on an average twelve and a half drachms. Haller supposed that the liver of a man would secrete from four to five times as much bile as the liver of a dog. If this were so, the average quantity secreted in man would be from six to eight ounces in the twenty-four hours. Dr. Murchison's case, however, seems to prove that this estimate is greatly too low, and that those who suppose the quantity to be from seventeen to twenty-four ounces are nearer the truth. Ritter's experiments on the dog, however, seem to show that the quantity of bile varies with the quantity and quality of food taken. Unfortunately, in Dr. Murchison's case the precarious condition of the patient during the occlusion of the common bile duct prevented any experiments by medication, or otherwise, being attempted. Recovery, however, followed the passage of the biliary calculus.

The incident of chief interest in the meeting was, however, the retirement of the President, Dr. Quain, from the chair which he has filled with no ordinary courtesy, judgment, and ability during the past two years. The mover of the vote of thanks to Dr. Quain, Dr. Headlam Greenhow, dwelt upon Dr. Quain's long connexion with the Society, and the services he has rendered to it. The seconder of the vote, Dr. Edwards-Crisp, referred in highly eulogistic terms to Dr. Quain's early labours in the cause of pathological science, and especially to his well-known paper "On Fatty Degeneration of the Heart." We need scarcely add that the vote of thanks was carried heartily and unanimously. Dr. Quain, in his reply, said that if it were a fault to have held office in the Society for many years, he must plead guilty to it, for he had served the Society as Councillor, Secretary, Treasurer, and now as their President, ever since its formation, twenty-five years ago. He bestowed a merited eulogy upon the successive Councils which had governed the Society; and as a proof of the earnestness and value of their labours, and of the advancement of pathology which has accrued from the establishment and work of the Society, he referred to the twenty-five volumes of the Society's *Transactions.* He spoke of the pathology of the past, as represented in the works of Baillie, Carswell, Cruveilhier, and others, and of the pathology of the present, which seems, by the aid of the scalpel and the microscope, to be daily telling us more and more distinctly what disease is. But he thought that the pathology of the future would arrive at still a higher level, for it would, he believed, tell us *why* disease is. He looked forward hopefully, for he believed that at the end of another quarter of a century we may have solved the problem—why, for instance, one human being exposed to cold should be struck down with pneumonia, another exposed to the same cause should have rheumatism, and another albuminuria. What was the condition of blood or other cause which determined the disease? This was the kind of problem which he hoped the pathology of the future was destined to solve; and he looked forward with confidence, as he believed the science was already tending in that direction. He instanced as hopeful signs the experiments performed by Dr. Sanderson and others on the inoculation of tubercle; recent researches in the chemistry of pathology; and the impetus which must be given to the study of comparative pathology in this country by the acceptance by the University of London of the Brown trust of 35,000*l*. for the prosecution of that branch of science. The pathology of the future, prosecuted in this direction, would, he believed, become the basis of a more certain and effective system of therapeutics. Dr. Quain's retirement at the termination of his period of office must not be allowed to pass without our again expressing our opinion that during his Presidency there has been a marked improvement in the tone and interest of the meetings. Without ever stepping beyond the strict limits of pathology proper, the Society's meetings have become in a less degree a mere series of demonstrations of morbid anatomy. Pathology in its wider sense has not been tabooed, and we believe that, in consequence, the meetings have been more attractive and more useful. The genial influence of the retiring President has promoted a better feeling, if we mistake not. The mock applause with which a lengthy case, or not, perhaps, very connected statement, used to be received, has been rarely heard of late. Dr. Quain will carry with him into the only less dignified but less onerous rank of the Vice-Presidency the thanks and kind wishes of all those over whom he has presided.

MEDICAL PROMOTIONS IN THE BRIGADE OF GUARDS.

THE retirement of Surgeon-Major Wardrop on half-pay from the Grenadier Guards, as published in the *Gazette* of 3rd inst., has caused a run of promotion among the Medical officers of that regiment and of the Scots Fusilier Guards. Mr. Elkington succeeds to the Regimental Surgeon-Majorcy. Mr. F. B. Baker, of the Scots Fusilier Guards, being the senior Assistant-Surgeon in the brigade, is, by the same rule which was applied in the case of Mr. Elkington's promotion some years ago, and which gave rise to so much discussion at the time, promoted as Surgeon into the Grenadier Guards; while Mr. Lane, Assistant-Surgeon in the Grenadier Guards, being junior in the Service to Mr. Baker, is promoted to Staff Surgeon, and re-transferred, in the same *Gazette*, to his old regiment, as junior to Mr. Baker. The rule which now appears to be established in the promotion of Medical officers in the Guards is that the post of Surgeon-Major, being considered more purely regimental, shall be filled up by senior Battalion Surgeons of the regiments in which vacancies occur, while, in the case of the Surgeons, a compromise is made between the two systems of brigade and regimental promotion; the Senior Assistant-Surgeon in the brigade gets the vacant post of Surgeon, and the Senior Assistant-Surgeon in the regiment also gets promotion in his regiment but as supernumerary of the rank. Surgeon-Major Elkington has had the good fortune to obtain the advantages of both systems, having, in somewhat less than eighteen years, chiefly at home, attained a rank which Medical officers in other branches of the Army Medical Service cannot reach until they have completed twenty years on full pay in all climates.

THE GENEVA CROSS.

WE observe that the *Moniteur*, of Bordeaux, of the 31st ult. publishes a decree by which the volunteer ambulances are placed under the control and responsibility of the National Society, without whose formal sanction no volunteer ambulances can be henceforth constituted. Official delegates from the existing independent ambulances are to report to the Society and submit to its decision. All arm-badges delivered by the local committees or authorities are declared null and void from January 15. We trust that this decisive and very judicious measure will, on the French side at least, to some extent check the unjustifiable abuses which have proved the confiding and amiable theories of the Geneva Convention to be impracticable, and have so much interfered with the efforts for the relief of the wounded.

SYPHILIS.

Our readers are aware, from the recent discussions in our columns, that, although much has been made certain in our knowledge of syphilis, much still remains vague and ill-defined. It will be seen, from a paper by Inspector-General Lawson we publish to-day, that, in his opinion, syphilis, like other forms of contagious and infectious disease, is liable to assume an epidemic form, although ordinarily prevailing sporadically. Making an attempt to clear up that which remains doubtful in our knowledge of syphilis, we have drawn up the following queries, and circulated them among the most eminent authorities on the subject. The results we shall in course of time make known. Meanwhile, we shall be most happy to receive information from our readers on any of the points on which their experience enables them to speak, hoping thereby to make our report all the more valuable :—

What are the ordinary primary lesions (*a*) in man, (*b*) in woman.

What are the relations between the lesions of the infecting and infected parties ?

What are the varieties of sore recognised by you ?

What are the relative proportions of hard and soft sores as seen by you ?

Is difference of character due to difference in texture of the part affected, or to the infecting agent ?

What is the proportion of suppurating buboes following venereal sores, and what sores do they follow ?

Is a suppurating bubo any protection against secondary symptoms ?

Are hard sores invariably followed by secondary symptoms ?

What form of secondary symptom is most invariably observed after a hard sore ?

What lesions, primary or secondary, are capable of propagating the disease ?

Does constitutional syphilis affect a child, the mother being unaffected ?

What form of treatment do you ordinarily adopt—(*a*) for hard sores, (*b*) for soft sores ?

Information on any disputed point overlooked in the above will be gladly received.

THE OBSTETRICAL SOCIETY.

The annual meeting of the Obstetrical Society was held in the rooms of the Royal Medical and Chirurgical Society, Berners-street, on the evening of Tuesday, the 4th inst., the President (Dr. Graily Hewitt) in the chair. The report of the auditors on the financial position of the Society was most favourable. The total income for the year was £757 7s. 11d., and at the date of the report there was, after making a small investment in the funds, a balance in the hands of the treasurer amounting to £135 19s. 10½d. The report of the honorary librarian was also satisfactory. There was evidence of the increasing usefulness of the library, and the supply of works had been considerably increased. There was a prospect of their lease being renewed at a slightly increased rental. The office-bearers recommended to the Council, and whose names were given last week, were elected. Dr. Graily Hewitt then proceeded to address the Society. He commented on its satisfactory position, its number of Fellows being about 600, among whom were Drs. Arthur Farre and West, who had stood aloof from them at the foundation of the Society. Their losses by death included the well-known names of Drs. Chowne, Lumley Earle, Uvedale West, and Simpson. He was pleased to be able to announce that the amalgamation scheme had been finally abandoned, and to be able to hand down to his successor their rights and privileges unabridged. Their Society had now existed for twelve years, during which time they had done much good work; and this he briefly reviewed, dealing first and most extensively with the subject of obstetrics, next with the diseases peculiar to women, those of children, infant mortality, obstetric instruments, and obstetric education and examinations. A hearty vote of thanks was put and carried, and the meeting adjourned.

THE CAT AMONGST THE GAROTTERS AT BIRMINGHAM.

The cat alluded to in the above heading does not belong to that class of domesticated animals with which we are all so familiar, but is the name of a peculiar kind of instrument used in the treatment of criminals, called the "cat-o'-nine-tails." This weapon—for it is truly a weapon—has, during the past week, *cut* a remarkable figure in the annals of our Borough Gaol. It has inflicted severe bodily punishment on three worthless and cruel scoundrels, who had been pronounced guilty of the dastardly offence of garotting. The prisoners, whose ages ranged from 19 to 25, had been arraigned before Baron Bramwell, and were by him sentenced to a good flogging. In passing the sentence, the learned Judge remarked that, as they had caused physical pain to others, it was only just that they themselves should experience pain. The majesty of the law was duly carried out in the courtyard of the gaol, in the presence of the officials (the Press was excluded). For the edification of the unlearned, we may state that the cat-o'-nine-tails is a very formidable instrument—of repulsive appearance, and capable of causing severe bodily pain. It consists of a stout handle, about a foot long, armed at the end with nine strong, firmly-twisted whipcord lashes, each a foot and a-half in length, well seasoned, and of rigid fibre. Such was the whip employed. The offenders having been stripped to the waist, pinioned, and bound to the triangles, two stout warders dealt them in turns the allotted number of stripes on their backs, the blows falling chiefly from the right shoulder to the left hip, in an oblique direction. Each stroke of the cat raised immense wheals on the quivering flesh, which, at the end of the punishment, became one huge mass of ecchymosis, of pulpy consistence and frightful aspect. The fearful screams—or rather yells—which succeeded the torture was a convincing proof of the pain-dealing character of the instrument, and the efficiency with which the edicts of the law were carried out; and not only did the cries last during the whipping, but continued at choking intervals long after the flagellation was over. This practice of flogging criminals was abolished in England, except in the case of comparatively slight whipping of lads, but, in the winter of 1862-63, owing to the extensive system of garotting, it was brought again into requisition. Since then, these deeds of violence have been much on the decrease; nevertheless, it becomes necessary, on their reappearance, to apply the only remedy—and this seems to be the one—which is effective, however painful and humiliating it may be, in dealing with such miscreants. Around Birmingham, for many a long mile, it is to be hoped the tale will be carried, so that the evil-disposed persons who cannot control their worst passions may learn such a lesson as will *and must* teach them, for their own sakes, to hold the "cat" in bodily terror.

PROSECUTIONS UNDER THE SANITARY ACT OF 1866 BY THE CORPORATION OF DUBLIN—POISONOUS CONFECTIONERY.

The Corporation of Dublin continue their laudable exertions in carrying out the provisions of the above and more recent sanitary statutes. They have now turned their attention to the very deleterious articles of confectionery manufactured and retailed in large quantities. Several traders have been brought up at the Southern Divisional Court, Dublin, on a charge of having used poisonous ingredients in the preparation of various sweetmeats. Sugar-sticks of a *yellow* colour were found to contain chromate of lead; lozenges were coloured with vermilion (bisulphide of mercury); and other articles were composed, to the extent of from 10 to 12 per cent., of *terra alba*—a form of fuller's-earth most injurious to children. The city analyst, Dr. Cameron, who had experimented on the different articles mentioned, suggested the employment of saffron and cochineal, both harmless substances, as colouring agents in lieu of the hurtful chrome and vermilion. The traders were fined, and obliged to pay all costs.

DEATH BY DROWNING AND COLD.

Dr. Richardson's lecture on Death by Drowning and Cold brought a large attendance of Medical men on Tuesday last. The lecturer pointed out, as a preliminary truth, that the cessation of motion of the body, which we designate death, may be of two distinct kinds, which he called colloidal or pectous, and crystalloidal or glacial. The first of these forms of death is absolute, as far as is yet known, in all animals; the second is not absolute, but in many animals is certainly no more than a suspension of living function from which there may be recovery. In proof of this, he took a carp which was frozen, and which had undergone what would be called glacial death, and restored it to life by gentle warmth. On the subject of death by drowning and cold, a great number of new observations were recorded, on which we do not dwell because they will appear in full in our columns. One exceptional observation must, notwithstanding, have place; it is to the effect that, owing to the sudden exhaustion of the nervous system, on submersion in water at 32°, the death is extremely rapid, and the cessation of consciousness almost instantaneous.

AN UNHEALTHY TOWN.

Camborne, a mining town in Cornwall, has of late had so high a death-rate from fever that the public schools have had to be closed, to prevent contagion. Dr. Buchanan, in his report of the state of the town, draws a sad picture of its condition. Nuisances abound; over-crowding prevails; and, practically, there is no drainage. The water-supply is bad and deficient. The adoption of the Local Government Act is the only remedy.

WORKING MEN'S FUND FOR THE EXTENSION OF THE QUEEN'S HOSPITAL.

On Saturday last, a meeting was held in the theatre of the Midland Institute, to consider the advisability of making a general collection for the above fund throughout the manufactories and workshops of the town and district. Speeches were made by several influential persons, and resolutions passed in conformity with the above expressed object.

OVARIOTOMY IN BELGIUM.

Dr. Boddaert, of Ghent, has recently had a case of ovariotomy. We are informed that this is the first successful case which has occurred in Belgium.

REMINISCENCES OF "AN OLD GUY'S MAN."

No. I.—BRANSBY COOPER.

While the "Reminiscences" of Mr. J. F. Clarke are being published by you, I should like to add a few of my own, beginning about the time of the "Bransby Cooper trial, *versus* Mr. Wakley." The last-named gentleman had been, I believe, a pupil in one of the Borough schools (I am not aware which), and one of the legends concerning him was that by nature he had a pugnacious temperament, and, indeed, excelled in the art of boxing—an art held in much esteem, no doubt, by those who are adepts in it. However that may be, he certainly showed much tenacity in all disputes in which he engaged, and they were many. I was among those who, as pupils, witnessed the operation for stone that Mr. Bransby Cooper performed on the unfortunate man, and I was one, also, among the "dressers" of the time at "Guy's" who were subpœnaed on the trial. I had already witnessed a considerable number of operations for stone, and I have since operated myself somewhere about sixty times. I can now affirm that, in my experience, two-thirds of the failures in the proper performance of the operation, and nearly half the deaths—I may probably say, with truth, *full* half the deaths—have been caused by the operator not having fairly entered the bladder with the knife before he had attempted—and often again and again attempted—to push the forceps into the viscus before there was a way made for the instrument to pass in, and the consequence has been a disruption of the cellular connexions of the bladder and violence done to those parts. This is particularly liable to occur to young or somewhat inexperienced operators, and I myself never attempt to pass the forceps into the bladder until I have felt the tip of my left forefinger *hook* over the edge of the bladder on the prostate gland. The sensation when once experienced will not be forgotten, and it is the true guide to having fairly entered the bladder. I should consider a young operator as peculiarly unfortunate to find his first case one of so deep a perineum as not to allow him to pass his finger far enough to feel the opening into the bladder.

In Mr. Cooper's case, I do not think such was his error; it may have been so, however, at first, for only the operator himself knows what he does after the point of the knife is beyond view. At any rate, I know that Mr. Cooper expressed more than once, "He could not say why he did not grasp the stone, when, to all appearance, he was fairly in the bladder." He certainly used the words, "Give me my uncle's knife," and passed that instrument carefully and quietly into the bladder; then, again introduced the forceps; but still could not grasp the stone. Turning round to a large number of spectators, he said, "Gentlemen, I really do not know why I cannot find the stone, when I know there is one, as we have felt it." Someone then said, "Press your hand over the pubes." Hills, the Surgery-man, did so; and immediately, without difficulty, the stone seemed to be dropped into the forceps, and was withdrawn. Mr. Cooper's character was wanting in the caution and reticence which is so essential in Medical men. He expressed whatever he felt, thinking everyone as honest and open as himself.

The case, as we know, was reported in the then new *Lancet*, in an unfriendly spirit, and in a manner only too common in the early numbers of that publication.

Mr. Wakley was the known editor, but we always believed that a man named Lambert wrote the reports. Be that as it may, the anger of the students was so roused against the reporter that he was waylaid, for the purpose of being kicked and otherwise maltreated.

When the trial was to come on, I remember going with a number of the "dressers" to be examined by a solicitor, or barrister, and, having waited nearly to the last, I was going into the room, when Mr. Bransby Cooper came in also, with his rather jaunty manner—his hat a little on one side, as was usual with him (partly, I believe, to hide or shade his injured eye, which had been lost by some accident when a boy). Looking round with his good-humoured smile, he asked, "How do you get on with them?" The lawyer replied, "Why, sir, we must not have them; their young blood is up, and there is not one that would not swear to anything for you. We must not trust them." Not, perhaps, very complimentary to *us*, but certainly showing how much Mr. Cooper was personally liked by the pupils.

Some time after the trial, that bore so hard upon a thoroughly upright, conscientious gentleman and Surgeon, Mr. Cooper appeared to have got the names of the dressers who were to have been examined as his witnesses, and though personally unknown to him at that time (as I thought myself), he gave each of us the first two volumes of the new *Medical Gazette*, as some acknowledgment of the trouble he fancied we had been put to, for to a man we had scouted the idea of being *paid* in any way.

I have continued to take the *Medical Gazette* to the present day, and I own for some years with a prejudice against the *Lancet*, though it often contained interesting and important papers and reports.

I shall never forget the excitement of the school, nor the crush on the benches, and the thrusting of bodies and heads through the trap doors, which at that time opened on to the landing above the operator, in that ill-ventilated, inconvenient hole called the operating theatre, when a boy was brought in to be operated upon by Mr. B. Cooper—the first after the trial. What *he* felt I do not know, but I know we all felt for him acutely. To our great joy and relief, the operation was admirably done; he appeared to be self-possessed and steady. Then afterwards there came a case of axillary aneurism in a man—Mr. Cooper's case also. I *timed* that, as we often did in those days, and in one-quarter of an hour, without hitch or hindrance, the artery was successfully tied above the clavicle. A more masterly operation I have never since witnessed.

Then, I think, our hatred of the author of the "famous" report was at its height, and Bransby Cooper more a hero than a martyr.

Within a year of Mr. Cooper's death I again met him in the Museum at "Guy's," where I had last met him, when he gave me the *Medical Gazette* years ago. I made myself known to him, and he asked every particular about my success, as if I had been intimate before, which was not the case. By some accident, I mentioned his giving me the volumes of the *Gazette*, and that led us to talk of the trial. He told me *that* trial was the hardest one of his life, but he had lived to be asked by Mr. Wakley to give evidence, if required, which was likely, in favour of a near relative of Wakley's, on account of some want, or supposed want, of skill and judgment in his Professional career, which he consented to do. I could not resist saying, "Then, sir, you have lived to take a Christian's revenge!" He was much moved, but I found, on further conversation, how much he was then depressed by family troubles, and his own state of failing health.

Though a young man when I knew most of the staff of Guy's Hospital, I always considered Mr. B. Cooper in the wrong place. He ought to have remained in the army, where he would have been a popular army Surgeon, or a dashing cavalry officer. Notwithstanding this, I have often known him make very acute, rapid, and accurate diagnoses; but his great openness, which was that of a student rather than a teacher, exposed him to be found tripping, when a more cautious man, like Mr. Key (particularly before pupils), would not have been found out. Mr. Key appeared never to have a doubt of himself. He once told me, years afterwards, "it was his custom to assert, and not retract; for pupils did not understand *doubts*, and were apt to go away uninstructed."

I have now, Mr. Editor, reached the chief, if not the only reason for addressing you, and that is, to say a few words and give reminiscences of one who was a better Surgeon, had a more scientific mind, more true physiological knowledge than any of his colleagues—I mean Mr. John Morgan. If you will accept them it will be a labour of love to send a short sketch of his life—not longer, probably, than what has now been said of Mr. B. Cooper and "old times."

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,

Now prisoner of War at Versailles.

In the absence of any news from Paris, and while kept here in Versailles, I propose to give you a short account of the 1st French Volunteer Ambulance, in which I held the position of Surgeon. We left Paris on August 4, well fitted up for an institution of that kind. The volunteer ambulance system had never before been tried in France—or, better said, French army Surgeons and ministers of war had never showed themselves willing to accept anything not immediately and completely under their control. This prejudice existing, it can be easily imagined how difficult it at first was to receive permission to follow the army, and be officially recognised. The management of this affair, as indeed everything else appertaining to the creation of these ambulances, was the work of M. Lefort. Contributions in money and material came fast pouring into the Palais de l'Industrie, where the committee had established head-quarters. Difficulties, however, in the management of things soon began to show themselves; the majority of the committee were gentlemen, noble and benevolent, but quite unacquainted with the Profession and its wants. It therefore became necessary, for the sake of quieting endless discussions, to divide, and leave to Surgeons what belonged to Surgeons, and to the others the arrangement of money matters. Many a fault was committed, and many a thing left undone; but, if we consider the few days which were allowed for the organisation of the whole, much praise is due to everybody connected with the institution, both gentlemen and ladies.

The members of our ambulance signed their engagement, to serve during the whole duration of the war, on July 25. Its Medical *personnel* was composed of—1 Surgeon-in-chief, 4 Surgeons, 10 assistants, 12 under-assistants, and 70 *infirmiers*. The Surgeons and assistants were mounted. The salary allotted to the Surgeons was 400 fr. a month; to the assistants 250 fr.; to the under-assistants 150 fr.; and to the *infirmiers* 60 fr.; rations to be furnished to all. The material consisted of—250 beds of a remarkably light pattern, and folding together so as to occupy but very little space when not in use; 100 stretchers, with movable headpiece, able to replace a bed in case of emergency; 12 "wheelers," each composed of two wheels united by an axletree, and provided with springs, intended for short transports, on level ground, of the more severely wounded—the stretchers fitted upon these "wheelers," so that one person could easily haul a wounded man on a good road; 20 tents, made after M. Lefort's pattern (a description of which was given in a recent number of the *Medical Times and Gazette*), each for twelve beds; a well-selected stock of medicines, instruments, splints, bandages, etc., etc. For the transport of the whole were eight two-horse carriages; four of these like the French army *fourgon*, the other four much lighter and covered with canvas. Two of the latter vehicles were exclusively used for the officers' baggage, each of us being limited to the army *cantine*—a little box, about 2½ ft. long, 1 ft. high, and 1 ft. broad. There were, moreover, attached to the ambulance two civil engineers and five workmen, for the purpose of dressing tents, etc., but more especially to erect barracks, in case we remained long enough in a place to establish more permanent Hospitals. We also had with us two priests and one pastor.

Our material, though abundant, was in nowise sufficient to last through a long campaign; not dreaming, of course, that communications with Paris could ever be cut, we naturally thought to have things forwarded only as they became necessary.

We were put into a special military train, and sent on to Nancy, August 4, as already stated. M. Nélaton had been to Imperial head-quarters at Metz, to find out the place where we might be most useful, and, as a falling back of the army already at that time seemed probable, Nancy was assigned to us as our destination. Our first night out from Paris was passed in the cars (we only reached Nancy in eighteen hours, while the usual time is but eight hours); the second night was spent in an open shed near the R. R. depôt, and the third and fourth in camp, outside the city. All this was intended to give our young gentlemen a foretaste of what they had to expect. The most of them, never having been out of sight of the smoke of their mother's chimney, began to think that war was not so pleasant a thing after all. Not a few began to grumble, for they had come to do Surgery, and not to endure hardships. Poor fellows, still harder tasks were in store for them. So far, no wounded had fallen into our hands, though half a dozen tents had been erected and handsomely fitted up for their reception on the Place Stanislas. About 250 wounded, from MacMahon's defeat, reached Nancy, and were placed in the military Hospital there; consequently, still no work for us.

We had thus been left without the least orders, either from Paris or head-quarters at Metz, for five or six days. MacMahon's disasters had so much absorbed the attention of the authorities that our little band of Surgeons was, of course, forgotten. We now started for Metz on our own accord. From the various defeats, up to this time, between four and five thousand wounded had fallen into the hands of the enemy; to try and take care of these was our next attempt.

M. Lefort, the Surgeon-in-Chief of all the French volunteer ambulances, was with us, and at once applied for an interview with the Emperor, to offer our services. There could be no nobler action, we thought, than to constitute ourselves prisoners of war for the sake of attending to our countrymen left in the enemy's hands. The Emperor readily accepted, and ordered Marshal Bazaine to let M. Lefort and myself pass into the Prussian lines. (I had been appointed merely because some one who knew the German language thoroughly was thought necessary.) Arrived at the Marshal's head-quarters, then located in the little village called Borny, two miles and a half from Metz, we received—instead of an escort, as I had thought—a simple *sauf-conduit*; this happened on August 12. After having ridden some three miles, and nearly through the 150,000 men then there encamped, we heard picket-firing in the distance. We soon came to our extreme outposts; and just as we were asking the officer in command to cease firing for a few minutes, only long enough to give us time to ride into the enemy's lines, an officer of the staff came galloping up, saying, "Not to pass now; a battle may begin at any moment, and our white flag is liable to deceive the troops." Not a soul took notice of us as we had ridden towards the front, but coming back we were twice in danger of being shot by our own men; our uniform was not yet known to the army, and the red cross, afterwards so much abused by both the French and Prussians, was at that time unheard of. As we were returning in the direction of Borny, with soldiers and guns to accompany us—to avoid being again shot at—everybody in camp came running to the roadside to get a glance at what they thought were two Prussian prisoners. "*Voila deux Prussiens!*" was said all around us. We arrived safely in Metz, where we concluded to wait until a more opportune occasion to pass might present itself. This moment, however, never came, for only forty-eight hours later, near 4 o'clock on the afternoon of August 14, began the battle of Borny, fought upon the very ground which we had ridden over two days previously. It was here that, for the first time, the whole ambulance was called upon to figure in its true sphere.

(To be continued.)

REVIEWS.

Elementary Treatise on Natural Philosophy. By A. Prevat Deschanel, formerly Professor of Physics in the Lycée Louis le Grand, etc. Translated and edited by J. D. Everett, M.A., D.C.L., etc., Professor of Natural Philosophy in the Queen's College, Belfast. Part I. Mechanics, Hydroststics, and Pneumatics. London: Blackie and Son. Pp. 239.

An Elementary Course of Theoretical and Applied Mechanics. By Richard Wormell, B.A., B.Sc.; and *An Elementary Course of Hydrostatics and Sound*, by the same Author. London: Groombridge and Sons. Pp. 238 and 146.

Lessons in Elementary Physics. By Balfour Stewart, LL.D., F.R.S., Professor of Natural Philosophy, Owen's College, Manchester. London: Macmillan. Pp. 372.

We trust that day by day the doctrine we have so long preached is becoming clearer and more acceptable to the minds of men—we mean the importance of preliminary training, not in Medicine alone, but in all arts and sciences. As there can be no accurate knowledge of pathologic effects without an intimate acquaintance with the normal histology of a part, so a knowledge of diseased function implies that we know the normal function of an organ; and the study of these two has been too much neglected. Of physiology, some have said that it is no science: that it is made up of applied chemistry and physics; and although, like most such *dicta*, the saying is not absolutely accurate, it contains a good deal of truth; and it is on the bearings of physical science on Medicine that we now desire to say a word.

If a considerable portion of physiological science consists of applied mechanics, it is surely right that pure mechanics should be studied before their application is considered; and yet students enter on the study of their Profession with, at best, such a smattering of knowledge on the subject of Physics that the unfortunate teacher of physiology is compelled to do the work of an ordinary schoolmaster, when his time is all too short for the business which properly belongs to him. It would be easy to multiply instances, and we shall select a few, the better to impress our views on our readers.

Of the various forms of energy, muscular motion is to the physiologist one of the most important: yet how is he to explain the modern views to men who know nothing of the conservation of energy? Osmose and the diffusion of gases are surely physical phenomena: yet how is absoption or secretion to be understood without a knowledge of the one, or respiration without an insight into the other? The mechanism of respiration leads, again, to the consideration of atmospheric weight, potential vacua, and such like phenomena, not in any way appertaining to Medicine. But these are as nothing to the time wasted in the study of levers and pulleys as exemplified in the joints, muscles, and tendons of the human body. When the teacher speaks of taste, he must tell of colloidal and crystalloidal matter; of hearing, and straightway, to make himself intelligible, he must teach the elements of acoustics. When he discusses vision, he has first of all to tell what light is, how it is propagated, and how it behaves in passing from medium to medium; lenses must be considered; aberration, both spherical and chromatic, will be something unheard of before to his hearers. Bodily heat leads to the consideration of chemical change in food, and other sources of that form of energy. It might be forgiven to men not to know of the electrotonic condition of nerves; but when they know not the different varieties of electric force, one is tempted to exclaim against our system of education.

Yet all this might be easily improved off the face of the earth were a proper knowledge of Physics insisted on as a preliminary to the study of Medicine. Something has been done in the way of promoting this study in some of the larger schools; but were the examining bodies to insist on an adequate knowledge of the subject, the means of instruction would have to be supplied in all. Curiously enough, one great difficulty hitherto experienced by public teachers has been the want of an efficient text-book—such a book, we mean, as might be used by boys whose mathematical knowledge is not too extensive. Of books of the highest mathematical class there has been no lack, nor, possessing two works like "Brookes's Natural Philosophy" and "Ganot's Physics," could the advanced student grumble; but of works which might be used in a preparatory school we have had none which were not next to worthless. Again and again we have been asked to recommend one, and as often have we been compelled to decline the task. We are happy, therefore, to say that any one of the volumes whose titles head this article may, within certain limits, be commended for the purpose we have named. The beautiful and admirable work of Deschanel will, we fear, prove too bulky and too expensive for the purposes of the scholar, but it may well serve as a text-book of illustrations to the master. Of Mr. Wormell's books it must be premised that they are specially intended for those preparing for the University of London, and portions only would be read and studied in ordinary schools. For their own special purpose they are well fitted. (By the way, a considerable number of the engravings are from French sources; yet we can find no acknowledgment of the borrowing.) But the last book is the one which pleases us most. Strictly scientific, its science is not beyond the comprehension of the young scholar, and its publication will do much to facilitate the teaching of Physics in ordinary schools. No science is perfect until it admits of being expressed in mathematical formulæ, and herein lies the benefit to be derived from a training in Physics,—accuracy of expression is indispensable—this as a means of training to express concrete ideas exactly in abstract terms; but, as a basis of much physiological knowledge, Physics have a higher claim on the intending student of Medicine, and their study should be encouraged accordingly.

NEW BOOKS, WITH SHORT CRITIQUES.

Introductory Address Delivered at Surgeon's Hall, Edinburgh, November, 1870. By Joseph Bell, M.D.

⁂ An eloquent and able exposition of the status and duties of the Medical Practitioner. We quote the peroration:—

"Nor in its practice is ours an easy Profession. Its work is never done. The tradesman may close his shop when likes; the artisan drops his hammer with punctuality and slacrity at the welcome sound of the bell; the lawyer leaves his office, and then need work no more; but the Doctor never knows, except during his too short autumn holiday, the feeling of having finished all possible work, and at last being his own master. No; be the fire and slippers never so comfortable, at the sound of that hated bell or knocker, your dreams of rest are rudely broken, and you are again in harness. You will find plenty of opportunities of using all the good nature, charity, and self-denial you can muster, even in your first twelvemonth of Professional life.

"You will get messages from a distant beat, from which, perhaps, you have just returned with a wearied horse, which messages might have been sent in the morning, and given you no trouble whatever. You will be sent for in haste by nervous ladies, when possibly your are ill and they are not. You will often be aggravated by finding yourselves requested by charitable ladies to see patients, they getting the credit for charity, you only the trouble of the visit. You will occasionally meet with ingratitude—not so often, however, as we are sometimes told; but behind all its disagreeables, all its trials, our Profession has a silver lining of respect won by duty, love, and trust, the fruit of sympathy and skill, gratitude for the past, confidence in the future.

"Few relations in life are more honourable and beautiful than those which exist between a sensible, manly, and skilful old Doctor and his patients. He has seen the first of the children, the old people hope he will see the last of them. He has been present at every family gathering, sad or cheerful; he is the adviser first consulted in trial or difficulty; he shares family secrets with the lawyer, and can even aid the clergyman in his special work.

"Now, this high, noble, honourable position is absolutely within the reach of every one of you. Industry, honesty, and kindness are needed, and no more.

"We cannot all be rich, or great; it does not fall to every one's lot, or even is in every one's power, to be a Syme or a Simpson, an Abercrombie or a Bright; but it is a noble Profession, which offers to *all* the members a decent competence, respect in life, and regrets in death.

"Nor let us forget that in no other task on earth could we hope so close to follow the very footsteps of Him who went about healing every sickness and every disease among the people; whose prophets and types made the waters of Marah sweet, and the salt-springs of Jericho life-giving, cured the sick, and made dead men live; and whose disciples had for a time gifts of healings as the charter and witness of their discipleship.

"Let us walk worthy of our high calling."

Hamlet: from a Psychological Point of View. By W. Dyson Wood. Longmans.

⁂ Another contribution to the many before-published opinions as to the mental condition of Hamlet. This fertile field of inquiry has been tilled by many able and zealous labourers. The results have been very different in different writers. Was he sane? Was he insane? Did he merely assume madness for a particular object? or was his mind off its balance from the troubles he had experienced? All and each of these has had its advocate. Dr. Wood thus sums up his somewhat moral view of Hamlet's intellectual condition:—

"As I have said before, a consistent theory of the evolution of this play is to be found in an examination of Hamlet's character and the circumstances in which he was placed. Hamlet is pictured to us as a young man possessing highly sensitive and emotional qualities of mind, in combination with most refined intellectual insight and subtlety, original reasoning power of a high order, exalted, and at the same time softened, by a brilliant and most delicate imagination; and yet, judged critically, these splendid powers of mind do not appear in their perfectly developed form—they seem to be beautiful young buds rather than fully expanded flowers. Whatever notes he touches, he touches brilliantly, and yet lightly, as with the finger of genius, but his songs are more like exquisite snatches of melody than the music of completed conceptions. His noble mind, tentative in its efforts, seems to be waiting and yearning for some favourable soil in which it may germinate, and for problems of thought and policy worthy of its greatness.

"Hamlet, I think, is deeply interesting to us, not only for his rare exhibitions of mental resources already vouchsafed to us, but also by suggesting the immense reserve force lying, as it were, latent, or partially developed, in the background, waiting only for favourable matter and opportunity on which to exercise itself. It is stimulating to reflect into what a giant he might have grown had his lot been cast in a fair and open field—say in the world of literature or politics. It is true that he appears to us in the play as a man almost solely of speculative and reflective ability, and certainly weak in capacity for action; but this does not necessarily involve our looking upon him merely as a dreamy, brooding egoist, unfitted by his very nature for ever battling with the realities of applied thought and practical life. We see him in that stage of development through which minds of a certain high class invariably pass—the stage of what has been called 'reflective indecision'—before the conceptions are systematised, before the will has been fashioned, and before the individual has placed himself thinkingly, and, as far as he can, actually, in harmony with the circumstances by which he is surrounded. The will, in so far as it is the instrument and servant of reason, and not merely another name for unreasoning impulse, is not innate, is not a necessary part of our constitution from birth, but is gradually formed and built up as the result of natural development and constantly repeated efforts; until the will is thoroughly fashioned and acts almost unconsciously and involuntarily, the character cannot be said to be complete, and, judged by this criterion, Hamlet's is incomplete, his individuality is not perfect. I prefer to regard him myself as a splendid specimen of humanity, full of promise, but arrested in his development, and that too in the very best blossoming of his powers; called to a career and placed among circumstances for which he was utterly unfit, driven through want of healthier outlets for his activity to brooding self-consciousness, the victim at last of melancholy and despair. In thinking of Hamlet and his destiny, the sad words of Ophelia come naturally to our lips, 'What a noble mind is here o'erthrown!'"

There is to be a ball at Willis's Rooms on Tuesday, January 17, in aid of the funds of University College Hospital. It is to be under most distinguished patronage, from the Princess Christian downwards, and will, we hope, be well supported.

GENERAL CORRESPONDENCE.

"AIDE TOI DIEU T'AIDERA."

From Dr. Joseph Rogers.

[To the Editor of the Medical Times and Gazette.]

Sir,—The Association for Improving the Condition of the Poor of Edinburgh, in their report dated December, 1870, draw particular attention to the insufficient arrangements for Medical relief in that city, and state that the College of Physicians and Surgeons have taken the question into consideration, with the view of suggesting certain beneficial modifications. Now, although nothing can be more praiseworthy than this action of the Corporation, yet, if its proceedings be confined to the Scotch metropolis, only very limited results will be achieved. May I, therefore, be permitted briefly to address you, with the view of securing a wider agitation of the subject?

That Medical relief to the poor in Scotland is most defective, will be exhibited when I state that £32,858 only is expended on the stipends, etc., of the parochial Surgeons, from which they have to find all medicines and appliances for the sick poor of a population of 3,188,125, as against £131,000 expended on the same Service in Ireland for a population of 5,543,285. That it is false economy is shown by the fact that by the last return of the Scotch Poor-law Board (that of 1868) the aggregate amount of poor-rate, inclusive of Medical relief, was £863,202, or 5s. 7½d. per head of population, as against £829,521, or 2s. 11¾d. per head of population (the cost of Medical relief being included) for the sick poor of Ireland—that is to say, in round numbers, the poor of Scotland cost nearly twice as much to maintain as those of Ireland.

That the insufficiency of the stipends and the generally imperfect character of the Service has attracted the attention of other than merely Professional observers, is shown by the circumstance that at the annual dinner of the Poor-law Medical Officers' Association last July, the Honourable E. S. Gordon, in returning thanks for the House of Commons, said "that he was a member of that body in Scotland which was analogous with the Poor-law Board of England, and he was ashamed to see the miserable stipends paid to men of that Profession in return for important services. It was impossible for that Board to pay more, but he believed that attention was being directed to the condition of Medical men, and he trusted that remedies would be found for existing evil."

In point of fact, the Scotch Poor-law Medical Service labours under exactly the same disadvantages (except that they are a shade more aggravated) that the English Service does, and which the Poor-law Medical Officers' Association was originated to remove. Hitherto, as you know, our labours have been attended with the most gratifying results, and we have good reason to believe that, before a great while, most of the grievances of which we justly complain will be largely diminished or altogether removed. Now, I would counsel our Scotch brethren to form an association having similar objects: surely it is a desirable movement, when it can be shown that an improvement in the status and remuneration of the Service would lead to a diminution of suffering amongst the poor, and a curtailment of the excessive expenditure on poor relief!

There can be no doubt that an association framed on the same principle as ours would not only effect much local good, but would also be able to render very valuable assistance to us; and for this reason, hitherto, we have found that the English M.P. is ofttimes deterred from taking Parliamentary action in our favour, from fear lest he might excite an adverse political influence from the Boards of Guardians of the city or county he represents. A dread of such consequences would not affect the member for a Scotch constituency, and, therefore, if locally solicited, he could safely support us. That this view is correct was shown by the fact that, in the late debate on the Superannuation Bill, several Irish members took a prominent part, to which action they were stimulated by certain Dispensary Physicians in Ireland, in return for similar good offices from us when their Bill was under Parliamentary consideration. Since then, an Association of Irish Medical Officers has been formed, whose members are distributed pretty equally over the island. With that Association we have proposed to establish an *entente cordiale*, with the view to an effective interchange of Parliamentary action for the redress of each other's grievances. Now, could we get our Scotch brethren to do the same, we could work the House of Commons in such a way that, though we might gratefully accept the aid of the Corporations, we should also be in a position to do without them.

In conclusion, allow me to state that, if my suggestion should lead to action, I should be most happy to aid such a movement in every way in my power; and if it is doomed to meet with no collective response, then, seeing that we still have after all certain common objects—these being the good of the poor, the advantage of the ratepayer, and the improved status of a very considerable section of our common Profession—the Association over which I have the honour to preside will welcome to its ranks all such Scotch Poor-law Medical Officers as may be disposed to join us in our efforts.

I am, &c., JOSEPH ROGERS,
President of the Poor-law Medical Officers' Association.
Dean-street, Soho, January 3, 1871.

CAMBRIDGE EXAMINATIONS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Referring to your recent remarks on the late Cambridge M.B. examination papers, will you permit me to relate an anecdote bearing upon the very point under discussion between yourself and Professor Humphry, M.D.

My esteemed friend the late Mr. Burcham, one of the metropolitan police magistrates, who was third in the first class of the Classical Tripos at Cambridge the same year (1830) that Dr. Wordsworth, the present Bishop of Lincoln was first, was afterwards appointed, I believe, amongst the first examiners for degrees at the newly-chartered London University.

Mr. Burcham, who was at the time of his appointment a Fellow of Trinity College, Cambridge, was examiner in classics and moral philosophy at the London University for, if my memory serves me truly, nearly twenty years, when he voluntarily resigned. I mention these facts as evidence of the weight that must attach to his opinion on all matters relating to public examinations and their practical effects.

Upon calling upon him one day, I saw on his table a pile of London University B.A. examination papers, and, glancing at their contents, I observed, "If these papers are for a mere pass degree, they would pluck more than half the Cambridge men." "Ah!" observed Mr. Burcham, smiling, "You only see the questions; but you should see the *answers*." He continued, "In order to give such a character to the London degrees as can alone establish the reputation of a new institution, we had agreed upon a high standard of examination papers; but we have found practically that to insist rigorously upon it would be to pluck half the candidates. We have, therefore, been compelled to lower the standard of the *answers* required, as we could not well withdraw from the position we had contended for. In fact," he added, "it is a mistake to make any pass examination more severe than men of ordinary capacity and ordinary industry can accomplish. It is different with 'honours.' There you may make the examination as stiff as you like."

These observations, I apprehend, must equally apply to Medical examinations. If none but men of great ability and considerable attainments could pass them, the public would lose the services of many an efficient but perhaps not specially gifted Practitioner. The same might be said of every other profession. A severe crucial test at starting would exclude many an useful and practical aspirant. With great deference I venture thus to endorse the views of my late friend.

I am, &c.,
A CAMBRIDGE MASTER OF ARTS.

P.S.—Doubtless the standard of answers has since been raised, but that merely proves a general advance in education; it does not affect the argument generally.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, DECEMBER 17.

DR. DRUITT, President, in the Chair.

DR. GIBBON asked leave to introduce a lady Physician, but the permission was not granted, on the ground that the subject of the presence of ladies at their meetings had been already discussed at the General Purposes' Committee, and unanimously refused.

MR. LIDDLE spoke of the necessity of having power to remove dead bodies from houses, and to order the people to go out, that the houses might be properly disinfected.

Dr. TRIPE said that, in parishes where there was no mortuary, it was still possible to obtain an order from a magistrate for immediate burial; the expense could be recovered from the family.

Mr. LIDDLE said that, at the London Hospital, separate sheds had been erected for the isolation of small-pox patients, with great advantage.

Dr. GIBBON approved of Mr. Liddle's suggestion, and thought that every Hospital ought to be provided with separate buildings of the kind.

Dr. STEVENSON next made his report on Chloralum as an Antiseptic and Disinfectant, as proposed by Professor Gamgee and submitted to the Association. Dr. Stevenson said he had examined the specimen handed to him, and found that the substance, aluminic chloride, was not new to chemists. It seemed to have no action on sulphuretted hydrogen. It will deodorise some compounds, perhaps, because it fixes ammonia and organic ammonias. In its antiseptic properties it seemed to be like many other mineral salts. It stopped putrefactive change to a great extent, but seemed inferior to carbolic acid. It was difficult to determine whether it had disinfectant powers; probably it had. Dr. Stevenson thought that, in any case, its expensiveness, as compared with carbolic acid and other disinfectants now in use, would weigh against it. It might be of advantage in the case of dead bodies, where the preservation of colour was of importance.

At this point Dr. Druitt was called away, and Dr. Tripe took the chair.

Professor GAMGEE said that he had been assured by Dr. Angus Smith and others that this was almost an untouched subject. He claimed for chloralum a superiority over carbolic acid on account of its inoffensiveness and harmlessness, and because the strength could be moderated at pleasure. It was applicable to ten times as many purposes as carbolic acid, and could eventually be manufactured at one-third the price.

Dr. ALDIS read a paper, entitled, "Scarlet Fever, for Ten Years, in the Parish of St. George, Hanover-square." Dr. Aldis first called attention to (1) the population of St. George's, (2) its elevation and area, and (3) its geology. The total population of the Hanover-square and Mayfair districts in 1861 numbered 32,418, while the Belgrave contained 55,099. The inhabitants of the latter district increased at the rate of 1500 a year; those of the two former remained almost stationary. The elevation of the Hanover-square above high-water mark is computed to be 64 feet; of Mayfair, 56 feet; of Belgrave, only 12 feet. Comparing areas, there is only a difference of one acre between the Belgrave district and the other two united. In respect of the geology of the parish, the soil of Hanover-square, Mayfair, and Belgravia consists almost entirely of gravel and sand, while that of South Belgravia is formed of made earth, gravel, and sand, situate upon alluvium. The deaths in the parish from scarlet fever during the four quarters of the past year were—in the June quarter, 1869, 6; September, 1869, 15; December, 1869, 22; March, 1870, 21; total, 64. Deducting 8 non-parishioners who died in Hospitals in the parish, there remain 55 deaths. Of these, 12 occurred in the Hanover-square, 8 in the Mayfair, and 34 in the Belgrave sub-district. The question of the admission of contagious diseases into Hospitals reminded him, Dr. Aldis said, of two cases in 1865, in which scarlet fever was contracted by two boys while staying in St. George's Hospital for the cure of other complaints. He likewise ascertained, a few days ago, that cases of scarlet and other fevers are still admitted into the wards of some Hospitals containing patients affected with other diseases. As to model lodgings, there was one of these establishments in his parish, in which there was a deficiency in the general sweep of air over the whole building. Here twelve cases of scarlet fever occurred, while in another erected under proper conditions not a single case arose. Respecting the coincidence of contagious diseases in the same house, Dr. Aldis gave a history of six or seven months of illness from scarlet fever, typhus, and small-pox, in a most crowded and ill-ventilated house, in which the greatest exertions were needed to get the people to make any move for their own benefit. With regard to the statement of the Registrar-General in January last, to the effect that scarlet fever had been more fatal last year than in any previous year since registration commenced, the author gave the figures for his own parish, from which it appeared that 1861 was by far the most fatal year. Dr. Aldis likewise called attention to the fact that, out of 499 persons who had died of this disease, he found that 476 were under 20 years of age. The greater number of deaths in the Belgrave district, compared with that of other districts, he attributed to the rapid increase of population and of new houses, to its lower level, and its geological features. As to the means of prevention of scarlet fever, there was no doubt that isolation was among the best; but without houses of refuge it was difficult to effect this, especially among the poor. They often conceal the disease, and break promises of taking their children to the Hospital, although living in the kitchen with their children, and letting the rest of the house to lodgers. In his own practice, Dr. Aldis said he never thought it necessary to break up a school or disperse a private family. He found the isolation sufficiently effective when he allotted apartments on separate floors to the sick and the healthy, and prohibited intercommunication. On the same principle, special carriages ought to be provided for the removal of these patients to Hospitals. Suitable apparatus for disinfection is likewise necessary; and the poorer classes especially ought to have a constant supply of water. The principal disinfectant he used was sulphurous acid (for which he quoted Homer, "Odyssey," book xxii., as an authority), carbolic acid, M'Dougall's Powder, and Condy's Fluid.

Dr. Tripe said that isolation could be effected if the patients could be got to live in separate rooms, shut off from the rest of the family, and were not allowed to mix with them too soon. He also objected to patients being removed to Hospitals in an upright position.

Professor Gamgee then read a paper on "Country *v.* Town Milk," which will be printed *in extenso.*

Dr. Ballard read a paper on "Pemphigus caused by Inoculation from the Teats of a Cow." This will be found in another column.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentleman passed his Examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, December 29, 1870:—

Garland, Henry, Walworth-road.

The following gentleman also on the same day passed his First Professional Examination:—

Bland, William Charles, St. Bartholomew's Hospital.

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Vachell, C. T., M.B. Lond., L.R.C.P., M.R.C.S., L.S.A.—House-Surgeon to the Glamorganshire and Monmouthshire Infirmary and Dispensary.

MILITARY APPOINTMENTS.

Royal Artillery.—Staff Surgeon Edwin James Hopwood to be Surgeon, *vice* William Younge Jeeves, placed on half-pay, October 28, 1870.

Grenadier Guards.—Battalion Surgeon Arthur Guy Elkington to be Surgeon-Major, *vice* James John Majoribanks Wardrop, who retires on half-pay; Assistant-Surgeon Francis B. Baker, from Scots Fusilier Guards, to be Battalion Surgeon, *vice* Elkington; Staff Surgeon William Ralph Lane to be Surgeon; January 4.

Scots Fusilier Guards.—Staff Assistant-Surgeon James Chatterton, M.D., to be Assistant-Surgeon, *vice* F. B. Baker, promoted Battalion Surgeon in the Grenadier Guards; January 4.

35th Foot.—Surgeon Charles Walter Poulton, M.D., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of April 1, 1867; December 13, 1870.

56th Foot.—Staff Assistant-Surgeon William Lougheed to be Assistant-Surgeon; January 4.

72nd Foot.—Staff Assistant-Surgeon William Nash, M.D., to be Assistant-Surgeon; January 4.

Medical Department.—Assistant-Surgeon William Ralph Lane, from the Grenadier Guards, to be Staff Surgeon; Quartermaster-Sergeant Francis Dancy Hamilton, Royal Engineers, to be Apothecary to the Forces, *vice* Edwin Rickards, deceased; January 4.

BIRTHS.

Atkins.—On December 30, at Weston-super-Mare, the wife of Henry Atkins, Esq., Surgeon, Her Majesty's Bombay Medical Service, of a daughter.

Dobis.—On January 1, at Chester, the wife of Wm. M. Dobis, M.D., of a daughter.

Gordon.—On November 24, at Meerut, Bengal, the wife of H. G. Gordon, M.D., Deputy Inspector-General of Hospitals, of a son.

Jones.—On January 1, at Prittlewell, Essex, the wife of George Francis Jones, M.R.C.S., of a son.

Knaggs.—On December 28, at 9, Highgate-road, Kentish-town, N.W., the wife of Sydney H. Knaggs, M.R.C.S., of a son.

Moore.—On December 25, at Brympton-villa, Granada-road, Southsea, the wife of Dr. George Moore, Staff-Surgeon, Royal Navy, of a daughter.

Rowell.—On November 9, at View-place, Singapore, Straits Settlements, the wife of T. Irvine Rowell, M.D., of a daughter.

Sutton.—On December 30, at the Norwich Borough Asylum, the wife of Frederick Sutton, Resident Medical Superintendent, of a son.

Walker.—On December 23, at Peterborough, the wife of T. J. Walker, M.D., of a daughter.

Whately.—On December 30, at 33, Vernon-terrace, Brighton, the wife of Edward Whately, M.R.C.S., of a daughter.

Williamson.—On December 27, at Clarendon-villa, Mildmay-park, N., the wife of James Williamson, M.D., of a daughter.

Worthington.—On December 25, at Worthing, the wife of Dr. Worthington, of a daughter.

MARRIAGES.

Bennett—Norman.—On December 20, at Chapelizod Church, County Dublin, Edward Hallaran Bennett, M.D., to Frances, eldest daughter of Conolly Norman, Esq., of Riversdale, Palmerston, County Dublin.

Jameson—Pringle.—On December 24, at 4, Albert-terrace, Edinburgh, Thomas Jameson, M.D., R.N., to Elizabeth, youngest daughter of the late Robert Pringle, Esq., of Lymington.

Livingstone—Davidson.—On December 29, at St. George's Church, Campden-hill, R. Hamilton Livingstone, of St. John, New Brunswick, M.D. Univ. Edin., to Jeanie, eldest daughter of the late Colonel James Davidson, 31st Madras N.I., H.E.I.C.S.

Thomas—Sheppard.—On December 29, at St. Bartholomew's, Sydenham, William Thomas, F.R.C.S., of Bradford-street, Birmingham, to Mary Elizabeth, eldest daughter of Thomas Sheppard, Esq., of Laurie-park-gardens, Sydenham.

Workman—Hebbert.—On December 28, at the parish church, Brighton, by the Rev. Albert Workman, brother of the bridegroom, assisted by the Rev. R. Snowdon Smith, Charles John Workman, M.D., son of the late T. Skeete Workman, Esq., of Reading, to Emily Elizabeth, second daughter of H. Hebbert, Esq., late H.M.'s Bombay Civil Service.

DEATHS.

Gedge, Joseph, M.B., of Caius College, Cambridge, Chief Medical Officer to Sir Samuel Baker's White Nile Expedition, fourth son of Johnson Gedge, Esq., of Bury St. Edmunds, at Khartoum, Central Africa, on October 21, aged 28.

Hetley, Mary, widow of the late Richard Hetley, Esq., of Maida-vale, and mother of Frederic Hetley, M.D., at Norbury-lodge, Upper Norwood, Surrey, after a few days' illness, on December 29.

Scarr, R. T., Surgeon, at Bishops Stortford, suddenly, age 61, on Jan. 1.

Speedy, Robert, Surgeon 46th Regiment, at Winchester, on January 3.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Charing-cross Hospital, West Strand, W.C.—Assistant-Physician; must have a degree from one of the universities recognised by the General Medical Council, and be a Fellow or Member of the Royal College of Physicians of London. The office of Assistant-Surgeon is also vacant. Candidates must be Fellows of the Royal College of Surgeons of England, not practising pharmacy or midwifery. Applications and testimonials to Henry Woolcott, Esq., Secretary, on or before January 10.

Cheltenham General Hospital and Dispensary.—Surgeon. Applications and testimonials to D. Hartley, Esq., Secretary, on or before January 21.

County Down Infirmary and Fever Hospital.—Resident Registrar and Surgeon's Assistant; must be duly qualified and registered. Applications and testimonials to James Simms, Esq., Registrar, on or before January 10.

Dental Hospital of London, 32, Soho-square, W.—Assistant Dental Surgeon. Applications and testimonials to the Hon. Sec. on or before January 12.

East London Hospital for Children and Dispensary for Women, Ratcliff-cross, E.—Surgeon. Applications and testimonials to the Secretary at the Hospital on or before January 23. Election the following day at 3 o'clock, p.m.

East Ward Union.—Medical Officer for the Workhouse at Kirkby Stephen. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and be registered. Applications and testimonials to John Whitehead, Esq., Clerk to the Guardians, Appleby, on or before January 14, election on the 16th inst.

Guisborough Union.—Medical Officer wanted for the Danby District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and be registered. Applications and testimonials to W. Weatherill, Esq., Clerk, on or before January 10. Election the same day.

"Hamadryad" Hospital Ship for Seamen of All Nations, Port of Cardiff.—Resident Assistant Medical Officer; must possess a Surgical qualification, and be unmarried. Applications and testimonials to D. Roberts, Esq., 17, Church-street, Cardiff, on or before January 16.

Holborn Union.—Medical Officer for No. 1 District. Candidates must possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. J. W. Hill, Clerk, at the Workhouse, Gray's-inn-road, W.C., on or before January 10.

Infirmary for Consumption.—Visiting-Physician; must be M.R.C.P.L. Applications and testimonials to the Secretary.

Royal Hants County Hospital, Winchester.—House-Surgeon and Secretary; must possess the diploma of the Royal College of Surgeons of England, or the Surgical diploma of a Royal College or a University in Scotland or Ireland, and, also, either a licence from the Royal College of Physicians of London or from the Apothecaries' Society. Applications and testimonials to W. A. Richards, Esq., Secretary, on or before January 11.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

Royal South London Dispensary, St. George's-cross, Lambeth-road, S.E.—Honorary District Surgeon. Applications to Mr. Hentseh.

University of Durham, College of Medicine, Newcastle-on-Tyne.—Medical Tutor. Applications and copies of testimonials to Mr. Luke Armstrong. The duties will commence after the Christmas vacation.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Melton Mowbray Union.—Mr. Burford Norman has resigned the First Melton Mowbray District; area, 15,037; population, 5730; salary, £40 per annum. Mr. James Roberts has resigned the Waltham District; area, 17,042; population, 3097; salary £40 per annum.

Truro Union.—Mr. E. M. Prynne has resigned the Veryan District; area, 9860; population, 2344; salary, £30 per annum.

APPOINTMENTS.

Alton Union.—Louis Leslie, M.D. Univ. Aber., M.R.C.S. Eng., to the First District.

Easington Union.—John E. L. Macdonald, L.R.C.S. Dub., L.R.C.P. Edin., L.A.H. Dub., L.M., to the Thornley District.

Evesham Union.—Horace E. Haynes, M.R.C.S.E., L.S.A., to the Third District.

Hartley Wintney Union.—Thomas J. Burroughs, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Crondall District.

Holborn Union.—George E. Yarrow, M.R.C.S.E., L.S.A., to the St. Luke's Workhouse.

Islington Parish.—Frederick O'Conor, M.D. St. And., L.F.P. and S. Glasg., L.A.C. Ire., to the St. Peter's District.

Poplar Union.—Herbert John Fausset, M.B., M.C. Dub., to the West District.

Westhampnett Union.—Richard O. Arnold, L.F.P. and S. Glasg., L.S.A. Lond., to the Rumboldswhyke District. Nathaniel E. Cresswell, M.D. Univ. St. And., M.R.C.S. Eng., L.S.A., to the Manhood District.

Dr. Barnes has been elected an Honorary Member of the Medical Society of Victoria.

The new Infirmary and Dispensary in Virginia-street, Southport, was formally opened on Monday.

On Friday evening last, Dr. Acland, the Regius Professor of Medicine at Oxford, at the invitation of a number of working-men of the city, delivered in the Town-hall a free lecture on "Hospitals, and their Management."

Mr. S. J. F. Stafford, M.R.C.S. Eng., has been presented with a handsome silver salver by the members of the United Lodge of Odd Fellows, N.O., Great Yarmouth.

Measures are being taken to establish a Medical school in connexion with the University of Sydney.

During the month of December last, the Fishmongers' Company seized 19 tons 15 cwt. of diseased fish, unfit for human food.

It is stated that from 75 to 100 British subjects die every twenty-four hours from snake-bite, and it is for Government to make up its mind whether it will put a stop to this state of things or not. It can only put a stop to it by means of a large and steady outlay.

A child two days old was poisoned by the nurse in consequence of her substituting laudanum for castor oil. A verdict of "death from misadventure" was recorded, but surely the mistake was one that ought never to have been made.

Fever in Ireland.—Fever is reported to be prevailing in Galway and the West of Ireland. The Poor-law Commissioners have despatched a Medical inspector to Keelkile, co. Galway, to take such steps as may seem necessary to oppose the epidemic.

Phthisis.—During the four weeks ending October 10, twenty deaths occurred in the Melbourne Hospital. Of these, three were occasioned by phthisis. The persons who died of consumption had resided, respectively, four, eighteen, and four years in the colony, or an average of eight and a half years each.

Lady Medical Students at Edinburgh.—The question of the admission of lady-students to the wards of the Royal Infirmary of Edinburgh came up for discussion yesterday at the election of managers for the year. Two lists were submitted, and at the close of a long discussion, in which Mrs. Henry Kingsley and Miss Jex Blake took part, 100 voted against the admission of ladies, and 96 in their favour. The votes will be scrutinised.

Medical News from Ceylon.—Assistant Colonial Surgeon Dr. Vandort is appointed Lecturer on Anatomy in the Medical School, *vice* Mr. Andree, removed to Kandy. The Secretary of State has offered Dr. Coghill, through the local government, an appointment at Hong-Kong, with a considerably higher salary than that of the fixed office in Ceylon; but the prospect of promotion in view of approaching changes will, perhaps, induce this efficient officer to remain in the Ceylon service.

Honorary Medical Officer to the Ashton District Infirmary.—At the monthly meeting of the Board of Governors of the Infirmary, held on Wednesday, Enoch Robinson, Esq., of Dukinfield, was unanimously elected an honorary Medical Officer of the Institution. This appointment will gratify a great number of people in the township, particularly those connected with the coal mines, to which Mr. Robinson has long held the appointment of Medical Officer with great approbation and respect.—*Ashton News.*

Health of Halifax.—For some weeks past the mortality of this town has been so great that the deaths have actually exceeded the births. For the last fortnight the death-rate has risen to the terrible amount of 49 per 1000. During the corresponding fortnight last year the death-rate was only 29 per 1000. Fevers of various kinds have been epidemic; 28 fatal cases of scarlatina have occured in the like period. Last year the deaths from scarlet fever amounted only to 3. There were 19 deaths from bronchitis, against 7 last year. No inquiry into the cause of the rate of mortality has been yet made, but the rate now is 52 or 54.

Propert Library, Epsom College.—This library has been completed, and was opened a few weeks ago to the boys. A sum of between £300 and £400 had been collected among the past and present Epsomians, and this has had to be expended in payment for the bookcases and fittings to the room, so that the supply of books will have to be provided for by future funds. It is hoped, however, that donations will be freely made by those interested in the institution, and such should be sent to the Rev. the Head Master, or to Mr. Wagstaffe, the Treasurer, 122, Kennington-road. The room is a very handsome one, and will form a very attractive feature in the school.

Presentation to a Medical Practitioner.—On Tuesday week several gentlemen met at the "Denman's Head," at Sutton, in Ashfield, near Mansfield, for the purpose of presenting Dr. Curran, who is leaving that place for Mansfield Woodhouse, with a testimonial of esteem and respect, which a residence of eighteen months had gained for him. The articles presented were, a massive gold chain, with ornaments set with a bloodstone and onyx, a ring set with a large carbuncle, and a Surgical instrument of considerable value. Mr. Charles Oscroft, in making the presentation, passed a high eulogy on the recipient, who replied in a few simple but eloquent words.

The authorities of the Hospital for Sick Children, in Great Ormond-street, Bloomsbury, have resolved—"That the practice of the Hospital be thrown open gratuitously to the pupils of the different Hospitals and Medical schools in London; but that not more than four from each school be offered the privilege at one time. That the admission be limited to a period of three months, but be renewable on application. That the pupils so admitted bring with them recommendations from one of the Medical officers or teachers of their school, and that they receive from the House-Surgeon a ticket authorising them to attend the practice. That the names of gentlemen so admitted, with the date of their admission, and the school with which they are connected, be entered in a book; and that, if their attendance be regular, they shall receive a certificate testifying to such attendance. That, in order to render such visits more useful, each of the senior Medical officers engages to give clinical instruction at the bedside, or after the visit, once a week." This arrangement will commence on Tuesday, January 17.

Royal College of Surgeons.—It will doubtless surprise the readers of the *Medical Times and Gazette*, especially the Fellows and Members of the College, to learn that no essays have been sent in this Christmas, either for the Collegial-Triennial or Jacksonian Prizes; the subject for the former was "The Anatomy and Physiology of the Organs of Taste and Smell in the Mammalia." On turning to the College calendar it will be seen that no award has been made for this prize since 1858, when it was carried off by Dr. Harley. For the Jacksonian Prize the subject was, "Hæmorrhagic Diathesis and Spontaneous and Accidental Hæmorrhage." There has been no award for this prize since 1867, in which year there were two, the recipients being Mr. C. Heath and Mr. W. J. Smith. The Jacksonian Prize for the present year will be adjudged to the author of the best essay on "The Treatment of Wounds after Operations, including the Arrest of Hæmorrhage, primary and secondary." The dissertations must be sent in before Christmas next, when it is hoped the Committee will not again enjoy a sinecure in having no essays to read.

HOSPITAL STATISTICS.—In the thirty-sixth report of the Glasgow Lying-in Hospital appears the following passage:—"As has been remarked in former reports—and it cannot be too strongly insisted on—the statistics of the Hospital do not warrant any conclusion based upon a comparison of the mortality of cases delivered in Hospital and those delivered in the mothers' homes. This year's returns show an in-door mortality of 1 in 67·4, while the out-door cases exhibit an apparent mortality of 1 in 139. It must, however, be borne in mind that, while the in-door returns are perfectly accurate, those of out-door cases, as far as mortality is concerned, cannot be vouched for as being even approximately correct. This defect in the reliability of the out-door statistics is common to all similar institutions, and results from causes over which the Medical officers can exercise little or no control. It must be evident to all acquainted with the conditions of out-door attendance by students, that, from various causes—such as neglecting to return the reports of cases of delivery, inability to attend a dangerous and protracted case till it terminates either in recovery or death, occasionally the removal of the patient to the poor-house, etc.—the returns are necessarily imperfect. Thus, our records cannot possibly present proper data on which to ground any conclusion whatever regarding the comparative mortality of Hospital and home deliveries. While on the subject of statistics, your Medical officers may state that the records of the Hospital are kept with great care, and the results periodically published in the columns of the *Glasgow Medical Journal*. This feature of the institution will not be undervalued by those who have studied the relation of thoroughly reliable statistics to some of the most interesting and important obstetric problems which at present attract so much attention throughout the Profession."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Frank Godfrey, Gibraltar.—Your letter, with enclosure, has come to hand.

Dr. D., Constantinople.—The papers must be sent through the post in future, as they cannot be sent through the Foreign Office.

S.—Dr. E. Ballard, M.D. Lond., Medical Officer of Health for Islington, must not be confounded with Dr. Thomas Ballard, M.D. St. And., who practises at Paddington.

QUERY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Two brothers married two sisters; would a marriage between their children (being thus doubly related) be essentially different from the case of ordinary cousins? And is there sufficient proof that such a marriage would probably be productive of marked deterioration in offspring?

I am, &c. INQUIRER.

N. M. must possess the double qualification.

R. T. can appeal—the case is doubtful.

Q.—The Dr. Ballard who has a theory of sucking, and never saw a case of infantile syphilis, is not the author of the pamphlet on Milk and Typhoid.

A. B. C.—We had nothing to do with the supplement in question, and never saw it before. We believe "climatic instruments" are respirators, and that the paper is an advertisement—a very obscure one we confess.

THE DUTIES OF AN ARTICLED PUPIL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Having seen in your journal of the 26th inst. a paragraph styled "A Yorkshire Apprentice," stating that "menial offices like those specified cannot legally be required," I would ask for the names of some of those menial offices, as I am sure I have a great many things to do which are very degrading, viz.:—

1. Washing and dusting the surgery bottles.
2. Going out with the Surgeon to whom I am articled, and officiating as groom—that is to say, not as regards the stable, but holding his horse and trap at the doors of his various patients whilst he goes in.
3. Carrying out the bottles made-up in the surgery to houses or offices of the various persons for whom they are prescribed.
4. Fetching all the sundry drugs from chemists' shops in the town needed for the surgery—*i.e.*, when the stock runs short before the quarterly order is sent to the wholesale chemist's.

There are also a few questions I would ask, viz.:—

1. If two or three accidents occur in one day, and there are two of us in the surgery, ought not our master to take one of us out to some of them?
2. Is Sunday attendance legally required, in a practice where there are sometimes one, and sometimes three, patients come in a day, of a pupil who boards and lodges at home?
3. What are the hours that ought to be required from a pupil who boards and lodges at home? Also, what time ought to be allowed for my meals, as I live about 200 yards away from my master's house?

I am, &c. AN ARTICLED PUPIL.

Liverpool, November 27, 1870.

P.S.—My hours at present are from 9 a.m. to 9 p.m.

J. G. H.—The respirators usually considered the best are those of Jeffrey's. Cheaper ones are to be had at most chemists. The cheapest of all, and effectual as any, is the habit of breathing through the nose alone. Read a little book called "Keep your Mouth Shut," by Catlin, to be had of Trübner, Paternoster-row.

W. H.—The guinea is, we believe, conduct-money, to pay travelling expenses, and should be excluded from the calculation. For the other services, eleven guineas is the smallest sum which, we think, you ought to charge consistently with your position and the circumstances of the case.

Sigma.—The Lettsomian Lectures were not founded by Lettsom, but instituted a few years since by the Council of the Medical Society, in honour of one of its founders, and the greatest of its benefactors. Lettsom's library was one of the richest in old works in the kingdom, and this he bequeathed, together with a house in Bolt-court, to the Medical Society.

THE MEDICAL COUNCIL AND MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Would you kindly permit me to point out, in reference to your otherwise excellent *résumé* of the affairs of last year, that the account given of the proceedings of the General Medical Council in the comments commencing line 11, column 2, page 754, can hardly be accepted as correctly representing the "feelings" of that body?

The strong expressions there alluded to were used by an eminent member of the Council, who is given to free speaking, and it would scarcely be fair to hold his colleagues in Council responsible for the terms in which it pleased that gentleman to express his feelings.

On reference to the minutes and to the published reports of the debates, it will be seen that although several representatives of Corporations, on the first day of the last session, objected strongly to a new single licence superseding every Corporate licence, yet there was no opposition to the Bill as a whole, or even to a single Examining Board, so that such Board gave merely a "certificate of competency."

On the second day of the meeting, finding that the Government meant to adhere to the *one licence*, some of the very members who had protested against that provision withdrew their dissent, and joined the majority of the Council in accepting the Bill as, on the whole, a good measure.

Neither is it correct to say, as has been said elsewhere, that there was "consternation" on the reception of the Bill, although, no doubt, as it involved serious changes, its reception was such as befitted the importance of the subjects, which, thus brought under their notice, the Members of the Council had specially been summoned to consider.

My object in writing to you is simply in the interest of truth and fairness, as I hold no strong opinions either way.

London, January 4. I am, &c. A CONSERVATIVE REFORMER.

M.A. Cantab.—There were about 350 candidates, and, considering the very large number of papers to be examined, the result cannot be known until about the end of the ensuing month. On making application to the Secretary he will send you the subjects for 1871.

M.D., Calcutta.—Your good opinion is very gratifying. The order on your agent has been received by our publisher, who will send the numbers from the commencement of the ensuing volume to the address indicated. Your will find the cases to which you refer in vol. xxix. of the *Medical Times and Gazette*.

SUPERANNUATION FOR POOR-LAW MEDICAL OFFICERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As there is a movement amongst the Poor-law Officers of London and Liverpool to get a Bill passed during the next session for the superannuation of all officers connected with an union, such payment to be made out of the consolidated fund, but in which they have made a mistake in fixing the minimum age at 60, thereby rendering the measure almost useless to members of our Profession, I therefore, through your valuable journal, recommend the Medical officers of all unions to petition the President of the Poor-law Board to bring in a Bill this ensuing session granting a superannuation to be paid out of the consolidated fund after twenty years' service, to be increased after twenty-five years' service, but quite irrespective of age.

It is a most absurd thing to suppose that every man on reaching 60 years of age is fit for all the calls and anxiety that are concomitant with being a Medical officer of a parish. Either the poor must suffer or he must be worked to death. I think a graduated scale of retirement should be adopted—twenty years' service to be the minimum, age to have nothing to do with it; for few men after 50 years of age can do their duty to the poor as it should be done.

I hope and trust that the ensuing session will not be allowed to pass without a Bill becoming law, and I hope that Dr. Brady will see that his Bill he so kindly brought in is a nullity without amendments, and those are that years of service alone should entitle a Poor-law Medical Officer to a pension, and also that 60 years of age is far too old for the minimum age. Thanking you for all you have done for Poor-law Medical Officers,

I am, &c. WILLIAM JACKSON.

Baker-street, December 30, 1870.

A Candidate, Plymouth.—The result of the recent examination in Arts, etc., for the diplomas of Fellowship and Membership of the College will be sent to *all* candidates about the end of the present month.

An Old Guy's Man.—Mr. Bransby Cooper received £1500 from the College of Surgeons in 1843 for the museum of his uncle, Sir Astley Cooper. The same institution possesses by purchase the collection also of Mr. George Langstaffe.

Errata.—In the last line of an advertisement of the Cheltenham General Hospital, in last week's issue, *for* "on Saturday, January 31, 1871," *read* "on Saturday, January 21, 1871." By a printer's error, the Royston Cottage Hospital was put down as being in Herefordshire instead of Hertfordshire.

Dr. M., Fowey, Cornwall.—On and after April next, all candidates for the diploma of Membership of the College of Surgeons will, we are informed, be examined on patients at the bedside, or in the out-patients' rooms. Write to the Secretary respecting the prizes.

A Pupil, under the agreement, is entitled to a reasonable allowance of time for study. Surely, a simple remonstrance is all that is required to obtain it!

COMMUNICATIONS have been received from—

Mr. W. Jackson; Dr. J. Wilson; Mr. C. A. Etches; Mr. A. S. G. Jayakar; Mr. W. Clark; Mr. H. Curling; Mr. W. W. Reeves; Dr. Blackwood; Dr. J. Matthews Duncan; J. G. H.; A Cambridge Master of Arts; W. H.; Mr. H. L. Snow; Dr. Wyatt; Mr. F. Sutton; Mr. P. H. MacGillivray; Mr. W. Dyson Wood; Dr. T. P. Lucas; Mr. D. Hartley; An Articled Pupil; Dr. Norris; Dr. Barnes; Mr. W. Ward Carr; Mr. H. B. Condy; Dr. Gavin Milroy; Inquirer; Dr. Letheby; Mr. Berkeley Hill; Dr. Buzzard; Dr. Phillips; Mr. C. T. Vachell; Mr. Arnott; Mr. S. Whitford; Dr. Clifford Allbutt; Dr. Ballard; Dr. James Russell; Mr. J. Chatto; Dr. Currie Ritchie; Dr. J. Burdon-Sanderson; Dr. W. Mortimer.

BOOKS RECEIVED—

Dr. G. F. Blandford on Insanity and its Treatment—A Tabular History and Analysis of all the Undoubted Cases of Typhoid and Typhus Fever treated at the Boston City Hospital, by J. Baxter Upham, A.M., M.D.—Journal of Mental Science, January, 1871—Edinburgh Medical Journal, January, 1871—Dr. John D. Jackson on the Black Arts in Medicine—Hamlet, from a Psychological Point of View, by W. Dyson Wood—Quarterly Journal of Microscopical Science, January, 1871—British and Foreign Medico-Chirurgical Review, January, 1871—Journal of Science, January, 1871—Medical Temperance Journal, January, 1871—The Introductory Address Delivered at Surgeons' Hall, Edinburgh, November, 1870, by Dr. Joseph Bell—Transactions of the Odontological Society, December, 1870—The Relations of the Medical Profession to Modern Education, by Dr. E. S. Dunster—On the Cellular Structure of the Red Blood Corpuscle, by Dr. J. G. Richardson, Philadelphia—Monthly Microscopical Journal—Popular Science Review, No. 38—Monthly Homœopathic Review, January—Transactions of the American Otological Society—Hardwicke's Science Gossip, January—The Twenty-sixth Annual Report of the Royal Humane Society—The Thirty-sixth Annual Report of the Glasgow Maternity or Lying-in Hospital and Dispensary.

NEWSPAPERS RECEIVED—

Nature—Pharmaceutical Journal—The Melbourne Argus—Ashton-under-Lyne News—Edinburgh Evening Courant.

APPOINTMENTS FOR THE WEEK.

January 7. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Odling, "Burning and Unburning" (Juvenile Lectures).

9. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. F. J. Gant, F.R.C.S.—Lettsomian Lectures: "Excisional Surgery of the Joints; The Conditions appropriate for Excision; The Operations; After-Treatment and Results" (illustrated by a series of original specimens, drawings, and apparatus). Lecture 1. The Knee.

10. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. C. T. Williams, "On the Duration of Phthisis, and on certain Conditions which Influence it." Mr. J. G. French, "On the Probable Cause of the Post-mortem Muscular Contractions in Cholera."

11. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Dr. Christie, of Zanzibar (and from official documents), "On Cholera in East Africa."

Hunterian Society. 7 p.m.: Meeting of Council. 8 p.m.: Dr. Hilton Fagge, "On a Case of Dilatation of the Stomach."

Royal Microscopical Society, 8 p.m. Mr. B. T. Lowne, M.R.C.S., "On the Anatomy of *Ascaris lumbricoides*." Mr. H. J. Slack, "On the Use of Colloid Silica in Preparing Crystals for the Polariscope."

12. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

13. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Annual General Meeting for the Election of Officers. Mr. T. Smith, "Case of Ulcer following Vaccination" (Adjourned Discussion). Dr. Silver, "On the Use of Veratrum Viride in Acute Rheumatism." Mr. Teevan, "Four Cases of Operation for unusually Large Calculi."

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 31, 1870.

BIRTHS.

Births of Boys, 1076; Girls, 965; Total, 2041.
Average of 10 corresponding weeks, 1860-69, 1951·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	894	866	1760
Average of the ten years 1860-69 . . .	780·7	773·7	1554·4
Average corrected to increased population .	...	...	1709
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	17	10	21	3	3	2	2	1	...
North ...	618210	27	3	27	1	10	5	9	4	...
Central ...	383321	5	...	9	2	6		...	...	1
East	571158	47	8	8	1	14	2	3	1	4
South... ...	773175	14	8	42	1	16	1	7	7	1
Total	2803989	110	29	110	8	49	19	21	13	6

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·802 in.
Mean temperature	25·7°
Highest point of thermometer	33·7°
Lowest point of thermometer	9·8°
Mean dew-point temperature	22·1°
General direction of wind	N.E.
Whole amount of rain in the week	0·42 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 31, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1870.	Persons to an Acre. (1870.)	Births Registered during the week ending Dec. 24.	Deaths Registered during the week ending Dec. 24.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3214707	41·2	2041	1760	33·7	9·8	25·7	-3·50	0·42	1·07
Portsmouth ...	122084	12·8	74	43	36·2	17·2	26·8	-2·89	0·00	0·00
Norwich	81087	10·9	46	64	35·0	5·5	25·1	-3·83	0·32	0·81
Bristol	171382	36·6	137	129	...	...	...	...	...	...
Wolverhampton ...	72990	21·5	53	39	33·4	7·2	21·9	-5·61	0·16	0·40
Birmingham ...	369604	47·2	251	222	31·5	11·0	24·2	-4·33	0·11	0·28
Leicester	97427	30·4	60	55	32·7	7·0	23·3	-4·83	0·06	0·15
Nottingham ...	88888	44·5	47	59	35·7	8·7	25·0	-3·89	0·11	0·28
Liverpool	517567	101·3	306	489	35·0	17·0	26·4	-3·11	0·00	0·00
Manchester ...	374993	83·6	265	249	...	...	...	...	...	...
Salford	121580	23·5	98	68	38·6	11·8	24·7	-4·06	0·00	0·00
Bradford	143197	21·7	100	76	31·2	19·0	27·5	-2·50	0·00	0·00
Leeds	259527	12·0	358	149	35·0	19·0	29·2	-1·56	0·19	0·48
Sheffield	247378	10·8	197	117	31·7	17·0	27·4	-2·56	0·10	0·25
Hull	130869	36·7	89	69	...	...	...	...	...	...
Sunderland ...	100979	30·5	148	56	...	...	...	...	...	...
Newcastle-on-Tyne	133367	25·0	162	66	40·0	12·0	30·2	-1·00	0·38	0·96
Edinburgh	178970	40·4	†140	†103	...	...	...	...	...	...
Glasgow	468189	92·5	†335	†309	...	...	...	...	...	...
Dublin (City, etc.*)	321540	33·0	†154	†167	...	...	...	...	...	...
Total of 20 Towns in United Kingd'm	7216325	33·8	5061	4289	...	...	...	...	...	...
Paris—Week ending Dec. 31	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Dec. 24 ...	622087	68	...	342	...	...	26·6	-3·00	...	...
Berlin—Week ending Dec. 29 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·802 in. The highest barometrical reading was 30·13 in. on Saturday morning, and the lowest was 29·53 in. on Christmas-day.

The general direction of the wind was N.E.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* Inclusive of some suburbs.

† No returns having been received from Edinburgh, Glasgow, or Dublin, averages of the births and deaths in recent weeks have been substituted for the correct numbers, in order to make up totals for the 20 towns of the U.K.

By Appointment.

DR. ANGOVE'S ACCIDENT CASE.

Extract from LANCET, May 21st, 1870.

"The advantages are that it will contain instruments enough for almost any accident, together with lint, plaster, bandages, tourniquet, &c.; and by keeping this stocked and hung up in a handy place, you are ready to be off at any moment. It is easily carried on horseback. By taking the instruments, &c., out, you have an oblong box, in which you can put what you like, the instruments being only kept in by a leather strap and an elastic band, which do not take up any room in the case. In a mining practice one scarcely ever knows the nature of the accident he is called to. I, therefore, find it invaluable, being, 'with my case,' ready for the smallest cut or anything else, including an amputation."

The Cases are made of hard, solid leather, and will stand any amount of knocking about, and cost a very small sum. Size of Case, 14 inches long, 5 inches deep. Price of Case, covered in morocco and lined velvet, with swivels and straps, complete, 17 6; Case complete with Instruments, £4 4 .

MANUFACTURED SOLELY BY

ARNOLD & SONS,

Instrument Makers, by Appointment, to Her Majesty, St. Bartholomew's Hospital, Seamen's Hospital, &c., &c.,

35 & 36, WEST SMITHFIELD, LONDON.

Established 1819.

SESSION 1870-71.—NOTICE OF REMOVAL.

CHAS. COLLINS, Microscope Manufacturer,

157, GREAT PORTLAND-STREET, LONDON, W.—Manufactory: GREAT TITCHFIELD-STREET.

SOLE MAKER of the "HARLEY" BINOCULAR MICROSCOPE.

ILLUSTRATED CATALOGUE (FREE ON APPLICATION) OF EVERY REQUISITE.

PRIZE MEDAL, 1862. PRIZE MEDAL, 1865.

JOSEPH F. PRATT,

SURGICAL INSTRUMENT MAKER, &c.,

420, OXFORD-STREET, W.

ELASTIC STOCKINGS, LADIES' ABDOMINAL BELTS, IMPROVED WATER-PAD TRUSSES FOR SCROTAL AND UMBILICAL HERNIA.

HOOPER'S
WATER MATTRESSES,

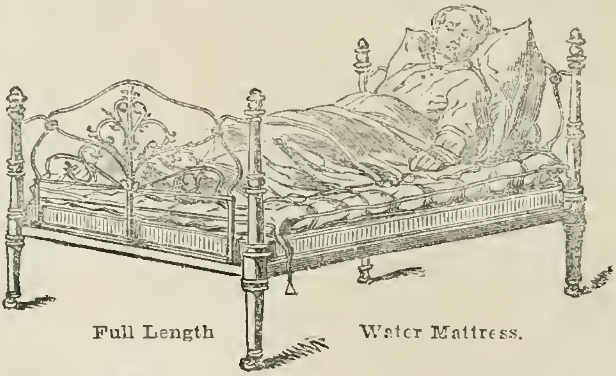
OR IMPROVED HYDROSTATIC BEDS, AND

WATER CUSHIONS,

FOR AN ORDINARY BEDSTEAD OR COUCH.

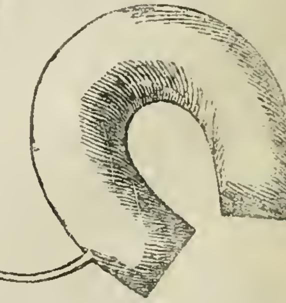
TO THE QUEEN,
ALSO
THE PRINCE AND
PRINCESS OF WALES.

USED IN
H.M. ARMY AND NAVY
AND THE
INDIAN PRESIDENCIES.



Full Length Water Mattress.

Circular Cushion, for sitting on.



Crescent Cushion, for the Sacrum.

7, PALL-MALL EAST, and at 55, GROSVENOR-ST., LONDON.

☞ *An Illustrated Price-list free by post.*

ORIGINAL LECTURES.

LECTURES ON THE CLINICAL OBSERVATION OF DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture I.

In pursuance of my plan, to dwell more in detail on those divisions of the practice of Medicine which have scant or no attention in the systematic treatises I have recommended you to read, I shall devote a few hours to those diseases of nutrition which depend directly or indirectly on disorders or diseases of the brain and nervous system. These, although recognised in practice, have not as yet a distinct chapter allotted to them. Before, however, we can do this satisfactorily, we must study how to observe them; and this requires us to take up another omitted chapter. So much more attention has been given to diseases to which the methods of physical diagnosis are available than to those of the brain and nervous system, which touch on the metaphysical, that the latter are omitted almost wholly from manuals of diagnosis. I will endeavour, therefore, to supply this want. We shall see that the means of physical research are not wholly wanting, but, owing to defective anatomy and the impractical character of mental philosophy, observations are chaotic and conclusions contradictory. The chief remedy for this state of things is, more accurate observation of the results of morbid function or symptoms, under the guidance of general laws. And this method is also available to a better knowledge of the anatomy and physiology of the nervous system, when aided by experimental research. The cerebro-spinal centres are not only wholly inaccessible to physical means of research, because enclosed in a bony case, but all their relations to thought and feeling can only be determined accurately in the living man under conditions which are frequent sources of fallacy.

In calling your attention to the best method of clinical observation, I shall not enter into such details as belong to the observation of particular diseases further than is needed to illustrate the general rules of method. To this end, it is necessary, in the first instance, to classify broadly. You will find, in my "Principles and Methods," a detailed classification of diseases of the nervous system. We need only now consider four great groups: two of these involve states of consciousness; two, motion and nutrition, with or without consciousness. Those which involve consciousness may be classed as they are mental and sensorial. By mental diseases I do not mean insanity only, but morbid changes in the feelings, thoughts, memory, judgment, and will, of all kinds, such as are included in Cullen's nosology under Vesaniæ. It has been truly a retrograde step to substitute *insania* for the vesaniæ, not only because there is no strict line of demarcation between mental disorders, but because insanity is best understood by the study of cerebral pathology in general. The sensorial class includes morbid states of sensation and perception, from merely bodily feelings to hallucinations and illusions of the senses. The term æsthesia, with prefixes, is in common use to indicate some of these: thus we have hyperæsthesia and anæsthesia. I think we might drop the prefixes, and use the radical word to indicate all kinds of sensorial disorders. The other two groups, in which motion of organs and nutrition of tissues are involved in nervous disorders, may be separately named in like manner, although they also are intimately connected with each other and with states of consciousness. Kinesis has been used as a generic term, like æsthesia, to indicate morbid affections of movement; and writers speak of hyperkinesis and akinesis. We can drop the prefixes, and use the term kineses for all impulses, spasms, palsies, and irregular movements like chorea.

It is not so easy to find a general term for the neurotic disorders of nutrition, for various reasons which I need not mention now. In hypertrophy and atrophy we have, however, a radical word in common use like æsthesis and kinesis; and I have therefore named this class of nervous affections trophesiæ—or, *anglicè*, trophesics—which is as easy a word to say as symphathies, or the like, and expresses what otherwise would require a sentence. If the word neurosis had not already a use restricted to functional disorders of a particular kind, we might use it as a generic term, and distinguish the four great classes as mental, sensorial, motor, and trophical neuroses.

Whatever classification is adopted, it is necessary to remember that to consider any diseased condition as an entity, because it has got a name, is a fundamental error in observation. The entity is the patient; the name signifies no more than that a predominant symptom, or group of symptoms, has been observed in a given case; the other symptoms are best investigated and classified in reference to those which give the nosological or pathognomonic diagnosis.

Having classed the case, the next step in observation is to determine generally the anatomical seat of morbid change. As to those in which consciousness is involved, we can say with all reasonable certainty that it is somewhere in the great sensorial division of the nervous system, the centres of which are contained within the cranium. In man, and probably in at least other mammals, the occipital foramen bounds all of the cerebro-spinal centres that may be included in the term sensorium commune; and, consequently, the cranium contains the seats of all vital changes necessary to consciousness. But the æsthesiæ and vesaniæ differ in this—that in the latter there must be some kind of disease or disorder in the cerebral hemispheres—meaning thereby all that part of the encephalon which can be separated anatomically from the cerebellum, medulla oblongata, and pons varolii. Such diseases are loss of memory, speech-palsies, delirium, and the various forms of mental disorders, whether they be called insanity or not. In the æsthesiæ, on the other hand, the seat may be, and often is, without the cranium, in the cord or in nerves, but not unfrequently in the medulla oblongata and its continuations, as crura cerebri, and thalami. In the kineses, in like manner, the seat may be, and often is, extra-cranial; but very commonly, too, in the cerebellum, pons, corpora quadrigemina, and corpora striata.

So far books will help you; but not so as to that portion of the nervous system which is specially involved in those neurotic disorders of tissues which I name trophesics. Is there a trophical division of the nervous system, as there is a motor, a sensory, a mental? or can we, for practical purposes, adopt the theory? It may be said that the vaso-motor system is such a system; but the objection to this doctrine is, that the name is misleading in so far as it only means a system which duly distributes the blood for nutrition of the tissues, by regulating the action of the vessels. We shall see that this is only a part of the duty of a trophical system; there is the action of the lymphatics and absorbents to regulate, as well as of the bloodvessels, besides all those changes in the tissues themselves which may be termed chemical. This confused and restricted use of the term vaso-motor has, in fact, led to so much erroneous observation and induction, both in Medical theory and practice, that it is one great object of my special discussion of these neurotic diseases of nutrition to instruct you how to avoid these mischievous errors.

Having determined, as far as may be, the seat, the next step is to ascertain how the various systems are related to each other—for we have seen that no case can be examined in reference to one only. If we inquire into what is common to all, practically, we find that there is always a change of function of some kind, and to this extent, that the regulative properties of the nervous system are altered. Now these properties depend upon a vital energy peculiar to the nerve-tissues, which has been termed vis nervosa; but we must always use the term in its broad sense. Thus, when we speak of mental energy, as applied to thought and will, we ought to mean the *vis nervosa* of the hemispheres, and not a mere metaphysical abstraction, of no physiological or pathological use.

We may conclude, from the facts of pathology, not only that there is a change of some kind as to the vis nervosa, but we can name at least three modes or kinds of change in nervous disorders:—(*a*) Vis nervosa is evolved in excess, as in furious mania; (*b*), is evolved in defect, as in nervous debility, palsy; and (*c*), whether it be evolved in excess or in defect, is distributed irregularly, as in insanity, chorea, ataxy, tetanus.

Take now another step, and inquire how these changes are brought about in each system. Under the guidance of text-books, you will too often meet with useless metaphysics. You will read of "palsy of the will," that "pain excites" this and the other, that "the mind plays" upon the nerves like a performer on the keys of a piano; and therewith you will be led into fallacies in observation and practice. Now, the changes which, in the nerve tissue, coincide with the evolution of energy or force, always result from the communication of force or energy to the tissue, and never from mere states of consciousness or by acts of will. Thus, the natural sensation of heat, or of being hot, is due to the communication of heat, as energy, to appropriate nerve tissue in or on the body. If, as often happens, a person has a feeling of being hot when he is cold, there is still a like condition of the thermal centres as if heat had been communicated to the part to which the sensation is referred. As the response thus made to the consciousness is illusive, the sensation is called illusive. It has been also termed imaginary, for the same reason. Now, as a matter of fact, pathologically, there are no imaginary vital states, for all illusions, delusions, and hallucinatious coincide with morbid vital change as certainly as that which is not imaginary.

All these metaphysical terms have been adopted, and, indeed, are used, with no regard to vital changes, and, consequently, are continually misleading. Philosophers refer everything to "mind" which Physicians should refer to "brains." This is why they conclude that "bodily" or "corporeal" pain merits no place in metaphysics; yet it is a state of consciousness just as inscrutable as the profoundest speculations about the Infinite. Bodily pain is felt when the seat of pain is referred to some part away from the brains; mental pain is felt, and said to be in the mind, when the causal condition is in the brains—that is, within the cranium—but not referable thereto, because we have no innate instinctive knowledge of our brains; and this arises from the fact that all the trophical processes go on everywhere in our bodies as independently of consciousness as they are thought to go on in plants. Hence the trophical system has been termed the system of vegetative or of organic life, as distinguished from conscious life. Disorders of the trophical system may and do arise, and continue independently of the sensory or mental systems, either because that is the natural order, or because there is abolition of function of the sensory system—*i.e.*, an anæsthesia. This latter state as to the skin is very common in insanity and in skin diseases in which it is not even suspected, as in psoriasis, in syphilis, and in the early stages of leprosy.

Obviously, the next step in the inquiry is to ascertain the kind of change the nervous system has undergone in any disease, or what is termed the proximate cause of the morbid state. This may be done, and treatment conducted satisfactorily, although we cannot fix upon the exact anatomical seat of disorder. Having regard to the kind of the tissue change, there are two great classes—namely, the functional and the structural—and each of these may concern different tissues. The first and most important change, practically, is that which follows upon activity and use of a nerve or nerve-centre, and which, if it be excessive, will lead to disorder of function. Excessive use is, however, only a relative term. Undue stimulation of a sensory nerve or nerve-centre, if continuous, may lead to structural changes; otherwise, repose of the tissue is followed by restoration to healthy activity. Examples of the former are the aphasia, hemiplegia, and palsies which follow, under certain constitutional conditions, upon excessive brain-work and depressing emotions. An example of the latter is the daily use, which tends naturally to a daily exhaustion and to a daily repair, as sleep. During sleep there is, as to the sensory nerves and nerve-centres, a diminution of vis nervosa, and this predisposes to functional disorders.

Now, one part of the nervous system may be more used than another, and thus that part will be more predisposed to take on morbid action than another. Hence, sleep, acting as an exciting cause, developes disease or disorder of any such portion; even dreams may thus be considered morbid as compared with perfect sleep. I shall discuss sleep and dreams in their practical relations in the psychological division of my course. I would only say now that there are three periods of sleep eminently pathological. Firstly, there is the stage of going to sleep—a natural delirium and commencing anæsthesia; secondly, the stage of profound slumber or completed anæsthesia, when all sensory excitation is at its lowest; and thirdly, the hour of waking, when the cerebral blood returns to its full current through the vessels. This hour is also the more predisposed because it succeeds a period of fasting, when the heart's action is feeble. Numerous diseases of all the four classes commence or recur during one or other of these states of sleep; in short, the fact that a disease does thus occur is *primâ facie* evidence of its neurotic origin.

It is necessary, in considering continuous and excessive use or activity as a cause of nervous disease, to get rid of vague ideas. When excessive use of a limb leads to palsy or weakness, the muscles of the limb are involved in the exhaustion as well as the nervous system, and the nerve fibrils in the muscles as well as the nerve cells and fibrils in the nerve-centres. Further, there cannot be excessive use of a nerve or nerve-centre without an increased activity of the circulation therein, and increased use, therefore, of the bloodvessels and the capillaries. This is a very common exciting cause of disorder of function and degeneration of structure of the vascular system. To this head we must refer the effects of agents, such as fever and other poisons, which, received into the blood, act upon the lymphatics or the vascular system, or the nerve tissue. Opium and alcohol cause at first only functional disorder, but their continuous and excessive use ends in nutritional changes in the nerve tissues, which are apt to become hereditary. The terms neurosis and nervous disorder have been given to this class of functional disorders. Their characteristic is that they have no pathological anatomy—for none of them, strictly speaking, exhibit cognisable changes in structure after death. The anatomy of poisoning by opium is the anatomy of the organs which the action of the drug on the nerve-centres has palsied, and not of the palsy itself.

Another kind of morbid state is that which results from deficient nutrition of the nerve-centres. This is usually named, in a very vague way, nervous debility. I shall consider what this is specially; all I need say here is, that its causes are much more complex than is usually stated, and that it influences all parts of the nervous system. Any exhausting disease will induce it, and special centres may be affected when special causes act upon those centres. "Bodily" weakness is often due to a complex causation, enfeebling the trophical system. An illustration is afforded by certain atrophies of the muscular system without palsy. There is a man in Ward 3 of the Infirmary who has gradually wasted until he is "skin and bone," except his lower extremities, which are anasarcous. He has no chronic diarrhœa and no pulmonary disease, so that the wasting is not phthisical; nor has he albuminuria or glycosuria, so that it is neither that of Bright's disease nor of diabetes. He has a quickened pulse of 90, but no hectic, so it is not the wasting of fever. Why, then, do his legs swell, and the muscles and fat of his trunk and limbs waste away? If you tap over any portion of a muscle, you throw it into fibrillary contractions, exactly as is sometimes to be seen in cases of a muscular atrophy termed wasting palsy. Is the wasting due to debility of the trophical nervous system? Hear what M. Trousseau says of wasting palsy itself: "As to a lesion of the nervous centres, the integrity of the intellectual functions, the absence of all symptoms during life of paralysis proper, and after death the absence of anatomical changes in the spinal cord and brain, prove, conclusively, that the great centres of innervation are not in the least involved in this complaint. And yet I have told you that M. Sappey thought he had found in my patient a diminution in size—*i.e.*, wasting or atrophy of the anterior columns of the cord." Now, just previously to this paragraph we find M. Trousseau refers to a case carefully observed by the late Dr. Aran in 1850, and quoted by Cruveilhier and Duchenne, as proving the fact mentioned by M. Sappey. When I come to speak of this wasting palsy, I shall show to you that it follows the law of production of dropsies, and that it is due to an imperfect functional activity of the anterior or motor trophical system, which is the proximate cause of the wasting. In the case just alluded to there are two distinct tissues involved: the muscular system in general, from which the absorbents have taken up fat and tissue; and the lymphatic system of the legs, from which the absorbents have failed to take up the serum present in the connective tissue. The man has, in fact, enlarged lymphatic glands in each groin; and from this and other symptoms there is reason to suspect malignant glandular disease within the abdomen. It is this condition which is the cause of the general atrophy, by action on the trophic muscular system in general; and of the paraplegic anasarca, by influencing through the same system the absorbents of the lower extremities. If the patient live long enough, the anasarca will probably extend to the hypochondria, the boundaries of the abdominal lymphatic system. In what, then, consist the fallacies of M. Trousseau's conclusions? He thinks—firstly, that there is an entity, such as he terms "paralysis proper;" secondly, that all palsies of this kind must be associated with some change in the intellectual function, or, anatomically, in the hemispheres; and thirdly, that change of structure cognisable after death is necessary to palsy of function. We shall shortly see, breaking away from those fallacies and others of a like kind, what M. Trousseau never suspected, that the articular and muscular diseases known as rheumatic and gouty, as well as muscular atrophy and wasting palsy, are influenced by the nervous system.

I have mentioned fibrillary contractions in the muscles as a sign of muscular trophesy; that there is a difference between mere wasting and this kind is shown by clinical observation. In a case of phthisis, for example, the fibrils of the thoracic muscles will tremble if tapped, when those of the limb muscles will not. So it is not mere wasting which induces that more definite fibrillary contraction in which shaking palsy consists. This is true also of the tremors of drunkards, and the subsultus with tremors of typhus. There is in all these a conjoint defect of nerve, nerve-centre, and muscle. The natural type of these is in the shaking of the hands which unusual exercise of them induces.

The structural diseases are most conveniently classed according to functional causes acting on the elementary tissues involved.

1. Degeneration and atrophy of the proper nerve tissues—the cells, granules, and fibrils. These, perhaps, are always the sequel to functional disorders, either directly or indirectly. 2. Of the connective tissue, which unites these elementary tissues with the others—the neuroglia, or "nerve-glue," as Virchow terms it, and which extends throughout the cerebro-spinal centres. 3. The essentials to nutrition, the vascular and lymphatic systems of the brain and cord, including the capillaries. Of the degenerations of the cerebral vascular system we know much, but of even the anatomy of the lymphatic system we know little. It seems probable, from the researches of M. Robin, and more lately of His, that the lymphatic system is to be found in what the latter terms perivascular spaces, which surround the capillaries in all their subdivisions and anastomoses. Lymph-vessels have been found in the pia mater, and these can be injected, according to His, from the perivascular spaces; the union is effected by a wide lacunar system separating the brain from the pia mater. I have long shown that, clinically, the pia mater must be classed with the blood-glands—considered, in short, a blood-gland spread out. Now, there are certain fevers in which the blood-glands are specially involved; and in these, when the pia mater is affected, you have important head-symptoms. The dura mater, as a protecting envelope, is not to be considered cerebral tissue.

These different elementary tissues (with which the neurilemma of the nerves must be included) are the seat of constitutional or diathetic degenerations. The pia mater is the seat of tuberculosis; the dura mater, of rheumatic and osseous degenerations; the connective tissue, of syphilitic and amyloid change; the vessels, of calcification and aneurismal dilatation, and of fatty, waxy amyloid and fibroid degeneration, all which are diathetic.

Anatomical changes in the cranium and dura mater do not belong to those of nervous diseases proper, any more than changes elsewhere externally to the cerebro-spinal centres. But from their close relation of contiguity, and perhaps of trophical function, such changes are very important in observation. Injuries to the cranium, sun-stroke, inflammations, and even ulcers and eruptions of the scalp, have sometimes a serious significance in diagnosis and prognosis.

Seeing how common diathetic degenerations are, their diagnosis is very important, because very available in practice, when we cannot diagnose the exact anatomical seat. The value of diathetic diagnosis cannot, indeed, be over-stated. You will meet with syphilitic cases which resist all treatment by the usual routine-tonics—which often, indeed, go on rather from bad to worse—but which yield readily to suitable treatment as syphilitic disorders. These, with gouty and atheromatous diseases, are, perhaps, the most easily diagnosed. Hæmorrhagic apoplexy, softening, palsy, and a sad, intractable kind of insanity known as general paresis, are due to vascular lesions, mostly calcific and atheromatous. Scrofulous tendencies are most important in children, and gouty and atheromatous in adults. Gouty women and men of the nervous diathesis are especially liable to neuroses of the neurilemma and the bloodvessels. The diagnosis of these diathetic tendencies will be taught to you specially. All these tendencies are hereditary.

The discrimination of hereditary and constitutional tendencies to nervous disorders proper of all kinds—for insanity is not the chief—is of primary importance to good prognosis and prevention. It is too large a subject for present discussion; I will only call your attention to some practical points. Hereditary nervous diseases are all, I think, to be classed as dynamical disorders of nutrition, and arise from causes which continuously influence nerve-nutrition in parents. Excessive mental work and drunkenness are illustrations. It is not always the same kind of affection of the nervous system which is manifested hereditarily; thus, insanity in the father may be cerebral hysteria in the daughter. Again, the same mental qualities are not transmitted, because the operation of the cause or causes is as continuous from generation to generation as it is in an individual. Hence, a large allowance must be made for the element of time. Thus, the son of a sot may be a maniacal drunkard, but *his* son may abhor drink generally, and have dipsomania only paroxysmally, while his grandson may have melancholia or mania ending in dementia. Excessive use of particular portions of the brain by the parents may not manifest its results in them, but in their offspring, and these may be such as follow upon atrophy or other diseases of imperfect nutrition. In this way it happens, not unfrequently, paradoxical as it may appear, that children are wholly unlike their parents in their moral and intellectual qualities. Very religious and moral persons have thus scapegrace sons, from absence of moral sentiment; and extremely proud persons will have sons and daughters of low habits and tendencies. It is from this kind of palsy that we sometimes find such an entire change of character occurring in an individual, from moral shock or other paralysing conditions.

I will now illustrate these views by brief cases. We had a strong Highland shepherd lately in Ward 3 of the Infirmary, who had wholly lost the use of his legs. He could neither walk nor stand, but he could feel. There was no trophesy of the legs, except such wasting as generally follows upon disease of muscles. After a long and toilsome walk, on a stormy winter's day, across a bleak Highland moor, he felt pains in his back, then "rheumatism" and weakness of the legs, ending finally in palsy. The so-called rheumatism was a muscular neuralgia. In this case there was probably not only tissue degeneration of the anterior or motor columns in the dorsal region of the cord, but also of the motor fibrils in the muscles, due to the exhaustion of excessive use. Doubtless there was also a condition of the cord predisposing thereto, but of this the history taught us nothing. Another case, of a powerfully built master mariner, of the atheromatous diathesis, illustrates this causation in a wider range of nerve-centres. For three cold wintry days and nights his ship was at the disposal of the stormy Atlantic. He was all that time on deck, amidst wind, rain, and sleet. His early symptoms did not impress him much, because he appeared to recover, but a fresh exposure caused a relapse, and he gradually became what he was when admitted into the Infirmary. He walked and spoke like a drunken man, in that peculiar way which hints at general paresis. When speaking, his lips and cheeks quivered with fibrillary contractions. He was pale, downcast, and meditated suicide. In this case, long strain had been on the whole system, motor and sensory—want of sleep, fatigue, fear, and anxiety, and a low temperature (of the influence of this on the nerve-centres I shall speak specially)—all this continuously operating for three days and nights broke down the vascular elements of his nervous system irremediably. In these cases there was no tendency to sloughing and gangrene, as you see in some cases of acute paraplegia, due to inflammation and inflammatory softening of the cord; but then there was no neuralgia, hyperæsthesia, or anæsthesia—no æsthesia, in short, such as coincides with this kind of trophesies.

Two kinds of palsy, in which the nutrition of the muscular system is involved diathetically with very opposite results, will instruct by contrast. Wasting palsy is a progressive atrophy of the muscular tissue proper, with or without absorption of fat. It attacks particular muscles and groups of muscles—*i.e.*, particular nerve fibrils and centres are involved, according to a law which I shall explain on a future occasion. The result is, that one part of a limb may be atrophied to skin and bone, and another portion remain plump and round. It is an hereditary and constitutional disease. But last session we had a quite different condition in a sailor, in Ward 3, about 30 years of age, who hobbled feebly along, with short steps, lifting his legs with a peculiar twist of the hips. In him the lower extremities are hard and torose, as in a Hercules. This man had what Dr. Duchenne has described and named "pseudo-hypertrophic muscular palsy" and "myosclerosic palsy," because there is a large increase in the connective and interstitial fibroid tissue, causing hardness without diminution of fat, and not strongly marked degeneration of the muscles proper. It has been seen most commonly in children, and, like wasting palsy, it may—indeed, commonly does—affect the muscular system generally. Now, in the majority of cases of children, there has been coincident imbecility or idiocy, while nothing of this kind is seen in wasting palsy. The causes of this difference, so puzzling to those who have written on the disease, is intelligible on the theory that they both are diathetic diseases of nutrition of a wholly different character. In the simple atrophy, the trophic muscular nerves act upon muscles with no tendency to plastic or fibroid degeneration of connective tissue; in the hypertrophy, this is a coincidence. Now, this kind of morbid nutrition is seen in various constitutional diseases, but strikingly in the two forms of elephantiasis—the Barbadoes leg and the leprous leg—and also in some cases of hereditary syphilis. What is common to all these is that the lymphatics, as well as the muscular tissues, are involved in the change, as in anasarca. In the imbecile children with general hypertrophic palsy, there is probably a coincident lesion of the connective tissue and lymphatic system of the cerebro-spinal centres, giving rise to cerebral sclerosis. The connexion of fibrinous "exudation" with trophic neurosis is well shown in that kind of leprosy termed tubercular; in the anæsthetic kind there is no exudation, only those ulcerations, sloughings, and inflammations which are apt to follow on lesion of the sensory nerves and ganglia.

It is easy to understand why these diathetic palsies are insidiously progressive, when we remember that this is the law of all diathetic diseases of nutrition, when once they have passed into the chronic and structural stage. Hence, too, the incurability of the diseases of the constitutional or diathetic class, such as progressive locomotor ataxy, general paresis of the insane, and atrophic palsy. But there are palsies which, being functional in their origin, are not progressive nor incurable—sometimes easily curable; such are two kinds of functional paraplegia, termed reflex and volitional. The sympathetic influence of the abdominal and pelvic viscera on the dorso-lumbar portion of the cord, so as to induce palsy of the legs, has been long recognised; of these the kidneys, or rather the genito-urinary organs, have the most marked influence. Dr. Brown-Séquard has shown that the influence of the kidney may be unilateral; for, tying the hilum of one of the kidneys, the same symptoms resulted as follow on section of the lateral half of the cord. I do not stop to discuss Dr. Brown-Séquard's theory; I only desire you to note that this reflex palsy is wholly different from that kind of paraplegia involving the will. Of this there are two kinds—the one structural, termed progressive locomotor ataxy; the other, a functional neurosis, usually seen in hysterical women.

The cases have this peculiarity—that, although the patient is powerless to will movements of the legs, she is powerful enough to use them under emotional excitement. These cases belong to the same class as certain kinds of speech-palsy, or aphasia, and the sensory portions of the nervous system are involved; all that side which is in relation to consciousness. Emotion will wholly paralyse the organs of speech, causing aphasia—as it will the legs, causing paraplegia—or, *vice versâ*, remove palsy.

All these cases come under the head, as to causation, of bodily and mental SYMPATHIES. Causes of this class are very complex, because of the multitudinous relations of the nerve-centres to each other and to the nerves. It is not easy to believe, unless you know the order of causation, that a diseased elbow can be the cause of profound melancholia; yet the removal of the one has been so immediately followed by the cessation of the other, that, taken with many like facts of experience, the conclusion is justifiable. Certain general rules may be laid down for investigating these complex sympathies, deduced either from the generalisations of experience or the laws of nerve action, which, if followed, will greatly simplify observation.

Let us first classify these sympathies in relation with our subject. There are the two well-known sympathies between what are termed body and mind. Everyone is aware how inseparably emotional states coincide with changes in the heart, lungs, and abdominal viscera, and in the circulation in the skin, as indicated by pallor and blushing. Now, these changes are usually said to be caused by the mind acting through certain portions of the nervous system in direct connexion with anatomical seats of change. Formerly there were two such recognised systems—one, the sympatheticus minor, now called the vagus or pneumogastric system; and the other, the major, now the sympathetic system proper—and more recently the ganglionic and the vaso-motor system. Another kind of sympathy formerly recognised is that now known as diastaltic or reflex—*e.g.*, the convulsions of dentition have long been rightly attributed to a sympathy between the teeth and the nervous system. A third kind of sympathy is such as that observed to exist between the pregnant uterus and the mammæ. The connecting-link between these organs was not admitted to be the nervous system until very lately. When I wrote my treatise on the Nervous Diseases of Women, and showed the diastaltic action of the uterus and ovaria in inducing cerebral hysteria, the explanation was not only wholly unknown, but, when offered, was unintelligible to many, because of preconceived notions. A fourth kind of sympathy is of the kind observed between a diseased and a healthy eye, as manifested in sympathetic ophthalmia.

In inquiring into these sympathies, it will be useful to remember that the fundamental fact in them all is that there are changes in either the evolution or the distribution of the vis nervosa, and that, consequently, the causes of these sympathies are the causes of those changes. Now, the vis nervosa is itself a molecular energy, like heat and light, although vital, and can only be evolved under conditions such as disturb the equilibrium of the nerve-molecules, or otherwise affect their qualities as the seat of it. Force or energy is needed to cause this disturbance. When applied directly and effectively to a peripheral termination of a nerve in the form of heat, light, chemical affinity, or gravity, a change takes place in the nerve, known as an external impression. This results in the evolution of vis nervosa, which again acts upon the centre, to which the nerve affected transmits it, and then an internal impression results, of which we may or may not be conscious. Bodily pain illustrates this order of events. An injury to a nerve-fibril acting as an external impression excites the changes in the nerve-centre which coincide with the feeling of pain; these, acting as an internal impression, excite two other series of changes—the one directed to the motor system, and exciting muscular action or vaso-motor and trophic changes; the other to encephalic centres, and exciting therein the series of changes which coincide with emotions and thoughts. As to all facts of this kind, it is of importance to remember that it is the changes in the line of physiological activity which is the primary consideration, and not the states of consciousness, except in so far as they show the direction and seat of those changes. It is quite certain that the pain in the order of events just described, which usually coincides with the other series of events, may not be felt, and yet the latter still go on, showing that it is not the feeling of pain which induces them. Nor can this be so, inasmuch as it is but a result of a part of the series of changes. Hence, if the sensory centre be anæsthetic from exhaustion, pain is not felt, while exhaustion shows itself elsewhere. An example of this kind is afforded in the excessive and exhausting pressure on the sensory nerves and nerve-centres by the shock of a terrible injury: no pain is felt, but the temperature of the body falls very low, and the action of the heart and of the vessels generally is enfeebled, sometimes to cessation.

I shall direct your attention in the next lecture to some anatomical points, bearing more especially on the observation of structural diseases of the cerebro-spinal centres resulting from peripheral and central causes.

ORIGINAL COMMUNICATIONS.

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CLINICAL NOTES OF THE VARIETIES OF IMPERFECT SPEECH PRODUCED BY BRAIN DISEASE.

By ROBERT DRUITT, M.R.C.P. Lond., etc.

Case 1.—*Aphasia preceding Puerperal Convulsions.*

THERE are few morbid phenomena more interesting than the varieties of imperfect speech produced by brain disease, ranging from complete *aphasia* (so-called) downwards to mere hesitation in finding a name. I venture to put before my Professional brethren a few notes illustrative of the various conditions and complications under which the function of speech may be impaired—and, having no theories, I put them forth as mere contributions to the natural history of disease. The first case is one of right hemiplegia with aphasia twenty-fours hours before parturition, followed by puerperal convulsions, and death in ten days. The second, a case of aphasia with slowly advancing hemiplegia, and death from softening of the brain. The third, sudden aphasia with right anæsthesia, followed by recovery. To these I add notes of a case of disturbed speech with left hemiplegia; a case in an old man absolutely deaf from previous attacks of brain disease; and a case of perversion of words in a woman in a state of incipient mania.

Case 1.—*Headache—Right Hemiplegia—Aphasia—Convulsions—Parturition—Death after Ten Days of Imperfect Consciousness.*

I give this case first, although the last in order of time, because the notes and facts are fresh, and the case one that excited the most vivid interest in all who watched it.

V., a lady, aged 30, had been somewhat delicate, and was said to have shown at times signs of fatigue and irritability of brain in childhood; but I knew her for the last ten years to be of a remarkably cheerful and even temper. She became pregnant for the sixth time in March, 1870, having had a miscarriage about a year before, and in May was again threatened with miscarriage, which was averted by the care of Dr. Farre, who saw her during my absence on the Continent. From that time till her last illness began, she drove out occasionally, but for the most part spent her time in the recumbent posture, as she did not feel it safe to take any exertion. She took aperients for the relief of the bowels, and occasional small doses of sedatives to check any tendency to uterine pain; and under this *régime* went on satisfactorily until December 8, which was about one fortnight short of the full time. On that day she is said to have complained of a slight headache, and on December 9 to have undergone a little fatigue and excitement, but nothing that would affect a healthy person—merely the return of her mother and children to town. In the evening she is said also to have complained of some heaviness and numbness of her right hand.

Dec. 10, 4 a.m.—I was hastily sent for, and learned that she had had a restless night and no sleep; that at 3.30 she had felt a sudden shock go up from her hand to her head, since which the right arm was entirely paralysed. Her pulse full, excited; head hot and aching; pain referred to left forehead; eyes natural; face flushed. Said she had paralysis of right arm, which lay helpless across her chest, with a sensation of pins and needles, and different feeling from the other arm when touched; it has been considerably agitated or jerked, but is now motionless and limp. The right leg slightly numb and weak; she seems excited and talkative; but misses her words, and cannot finish a sentence. Ordered a purgative of podophyllin and colocynth, to be followed by a seidlitz powder and also fifteen grains of bromide of potassium immediately.

10.30.—*In statu quo;* no sleep nor action of bowels. Repeat the seidlitz powder, and get ready strong infusion of senna for an enema.

1.30 p.m.—Some twitching of face; much headache; ice bladder to head; enema of senna.

N.B. Examined urine passed this morning; quite acid, of full colour, and yielding no precipitate when boiled.

3.30.—Consultation with Dr. A. Farre. Bowels have been copiously moved with thin, dark, fetid, lumpy stuff; head feels better; but during our visit a short convulsion came on, which left her restless and talkative, with great difficulty of expressing herself. Sinapisms to calves of legs; enema assafœtidæ; tinct. valerian ammon., half a teaspoonful when restless.

6.30.—Tranquil and collected; a little sick; seltzer water; repeat colocynth and podophyllin.

N.B. Urine again examined and found as before. Discussed with Dr. Farre the probability of convulsions during labour, and agreed to await the on-coming of labour, to accelerate it by all means, and, if lingering, deliver with forceps.

Dec. 11, 4 a.m.—Has had some sleep intermixed with fits of restlessness; cries with vexation, and is greatly distressed at not being able to find the words she wants; says "pain," "pain," for "pan;" bowels freely moved; some serous discharge from vagina. Beef-tea, brandy, common tea, with milk.

6 a.m.—Labour has clearly set in; uterine contractions about every twenty minutes; os opening, membranes protruding; great restlessness, soothed off by a small administration of chloroform; at 8.30 membranes bulging near vaginal orifice, burst, followed by very severe fit of convulsions. When these passed off, uterine action immediately returned, and a living male child was born at 9.15; placenta soon followed; no hæmorrhage.

Noon.—Patient tranquil, conscious if slightly roused; lifts left hand frequently to left forehead; moves left leg often; the right sometimes; cannot articulate; passes urine in bed. Pulse 72; breathing 20; temperature in axilla 100°.

10 p.m.—Patient turns on her right side, raises her left hand to arrange her dress, to adjust the feeder to her mouth, and wipe her lips; takes nourishment freely, but does not speak. Beef-tea, brandy and water, and tea with milk by turns every hour.

Dec. 12, 8 a.m.—A quiet night; is conscious if roused; takes nourishment freely; occasional twitchings of paralysed arm; makes no attempt to speak. Pulse 66; breathing 20; temperature 100·6°.

2 p.m.—Consultation with Dr. Farre, who thinks pulse less steady, and showing characters of cerebral mischief; its mean rate is 64, but it fluctuates in the course of a minute from 62 to 63; manifestations of consciousness slight, but decided—*i.e.*, she wakes, opens her eyes, shades them from the light with her left hand; takes her food, opens her lips, guides the cup with her left hand; right still motionless.

10 p.m.—Some twitching of right leg, otherwise *in statu quo;* urine (twenty ounces) relieved by catheter, full-coloured, acid, not coagulable by heat.

Dec. 13, 8 a.m.—Has slept quietly; taking plenty of nourishment at intervals; looks up, smiles, and says "yes" when spoken to. Pulse 74; skin normal.

9 a.m.—A sudden convulsion, of short duration. Blister behind left ear; five grains of scammony in powder.

11.30.—Another convulsion, of short duration, consciousness returning immediately.

3.30 p.m.—Another convulsion, attended with an immense rush of fetid liquid and gas from bowels.

6 p.m.—Dr. Farre thinks pulse steadier, at 74; patient looked up, and smiled, and said "yes," the only word she utters.

10.30.—A succession of mild convulsions the last two hours, beginning with another fetid motion. Pulse 68; head cool; small inhalation of chloroform seems to check them. Bismuth, 15 grains at once; ammoniated tincture of valerian; beef-tea to be thickened with purée of raw meat.

Dec. 14, 8 a.m.—A quiet night, with no convulsions; sleeps for about half an hour, then wakes; uses her left hand, and moves left leg; answers "yes," and smiles. Pulse 72. Bread panada.

6.30 p.m.—Has had a quiet day; pulse varying from 64 to 78; now slight threatening of convulsions; rigidity of neck; twitching of limbs. Ice to head; a little chloroform occasionally; and poultice of linseed and mustard to abdomen.

Dec. 15, 1 a.m.—No return of convulsions; pulse 68 to 72; breathing 20; motions and urine pass unnoticed; three or four motions, dirty, serous; lochia natural; bosom slightly swelled; takes soup, pushes away the brandy.

9 a.m.—Awake, but not restless till 5 a.m.; rigidity of jaws; cannot put out tongue or open mouth, hence cannot take anything thick, as purée or panada. Pulse 64—72. Repeat blister; one dose of rhubarb, soda, and grey powder.

10 p.m.—*In statu quo;* three motions, less offensive; breasts full and hard. Substitute sherry, which she takes readily, for brandy, which she rejects.

16th, 8 a.m.—A comfortable night. Most of her time passed in apparently sound but not stertorous sleep, but wakes from time to time; looks up in recognition; arranges ice-bag on her head with her left hand; expresses pain when blister touched; moves left leg freely; takes food more easily; said "yes" when spoken to; breathing easy, 24; pulse 68; bowels open twice; motions thin, not offensive; urine passed in napkins; dislikes light; pupils small and contract both equally.

17th, 1.15 a.m.—A return of convulsions; squinting, all muscles of face working, and jaws churning, with great flow of saliva; profound unconsciousness; yet, on the nurse attempting to give beef-tea enema, during a quiescent period, there was great unconscious resistance and crying.

8 a.m.—Consultation with Drs. Farre and L. Beale. The latter does not take a hopeless view of the case, believing that symptoms equally severe might be caused by functional disturbance and hysteria.

2 p.m.—Intervals of ease and unconscious sleep, interrupted by convulsive fits, in which the paralysed arm and leg participate; some of these preceded by expressions of distress and action of bowels; motions brown, thicker. Pulse 76; breathing 22; temperature in axilla 100·1°. Breasts continue large and hard; a very cautious attempt to draw them seemed to distress. Beef-tea and wine have been freely taken.

Sir Charles Locock, who has given us the benefit of his opinion, takes a more cheerful view, believing much to be due to the nervous disturbance incidental to parturition, rather than to any organic mischief in brain. Recommends camphor in five-grain doses every hour, to subdue the spasmodic element.

5 p.m.—Occasional twitching of muscles of face, preceded either by heavier sleep with stertor, or by action of bowels, occasionally passing into severe general convulsions, affecting both sides of body; great flow of saliva from churning of jaws; complete flaccidity in the intervals, with *fumer la pipe*, from paralysis of cheek muscles, yet masseters continue rigid.

18th, 10 a.m.—Convulsions continued at intervals till 12 last night, when they ceased, and a quiet night followed, with occasional fits of spasm of face, eyes, and neck. Patient has taken four doses of camphor; certainly opens mouth better this morning; shows faint signs of recognition; swallows slowly; breasts very hard. Belladonna epithem.

10.30 p.m.—Has passed the day without severe convulsions, but frequent fits of spasms of face and eyes, with entire unconsciousness and intervals of intelligence; moves left arm and leg, and takes beef-tea and sherry abundantly. Bowels frequently moved; pupils small, yet contract on exposure; face flushes at intervals; pulse very variable, may be 4 or 5, or rise to 8 or 10 in 5 seconds; temperature in axilla, 100°; breathing 24, regular.

Dec. 19, 8.30 a.m.— A quiet night, with occasional fits of spasm of face; pulse uncertain and variable; breathing tranquil, 24; slight stertor; face expressionless as waxwork, eyes fixed; swallows slowly. Gave good dose of soup and wine, and ordered belladonna to be washed off.

9.30 a.m.—Consultation with Sir C. Locock and Dr. A. Farre. Patient has wonderfully cleared up in the last hour. Eyes intelligent; features expressive; welcomed Sir C. Locock with a smile, and tried to speak, saying, "Very well," and showing some emotion. Sir C. Locock felt he could give a happier prognosis. Battley's liquor cinchonæ five minims every four hours.

6 p.m.—Sir C. Locock and Dr. Farre again in consultation. Three slight spasmodic attacks during the day, and a good deal of heavy sleep; otherwise *in statu quo.*

11 p.m.—Has taken beef-tea, bread-and-milk, and sherry freely; no attacks; pulse 84, not quite regular; perfect use of left arm; features natural; understands what is said, and whispered "Good night" when I said the same words as a parting salutation.

Dec. 20, 8 a.m.—A quiet night, save that bowels often moved, and some twitching of left arm and leg; but I see a great change for the worse, which, I am told, came on the moment of my entering the room. Pupils widely dilated, and quite insensible; eyeball insensible to touch, though heretofore so sensitive; breathing fitful, husky, and accompanied with strange jerkings of the diaphragm and muscles of the chest; left arm firmly bent and rigid; right arm rigid, but less so—both occasionally jerk in convulsion; teeth clenched, but churning against each other; lips flaccid, and puffing with each expiration (*fumer la pipe*); breathing occasionally suspended for intervals of two seconds; pulse 64 to 96, irregular.

9.30.—Sir C. Locock and Dr. Farre in consultation. Sir C. Locock gave a little chloroform, which seemed to quiet the attacks; he hoped these might be epileptic, and not so dangerous as they looked; proposed bromide of potassium and a lead lotion to wash out lochia, which were offensive.

10.30 a.m.—Convulsions continued; breathing irregular; but colour of lips and cheeks natural.

11.10.—After repeated convulsions, with suspension of breathing, she expired.

In reviewing the history of this lamentable case, it will be seen that there was no evidence of defect of urinary secretion or of kidney congestion, which undoubtedly accompanies or causes many cases of puerperal convulsions Throughout pregnancy the bowels had been kept as regular as was possible, and on one occasion only—a month before—was the urine scanty, and was set to rights by citrate of potass. The preliminary numbness of the hand, and the paralysis, made me believe from the first that the condition we had to deal with was apoplectic clot (or embolus, but there had never been any heart disorder). Dr. Farre held the same view. But the fact that Sir Charles Locock (who represents half a century's special experience in the highest departments of midwifery) and Dr. Beale (who represents the most exact modern scientific research) should each regard the case as more probably functional, is an instructive comment on the difficulties of diagnosis. In most cases of brain disease there are periods of maximum and minimum of intelligence. If the patient be seen during the former, she seems safe. How often have I seen a hydrocephalic child lying in the nurse's lap, and the father or mother anxiously watching the features, and if these clear up a little, and there is a smile or look of recognition, then there is a gleam of hope—alas! too soon to be dimmed. There was in this case a period, up to the first convulsion at 2.30 p.m. on December 10, of perfect consciousness, with talkativeness, and merely some confusion of speech. After the severe convulsion which preceded parturition on the morning of the 11th, speech was abolished, or reduced to monosyllables. As to treatment, an efficient purgative is, I believe, the sheet-anchor in all cases of puerperal convulsions, and in most of apoplexy, but certainly the last dose of medicine did not act kindly, and the irritation of the bowels, aggravated by the impossibility of giving other than liquid food, seemed to enhance the tendency to convulsion.

(*To be continued.*)

ON THE TREATMENT OF EPILEPSY.

By WALTER TYRRELL.

Although it is plain, as shown in one of my former papers, that the predisposing cause of epilepsy is a certain deficient power of nervous control, and that in this lies the chief obstacle to cure, yet it must never be forgotten that there are exciting causes present in almost all cases, which must be overcome before we can hope to relieve the predisposing cause. Therefore, in laying down any plan for the treatment of epilepsy, we must endeavour—

First—To discover and treat the exciting causes.

Secondly—To supply to the nervous system that strength and power of control, the deficiency of which constitutes the predisposition to epilepsy.

Now, these exciting causes may arise in almost all organs of the body, and must be treated with a variety of means. And this, I think, accounts for the large number of remedies which have from time to time been vaunted as specifics for epilepsy, all of which, when submitted to more searching trial, have failed to give satisfaction, for the simple reason that, although each was sufficient to relieve one form of exciting cause, yet it would be perfectly useless in others, and would have no effect whatever on the predisposing cause.

The exciting causes of epilepsy are often difficult to detect, but they may be stated, in general terms, to consist of irritations (mechanical or otherwise) of the extremities of nerves in any part of the body.

Among the more common forms of these irritations may be enumerated:—Irritations of the mucous membranes of the stomach and intestines, as from the presence of worms or undigested food. Deterioration in the quantity or quality of the blood circulating in the cerebrum and spinal cord. Deposits, syphilitic or otherwise, on the meninges of the brain or spinal cord. Irritations arising in the sexual organs or uterine apparatus, or those which have their site in the throat or fauces.

Now, supposing any of these irritations to be excessive, convulsions may arise, without any special predisposition on the part of the patient. This fact is well illustrated by the convulsions (identical with those of epilepsy) which occur in infants from the irritation of teething. These attacks rarely ripen into permanent epilepsy, because, no predisposition existing, the convulsions cease with the exciting cause.

It is, then, advisable to watch every case of epilepsy carefully for some time before commencing treatment, to ascertain, if possible, the nature and seat of the exciting cause. This may often be obscure and difficult of detection, as is shown in the following cases:—

J. N., aged 42, married, but without family, has, for the last four years, been subject to violently convulsive attacks, alternating with others, which partook more of the character of petit mal, but without entire loss of consciousness. She attributed the attacks to the partial cessation and irregularity of the menstrual discharge.

The attacks were preceded by fulness of the head and flushing of the face; the bowels were very irregular, but usually much constipated. As it appeared probable that the exciting cause arose from the irregular catamenial flow, I placed her under warm purgative treatment with iron. The aloetic in a few days dislodged from the bowels large quantities of scybalous matters with a great relief to the patient, and a considerable effect on the attacks of convulsion, which were ultimately entirely overcome by a course of strychnia in small doses. The menstrual discharge soon after ceased entirely, making it evident that the exciting cause of the epilepsy has really been the irritated condition of the intestine and not the uterine derangement.

In the following case the attacks had been for some years attributed to sunstroke, but were afterwards plainly shown to be due to the presence of syphilitic deposit on the meninges of the brain:—

R. W., aged 29, had been at sea for many years as officer in the merchant service, and had been much in hot climates. While in China he was seized with a severe convulsive attack, supposed at the time to be sunstroke. After this time the attacks continued at intervals of about every month, but gradually became more and more frequent, until, at the date at which I first saw him (June, 1867), attacks occurred every week, and sometimes two or three times in one day. After watching him carefully for some time, I found, on questioning him, that he had for some years previous to his first attack been suffering from secondary and tertiary forms of syphilis, in the shape of sore throat, eruption, and ulceration of the legs. On examining his scalp, I found a plainly marked node over the left parietal region; this was very tender on pressure. I now placed him on large doses of iodide of potassium with some sulphate of strychnia in solution, and with complete success, the attacks ceasing very shortly; and up to the present date he has remained perfectly well.

There is no necessity for multiplying cases to show the difficulty of ascertaining correctly the exciting causes of the disease; nor would it be possible in a short paper to show what remedies are adapted to relieve the different forms of irritation when they are discovered. We will suppose that the exciting causes are discovered and remedied—in what way are we to overcome the predisposition to epilepsy, without which the disease would never have appeared? This question I shall now endeavour to answer. We must supply to the nervous system an increased tone and power of control; and we are in possession of some remedies which will undoubtedly do this, among the most powerful of which is strychnia. In an admirable paper in the present volume of the "St. Thomas's Hospital Reports," by Dr. Clapton, "On the Action of Quinine," he remarks on its value as an anti-periodic, and goes on to show how valuable is its action in relieving the attacks of epilepsy. "Not in every case, however; it has no power of preventing the seizures when they arise from the effects of syphilitic disease, or of injuries to the head, and it generally fails in highly hysterical young women." Naturally not; because the syphilis and the injuries to the head are merely exciting causes, which only would produce epilepsy in patients who had predisposition to that effect.

All that Dr. Clapton has said of quinine may, I am confident, be said still more strongly of strychnia. No one who has ever given it in epilepsy can for a moment doubt its power of relieving the attacks of convulsion; and Dr. Clapton, in the paper I have above quoted, narrates a case in which complete cure followed the administration of strychnia. In many cases it is possible to carry on the treatment of the exciting and predisposing causes at one and the same time. A good instance of this is afforded by that large class of cases in which there is present a hypersensitive condition of the gastric branches of the pneumo-gastric nerve; in these cases there is a marked weakness of digestion, and attacks very frequently follow a full meal. Now, in these cases the nitrate of silver and sulphate of zinc are of marked benefit, their action being, I imagine, to deaden the excessive sensibility of the nerves. Now, in these cases, if we combine the salt of silver or zinc with the sulphate of strychnia in its appropriate dose, we are treating both causes simultaneously. Dr. Brown-Séquard has evidently hit upon this same truth, as in his last lecture he recommends that strychnia should be combined with the bromide of potassium. Space will not allow me to illustrate my plan of treatment with more cases. This I shall hope to do in another paper. I shall merely, at the risk of being tedious, recapitulate what I have been endeavouring to establish—that, to cure epilepsy, we must do two things: first, discover and relieve the exciting causes; secondly, strengthen the nervous system, and supply to it its lost power of control. This is only to be effected by one class of remedies, the most powerful of which is strychnia.

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SURGERY IN INDIA.

ELEPHANTIASIS OF THE LABIA (PROBABLY THE LARGEST CASE ON RECORD)—AMPUTATION—RECOVERY.

By A. S. G. JAYAKAR, M.R.C.S.E., etc.

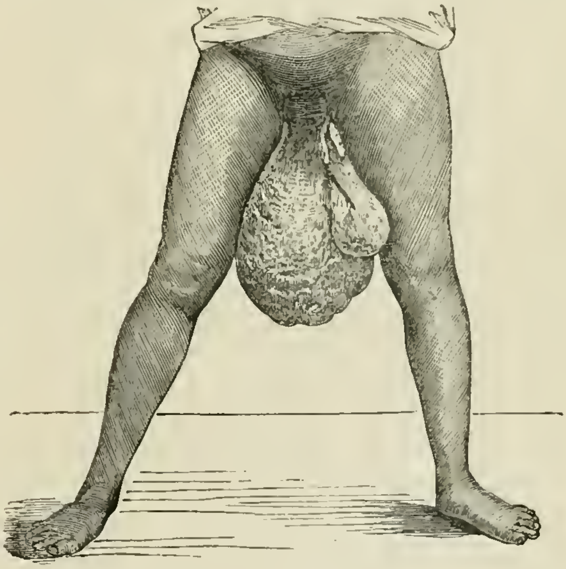
W., a married woman, aged about 25 years, was admitted into Hutteesingh's Hospital, Ahmedabad, on March 29, 1870, with two large elephantoid tumours in connexion with each labium. The right one, which was the larger of the two, measured from above downwards thirteen and a half inches, reaching an inch or two below the knee when the patient stood in an erect posture. Its greatest circumference was thirty-two inches. The tumour on the left side measured twelve inches in circumference, and was pedunculated. On separating the tumours, the vagina was easily seen; but the parts around were ulcerated, and presented a canceroid appearance.

History.—The disease first commenced, six years ago, in inflammation of the right labium, which, on the subsidence of inflammation, was affected with chronic thickening and induration. This went on gradually increasing, till it attained its present size. The patient described the left tumour to be of about six months' standing. Her general constitution was very good. Delivered of a full-grown child two years before the commencement of the disease, without any difficulty. Has not borne any children since.

On April 2, with the kind assistance of Drs. Wyllie and Ruttonjee Hormusju, I removed the tumours. A small skin flap was dissected upwards from the surface of the right tumour, and, a similar one having been made on the lower surface, the tumour was transfixed and ligatured on either side. Then, with one sweep of the knife, the whole mass was removed. There was very little difficulty in removing the left tumour. There was a considerable hæmorrhage at first, which almost threatened the life of the patient; but she soon rallied, and the hæmorrhage was checked by means of pressure, torsion, and ligatures. The mucous membrane of the vagina was brought in apposition with the side of the skin flaps on either side, and portions of the flaps brought together by means of sutures. During the operation, while the patient was under chloroform, an abdominal tumour presented itself; but the question of pregnancy being rather inconsistent with the presence of such large tumours, it was hurriedly diagnosed to be an ovarian tumour. Both the tumours together weighed 16 lbs.; but, considering the loss of blood and serum during the operation, the whole weight would be put down as 19 lbs.

The patient progressed very favourably till May 15, when she miscarried, giving birth to a dead fœtus of six months. On the 20th the wounds were entirely healed, and she was discharged on May 23.

Remarks.—The rarity of such cases is in itself a point of great interest. The right tumour had attained such an immense size that I am inclined to believe this is probably the largest case of elephantiasis of the labia on record. On referring to several books on the subject, I do not find any mention made of such large tumours in connexion with the labia. I inclose a photograph of the tumours taken before the operation, that it may give a general idea of the exact size. The second point of interest in the present case is one of pregnancy. It strikingly shows that sexual intercourse can be had even in the presence of such frightful mechanical obstacles.



METEOROLOGY OF 1870.—The greatest atmospheric pressure in the year occurred on the 1st of October, when the barometer was read 30·06 inches, and the lowest happened on the 24th October, the mercury being then 28·19 inches. The mean annual value was 29·41 inches. Highest monthly average, 29·60 inches, in April. Lowest monthly average, 19·16 inches, in October. The highest temperature was on the 23rd July, 89°; and the lowest, December, 25·8°. Mean temperature of the year, 48·7°. The warmest month, July, 65°. The coldest month, December, 31·8°. The total depth of rain in the year was 25·54 inches, of which only 15·93 inches fell in the first nine months. The greatest deficiency was from March 4th to October 7th (217 days), rainfall only 9·42 inches. It was by far the driest period since 1847.

COUNTRY *VERSUS* TOWN MILK.

By JOHN GAMGEE, Esq.(a)

Dr. Michael Taylor, of Penrith, and Professor Bell, of St. Andrew's have, with Dr. Ballard, afforded positive evidence of the propagation of scarlet and typhoid fevers by milk. The cases recorded are so striking and circumstantial, that Medical men may well ask themselves what can be done to mitigate an evil of such gigantic proportions. The simple dilution of milk has been regarded by many as the worst form of deterioration injuring the milk consumer. But when it is considered that impure water, used in washing milk-pails, or diluting the milk, transfers from the cesspool to the breakfast-cup, or infant feeding-bottle, the germs of enteric fever, and that the scales of a scarlet-fever patient drop and fructify in the most essential of baby-foods, it is high time that, as practical men, we should consider the whole subject, and devise a remedy at once efficacious, and of possible or probable application.

On April 16, 1862, in addressing the Metropolitan Association of Medical Officers of Health, I attempted to answer a very important question—viz., "Is the produce of diseased animals unwholesome as human food?" Unfortunately, there are still those who cannot believe that it is criminal that our households should be supplied with the flesh and milk of diseased animals. This is the case with those who have of late been most influential in directing Government measures.

In my reply to the above question, I attempted to classify the impurities known as pervading animal food as follows:—

"Firstly, cadaveric venom and animal poison of undetermined nature, including the flesh of over-driven cattle, the poisoned milk of a passionate woman, and the produce of cattle afflicted with local diseases of a non-contagious type.

"Secondly, animal poisons, well-known from their effects in creating specific contagious diseases. These effects are constant, if circumstances be favourable for their development, and unchangeable. Under this head I originally referred to the poison of anthrax, eruptive fever, foot and mouth disease, pleuro-pneumonia, rabies, etc.

"Thirdly, organic poisons, the result of decomposition. The sausage poison, cheese poison, putrid flesh and fish, all come under this head.

"Fourthly, the effects of mineral and vegetable poisons.

"Fifthly, parasitic animals and vegetables."

At the time I drew the attention of Medical Officers of Health to the above points, the cow-sheds of the metropolis were crowded with cattle, changed week by week, and even day by day, from the constant prevalence of the lung plague and foot and mouth complaint. In 1863 I attempted to show how the town dairy system might be improved and the diseases of cows prevented, and remarked that town cow-sheds were as indispensable in large cities as stables for horses. Since then we have had a very effectual broom to sweep out the old cattle diseases, and the cows themselves. The cattle plague drove us to the country for milk, and rendered comparatively easy the organisation of such a system as that adopted by the Aylesbury Dairy Company, the Dairy Reform Company, and other associations, which now enable us to compare three distinct systems of milk for town supply.

The oldest of these, which, in spite of the contagious pleuro-pneumonia, was partially in force as late as 1850, consisted in the stabling of cows in and near large towns, without any regard to the comfort or well-being of the animals. The sheds were often old buildings, originally destined for better purposes, and not unfrequently cellars or ancient warehouses, constructed with a due regard to economy in the window-tax days. There were exceptions, but not so numerous or of such a class as to induce anyone to record their admiration for town cow-sheds. The public was usually excluded from such places by notices of "no admittance except on business," and business usually led only into the milk-shop. An examination of the cows revealed that, as a rule, they were old and of ancient breeds. Before 1840 the tendency was never to have cows in town until the farmer had drafted them from his breeding stock in order to make room for younger ones. When the animals' growing days had passed, and there was a tendency to turn all the food consumed into milk, the cow-feeders preferred them. But the town dairymen were enterprising individuals, and they bought a cow, then two, and so on, until a large herd was crammed within very narrow limits in the most crowded neighbourhoods. Thoughts of the country, and the many accidents occurring amongst the poor animals thus housed, induced the dairymen to rent fields in summer, and, ultimately, to secure a farm near the town. The cows, which had already served the breeder's purpose, were again used for breeding purposes, and a very wretched and wasteful system of town dairy breeding prevailed. There are, doubtless, those here who can remember strange specimens of old cows, good milkers, blind from prolonged confinement in close, ill-ventilated dungeons, with their ribs prominent, cough chronic, and an abnormal flow of milk, which sometimes seemed almost to increase with age. The old cow could always be relied upon for a drop; but no one vouched for the quality. In those days cows were often phthisical; they were subject to lingering diseases of a non-contagious character, which killed too slowly for the public good. The advantages of summer grazing on a common were extolled; and freemen cling tenaciously to this day to their privileges on open or waste lands in or near towns, notwithstanding that each succeeding spring or summer is attended with a recurrence of contagion, from the aggregation of cattle, healthy or diseased, from every part of a town or towns.

The average duration of a cow's life in town, in the good old days, would be not less than three years. The majority of the cows brought in with their second, third, or fourth calf, would continue until, somehow or other, they had bred two or three more at tolerably long intervals. It was by no means uncommon for a cow never to be actually dry for three or four years, and some would go on yielding enough milk to pay for their keep for eighteen months or even two years after calving. In many towns, notwithstanding the wretched system I have described, the supply of milk was much more abundant than it has ever been since, owing to the large stock of cows then in the country. Amongst the poor of Edinburgh and Dublin, I have heard sad complaints of the privations endured since cheap milk could no longer be had for children; for the cheap milk of bygone days has been rendered an impossibility by the wholesale destruction of dairy stock.

The absence of contagious diseases amongst cattle enabled the dairymen to accumulate stock and wealth. From one, some gradually reached to one short of 1000, and it is reported of a Mr. Biggs, that he somehow always failed to have more than 999 in his cow-sheds. Those were the palmy days of the town cow system, a system rendered obsolete in this country by the lung disease and rinderpest. It still prevails in some healthy countries, and, with the rapid growth of towns in the new world, we still see the combined town-milking and town-breeding system, which sanitary science teaches us should for ever pass amongst the things that were.

The importation of foreign stock and foreign diseases introduced amongst us a new order of things. The foot and mouth disease, which appeared first, was observed by some veterinarians to be communicable to man; but since the malady was curable in the cow, it led to no practical change. The origin of the malady was enveloped in mystery, and of late years, when I insisted on its eradication, it was pronounced "atmospheric" and beyond our reach. But next came the lung plague. It not only inflicted pain and inconvenience, but it killed. We should have known how to get rid of it, but the disgrace of fostering it still clings to the British escutcheon, and must cling until the voice of reason and sense prevails. It is of no use for us to explain what should be done. The majesty of resistance frowns upon us, and the nests of a few are feathered, to the prejudice of the million.

But to return to the dairies—the old dairies, in which the number of inmates gradually diminished, and out of which I have seen 10 per cent. per week carted or driven diseased to the slaughter-house and sausage shop. Medicines failed. The butcher proved the dairyman's safety-valve. Between ruin and selling diseased animals, the dairyman's choice was guided by his instinct of self-preservation. One of the old veterinary schools advocated ventilation, and ascribed the lung disease to east winds. The other simply suggested a string of prescriptions, with the alternative of the knife. Yet, until now, to the lasting disgrace of our veterinary institutions, the slaughter and sale of cattle afflicted with lung disease is openly and unblushingly advocated; and, what is more, the Government is thereby induced to temporise with the great and urgent subject of exterminating the contagious pleuro-pneumonia. The supreme and vital interests of the country—of every man, not a vegetarian; of every farmer in the United Kingdom—renders it proper and necessary that it should be known and widely proclaimed that the sale of diseased cattle as human food has been tacitly sanctioned under the advice of those whose advice alone has been listened to; and when I have drawn the attention of Medical men in authority to the question, they have hesitated to enter into it, from personal considerations.

(a) A paper read before the Association of Medical Officers of Health, December 17, 1870.

For nearly a quarter of a century the system advanced from bad to worse, whereby the lung disease established a hold on the country, such as it never could have had but for the town dairy system. The cow-feeder's old stocks of ancient and phthisical cows passed away. Bulls were no longer kept in the cow-sheds. The cow-feeder's farm near town had to be sold or let. Everything was done to ensure a speedy realisation of money on the appearance of disease. From Essex, a trade in milk, to supplement the London cow-feeder's supply, sprang up. The country trade had always been somewhat in existence, and its complete development was mainly checked by the spread of contagious diseases to the herds of those firms engaged in the supplementary supply of towns by road and rail.

Circumstances favoured my learning the cause and extent of the mischief caused by the lung disease. I first indicated that the foot and mouth disease and pleuro-pneumonia never originated spontaneously in this country. I then showed that, since the importation of foreign stock, the loss by cattle disease was four times the number of cows imported, and upwards of 50 per cent. of that loss was caused by the lung plague alone; that mountain districts were healthy; that counties where cattle were frequently bought in were diseased; and the great centres of propagation were the cattle dealers' farms, the cattle markets, and town dairies. The average duration of a town dairy cow's life had been reduced to six months, and under; or, in other words, a dairyman whose standing stock would never exceed fifty, had to buy 100 cows during the year, and nearly the whole of these were sold to the butcher in various stages of contagious disease. All this was said to be exaggerated and overdrawn.

And this is not all. The town dairyman, finding that he required to be ever ready for the butcher, no longer bought in lean old cows. He sought the fine fat short-horn crosses of Cumberland, Westmoreland, and Durham. He discarded old cows, and bought in animals varying from four to six years of age, and killed them out so fast that the price of cows soon became ruinous, but for the old safety-valve, the butcher's shop. Instead of the stock of the country increasing, so as to give us a chance against diseased imports, it diminished, and the destruction continued to overbalance the extent of our purchases from abroad. In actual quantity of animal food we therefore suffered, and as for quality, I believe opinions cannot be divided.

The milk, secreted in abundance even in the latent stage of pleuro-pneumonia, was sold, and several outbreaks of foot and mouth disease annually insured the wholesale supply to our infant population of a milk which direct experiments prove to be deadly to the young of those creatures that are liable to it. Man is one of those creatures, and I have very frequently attempted to show that it was wrong, dangerous, and highly reprehensible to permit the sale, under any circumstances, of the milk of cows afflicted with the foot and mouth disease.

The town dairy system of the quarter of a century from 1840 to 1865, which still holds its ground to much too large an extent, has therefore been a system enforced by the prevalence of contagious disease, and been based entirely on the disposal of the largest amount of diseased meat and milk which town dairies can yield for human consumption. Is such a system to be bolstered up?

(*To be continued.*)

THE collection of antiquities of the late Sir James Y. Simpson has been presented to the Society of Antiquaries of Scotland. The collection includes portions of sculptured slabs from Nineveh.

PREVENTION BETTER THAN CURE.—The following curious advertisement appears in last Saturday's issue of the *Malvern News*. Mr. Smith has certainly hit upon a novel mode of preventing the spread of scarlet fever. If such a complete isolation of cases were generally adopted, it is not too much to say that the disease would be less common, if not eventually stamped out. Mr. Smith makes the fact known of scarlet fever being in his house by posting this information on his gates at the entrance to his grounds:—"Mr. Frederick Smith, of Leeston, announces that his two youngest children have scarlet fever; his four elder boys were removed, after disinfection of their persons and clothes, into lodgings on the day on which the disease in the little ones was pronounced. N.B.—This advertisement will be continued till the Medical attendant shall certify that there can be no risk to visitors and others."

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. GEORGE'S HOSPITAL:

SOMEWHAT UNUSUAL FORM OF PARALYSIS.

(Under the care of Dr. OGLE.)

THE patient, a widow, aged 39, who had for some years had great mental distress, was admitted with great loss of power in *all* the limbs, and awkward, shaky, and unprecise way of using them. She said the *right* leg and *left* arm were the worst. She was very thin, but there was no emaciation of any one set or group of muscles, and no muscular rigidity. There was a peculiar *slowness* and drawling character of speech, and slight tremor of the muscles of the face and tongue, but her intelligence was unaffected; and, saving occasional dimness of sight, her special senses were entire. There was a tendency to *oscillation* of the eyeballs. The memory was said to be bad at times as regards recent events, not so of things long gone by. There was some loss of sensibility of the soft palate. Galvanism by Stöhrer's battery showed greater muscular contractility in the right arm than in the other limbs; but no perceptible difference in the sensibility of the muscles of either arms or legs existed. White atrophy of the optic nerves was found, on using the ophthalmoscope, by Mr. Carter. It appeared that the patient had first experienced want of power three years previously, which began in the right leg. She had had a sister who died of the same disease as her own.

This case presented certain features of general paralysis (*i.e.*, of insane), but there had been no delusion or mental defection, and Dr. Ogle inclined to look on it as one of creeping or peripheral hemiplegia, which had not confined itself to one side. It is under treatment by steel wine and liquor arsenicalis, with generous diet, and also galvanism of the limbs and down the spinal cord, by Stöhrer's battery, every other day.

PARAPLEGIA IN A BOY AGED SEVEN, CONNECTED WITH CURVATURE OF THE UPPER PART OF THE DORSAL REGION OF THE SPINE.

In this case the legs were persistently kept extended and highly rigid, and when they were crossed he was unable to separate them. At times he had involuntary movements of the legs, and he had the rope-like tightness across the abdomen. On the application of a hot spoon, or tickling the feet, the legs were slowly drawn up to the body; but by forcibly bending the ends of the great toes, the legs became as if suddenly unlocked, and were briskly drawn up. Dr. Ogle alluded to some cases, described to him by Brown-Séquard, of spinal disease where a similar sudden relaxation of the legs could be produced in the same way.

PARAPLEGIA OF SOME STANDING, SUDDENLY BECOMING WORSE.

The patient, a gardener, had been much exposed to sudden change of temperature up to three years ago, when he became subject to numbness in the fingers of the right hand, with a pricking and tingling sensation. It then subsided, and affected the fingers of the *opposite* hand; and after six or seven weeks the left *foot* became affected, which extended up the leg to the hip. Under cod-liver oil and quinine he improved for a time. Then he went to the Bath mineral waters, but no good resulted; and after returning home again tried the oil and quinine, and improved for some time, but, remaining very weak, he did nothing for nearly two years. Suddenly, whilst in the train, numbness came on in both legs, hips, and back, and he lost all power in the legs, and was brought to St. George's direct from the railway. It appeared that in 1851 he had had a severe blow on the back by a cricket-ball. Reflex action was easily excited in the legs, and tremors of the muscles, and pain, *remain some moments after* ceasing from titillation or pinching. There was much pain in the back, and great *hyperæsthesia* of the skin of the legs, with diminished temperature of the lower limbs. Dr. Ogle commented on the rarity of hyperæsthesia in paraplegia. Under the use of belladonna and ten-grain doses of iodide of potassium, the symptoms are improving—that is, the pain and hyperæsthesia are greatly diminished; but latterly there has been noticed some loss of sensibility of the skin of the cheeks, and slight difference in the size of the pupils. There has been no interference with the sphincters.

Dr. Ogle looks upon the case as one probably of *softening* of the spinal cord, in which *extravasation of blood* has suddenly come on, partly in connexion with the spinal membranes. As symptoms of iodism were produced, the iodide of potassium was for a time left off, and he is now taking it in smaller doses, with cod-liver oil, iodide of iron, and quassia. It was remarkable that several attempts were made to blister the back in vain for the space of ten days; contrasting with the rapidity with which sores often form in paralysed parts.

TWO CASES OF PLEURITIC EFFUSION OCCUPYING THE ENTIRE CHEST ON ONE SIDE.

Both cases are males, and of exactly the same age—viz., 32 years, one being a Frenchman (a groom), and the other English. In the one case the right side, in the other the left, is affected, the heart being in the latter pushed over, so that its beat is at the ensiform cartilage. In the case of the Frenchman, ægophony behind was well marked, and now, on convalescence, the "redux" friction is well heard. In the Englishman, kidney disease exists, and physical examination shows indication of tubercular deposit at the upper part of the lungs; he has also spit blood. Both were treated by iodine externally applied, and small doses of squills, digitalis, and blue pill, carried so as to touch the gums. In the one case, good and rapid progress is being made in the right direction; in the other case, much relief has been afforded as regards cough, pain, and dyspnœa, but not much reduction of the fluid in the chest effected as yet, nor can he lie on the opposite side. Dr. Ogle gave the mercury in both cases, with the view of seeing if its action would be the same in two cases rendered pathologically so different by the presence of tubercule and kidney disease in the one and not in the other. Hitherto much more desirable effects have attended its use in the case free from the above complications. In the other case, the salivation in a given time was much more decided than in its fellow, but nevertheless was quickly recovered from.

Dr. Ogle mentioned a private case in which he had lately, for a few hours only, heard, over a large portion of the pleura, behind, on one side, intense loud friction-sound, which had totally vanished, and had not been succeeded by effusion of fluid or appearance of adhesions. It was treated by hot applications constantly applied, and laudanum, over the affected parts. He had also had a case in the Hospital of similar extensive pericardial friction-sound coming on, and lasting for a few hours, and then disappearing without further issue. He is inclined to look upon these friction *noises* as owing to *dryness* of the serous membrane which has not gone on to effusion of fluid or fibrine.

The Frenchman above alluded to could not endure the aërated bread, which we find the patients eat at St. George's Hospital unless other bread is specially ordered by the Physicians.

THE LOCK HOSPITAL, SOHO.

STATISTICS OF CASES OF SYPHILIS AND OF VENEREAL SORES TREATED AMONGST THE MALE OUT-PATIENTS IN THE YEAR 1869.

(Under the care of Mr. BERKELEY HILL.)

At the present time, when in many quarters the question of the unity or duality of the syphilitic virus is being again warmly discussed, the valuable statistics gleaned from Mr. Hill's notes of the men under his care at the Lock Hospital in 1869 will be found to be full of interest. It should be noted that only those apply for relief at this Hospital who believe themselves to be suffering from venereal disease, and therefore the number of cases of visceral or tertiary syphilis is small, these affections being seldom attributed by the patients to their original cause. Only those cases are included here which fall under the category of either venereal sores without constitutional syphilis, or of syphilis itself. It may be mentioned, however, that besides these there were 1282 case of urethritis or gonorrhœa, of which 631 were of acute urethritis without complication, 406 of acute urethritis with some complication, and 245 of chronic urethral discharge.

Amongst the complications attending the acute cases there were as follows:—Phimosis, 25; balanoposthitis, 31; irritated lymphatic glands, 21; suppurating bubo, 8; inflamed lymphatic vessels of the penis, 7; chancre, 7; syphilis, 5; retention of urine, 1; chordee (obstinate), 19; varicocele, 2; eczema, 1; roseola balsamica, 1; epididymitis, 61 (35 of the left side, 21 of the right, and 5 double); orchitis, 5 (3 left, 1 right, and 1 double). In the cases of epididymitis the time the inflammation set in was noted in 38—5 began during the first week of the discharge, 6 in the second, 6 in the third, 6 in the fourth, 3 in the fifth, 4 in the sixth, and 1 in the seventh, eighth, ninth, and tenth weeks respectively. In three cases the patients declared their discharge had lasted six months, and one a twelvemonth; but little reliance was placed on their statements.

Venereal Sores without Syphilis.—This class included 201 patients, and of these the sores were multiple (more than one sore being noted on the same person) in 76 cases. *Position:* 36 on the inner surface of the prepuce, 30 in the furrow behind the glans, 30 at the frænum, 20 at the free border of the prepuce, 14 on the sheath, 11 at the meatus urinarius, 2 at the root of the penis. In the rest the position is not specified. They had the following characters:—71 were excoriations or very shallow sores, and suppurating but little; 32 were inflamed—that is, painful, with much red areola, and secreting yellow adhesive discharge; 19 were spreading or serpiginous, 6 of these being sloughing sores; 20 had well defined edges, copious viscid discharge, and spongy floor; 9 were raised and prominent, with large granulations; the rest were either indolent or not described beyond being soft suppurating sores. Their concomitants were as follows:—In 28 the glands were only irritated; suppurating bubo in 22, of which 4 were marked; virulent phimosis was present in 19; balanoposthitis in 13; inflammation of the lymphatics of the sheath of the penis in 3.

It must be observed that these numbers include the cases which healed during their attendance without indurating or without constitutional syphilis developing, as well as those who only attended once or twice, but who gave no symptom making the ultimate appearance of syphilis probable. These, of course, formed a considerable number of the whole.

Treatment of Local Sores.—When inflamed or only simple excoriations, the dilute sub-acetate of lead solution was generally prescribed. For freely suppurating sores, with pain and tendency to spread, carbolic acid solution—1 to 30 or 50 of water, with or without a little glycerine. Stronger solutions were now and then given to men likely to be careful in their use. Black wash, simple lime water, or solution of sulphate of zinc were the usual stimulants to languid sores, opium being in a few cases added, if the pain was severe. Rapidly sloughing or obstinate serpiginous sores were admitted into the Hospital for more systematic treatment. In two cases of obstinate creeping abscess of the glans penis, which had resisted other efforts, dry calomel dusted over them caused them to heal rapidly. If induration of the sore and enlargement of the glands set in while the patient attended, mercury was at once given, but these cases are not included in the foregoing category.

Syphilis.—403 cases had constitutional disease. In 71 other patients, hard-based sores, with multiple enlargement of the inguinal glands, were found, but they had been kept separate during their short period of attendance. They were, nevertheless, treated as syphilitic at the time they were seen. In the patients clearly suffering from constitutional disease, the sores, when present, had very much the same position as the local venereal sores—namely, 41 in the furrow, 31 on the inner prepuce, 17 at the frænum, 15 at the free border of the prepuce, 12 on the glans penis, 10 on the urethral meatus, 24 on the outer prepuce, and so on. In one man, who was covered with syphilitic maculæ and papules, with scabs in the hair and erosions on the tonsils, no sore, or trace of sore, could be found on the genitals or anus, on the lips, face, or fingers. There was, moreover, no enlargement of the inguinal, submaxillary, or axillary glands. The patient denied ever having had a sore or chafing, but confessed to a thin discharge from the urethra the last two months. On examination of the urethra, a scanty muco-purulent discharge was found, but the endoscope showed that no excoriation was present as far as the bulb. The patient was put under treatment, and had subsequently other syphilitic affections, but no sore or papule developed on the genitals.

In character, the syphilitic sores differed considerably; 9 were spreading, 3 excavated, 5 suppurated freely. In one sore only was induration absent throughout its existence. In about six weeks after its appearance it had entirely healed, by which time the roseolar and papular eruptions were well-marked. In 106 patients the multiple indolent enlargement of the lymphatic glands was very marked on both sides; in 10 cases acute inflammation of the glands, with suppurating bubo, occurred; in only one was permanent absence of enlargement of the glands noted; in 5 cases induration of the dorsal lymphatic vessels of the penis took place.

The eruptions of the skin noted were most frequently the papular, next the roseolar, then the pustular or bullar. In three cases the eruptions appeared to be confined to the skin of the penis and scrotum, where it took the form of configurate scaling papules or moist ulcerated patches. In one case the eruption over the back and shoulders was arranged in groups of minute coppery papules, each of which, when examined with the lens, was seen to be tipped with a fine scale, as if the eruption at one time had been vesicular.

Gummy syphilides occurred very seldom. In three cases it was confined to ulcerative nodules in the skin of the knee. In six cases the hard palate was attacked with necrosis. In seven the soft palate was the site of gummy disease and ulceration. The tongue had gummy disease in two cases; they were both on the left side. Iritis was observed in few cases, being noted as severe in two, in one of which the sight was almost wholly gone from accompanying disease of the choroid and retina. In two cases thickening of the capsule and ligaments about the knee-joint, with some effusion into the interior. The patients complained little of pain, and the disease was always checked by a few doses of iodide of potassium. On the inner side of the joint, in one case, the soft parts were beset with nodules, and generally thickened, so as to be hard and inelastic, the whole of which cleared away under iodide of potassium, in about four months after it came under treatment. In another patient, an old Crimean soldier, with caries of the frontal and parietal bones, the sheaths of the extensors of the three inner fingers of the right hand were thickened and filled with effusions of fluid. This yielded, in like manner, to the same treatment.

Treatment of Syphilis.—The indurated sore and enlarged glands were, as a rule, treated by mercury in moderate doses—that for men being usually five grains of mercurial pill with half-grain of powdered opium every night; eight pills being given at each visit. This quantity sufficed, in most cases, to bring the patient under the influence of mercury in a week or less. The influence was continued for three or four months, or until the sores had soundly healed, and other symptoms had vanished, when iodide of potassium replaced the mercury. The later affections of syphilis which were most benefited by mercury were the papules of the palms and soles, many of these being totally unaffected by iodine in large doses. So, also, the papular affections of the tongue, and the deep chinks which sometimes accompany the papules, required mercury. In obstinate cases of relapsing syphilis, very large doses of iodide were given; thirty or forty grains thrice daily were not infrequent, and drachm doses occasionally, either with ammonia, sarsaparilla, or simple bitter. Pitch ointment was often very effectual in closing obstinate fissures of the hands and round the mouth.

It is worthy of remark how much venereal disease and suffering from disease of the genitals is caused by neglect of personal cleanliness. Phimosis and balanitis were present in 167 patients; while, of the 437 ulcers of the genitals, a very large proportion were situated in the furrow behind the glans, prepuce, and on the inner surface of the prepuce. These are exactly the situations where want of cleanliness excites herpes and excoriation, and thus sets open the door for the entry of contagion.

RADCLIFFE INFIRMARY, OXFORD.

ENDO- AND PERI-CARDITIS, WITHOUT AFFECTION OF JOINTS, FOLLOWING SUBACUTE RHEUMATISM, AFTER A FIVE WEEKS' INTERVAL OF OBSCURE FEBRILE SYMPTOMS.

(Under the care of Dr. GRAY.)

Edward A., aged 16, was admitted into the Radcliffe Infirmary in February, 1868, with the remains of a first attack of subacute rheumatism, of about a month's duration. The joints of the lower limbs alone had suffered. On admission, he presented the following symptoms:—Slight pain, without swelling, in one knee; pain in the right side of the occiput, constant in the erect posture, only occasional in the recumbent; a remarkably dry, harsh skin, of temperature $99\frac{2}{5}$°; pulse 120, very small and weak; urine with excess of phosphates, no albumen; heart-sounds normal. He was very phthisical-looking. Apex of right lung gave rather prolonged expiration and slight increase of voice-resonance, without any percussion-dulness. No cough.

Although the pain left the knee a day or two after admission, and never afterwards returned in any joint, he did not convalesce. He remained exceedingly weak, with a small pulse, oftener above than below 120; skin harsh and dry, with an average morning temperature of 100°, and constant complaint of occipital headache, but no gastric disturbance. For the next five weeks, these obscure febrile symptoms, with only slight occasional remissions, constituted the sole complaint. At the end of that time they quickly subsided, on the development of an attack of endo-peri-carditis. By the time the friction-sound was fully pronounced, the skin had regained its natural moisture, and almost its natural temperature, the pulse had fallen to 100, and the headache had ceased. The pericarditis got well in a fortnight, without any effusion. The endocarditis left behind it a mitral and aortic regurgitant murmur, both of which had ceased to be audible by the middle of May. On the subsidence of the acute heart-mischief, the occipital headache again returned, though not so constant as before, and rendered convalescence very tedious.

We have here an illustration of the difficulty of diagnosis in cases of rheumatic fever, when, as sometimes happens, the constitutional symptoms of the disease occur and persist, independent of any local manifestation. In the above case, the febrile symptoms, persisting for weeks after the joint affection had yielded, were suspected to arise from the development of tubercular disease in the chest. This view was at least strongly countenanced by the boy's general appearance, and the auscultatory signs in one lung; indeed, any other diagnosis at the time was scarcely to be entertained. The further progress of the case, however, renders it, to my mind, highly improbable. A period of constitutional disturbance, preceded by articular rheumatism, and followed by acute cardiac inflammation, points almost unmistakably to the lurking of rheumatic poison in the blood—in other words, to suppressed or latent rheumatism. A series of five cases illustrating this same point—viz., the unusual relations sometimes found to subsist in rheumatic fever between its constitutional and local symptoms—were given by Dr. Russell, of Birmingham, in the *Medical Times and Gazette* of December 3, 1870.

LEEDS GENERAL INFIRMARY.

(Under the care of Dr. CLIFFORD ALLBUTT.)

Three interesting cases of abdominal disease have recently been under Dr. Allbutt's care, all occurring in young boys, and all discharged cured.

The first case was one of impaction of fæces in the transverse colon, of six months' standing. Six months ago the boy was "seized with a pain in the body" when going to his work, he then discovered a lump in his body, which had remained ever since. His bowels, which were costive, had latterly been relaxed. Some symptoms of obstruction had also appeared, but not to any severe degree. On examining the body, a tumour was found exactly occupying the site of the transverse colon; it was irregular and doughy in feel, and dull on percussion. The general condition seemed to negative malignant disease, and the symptoms of obstruction were not complete enough for intussusception, nor was there blood in the stools. Dr. Allbutt pointed out how often diarrhœa was a sign of constipation, and depended frequently on irritation of the gut by retained fæcal masses. The boy was treated by a succession of large injections of warm oil and gruel, which brought away black lumps of fæces, and diminished the tumour piecemeal, as was evident on physical examination.

The second boy presented a more remarkable subsidence of a tumour. He was 12 years old, and came from Ripon; he complained of a heavy, painful lump in the right hypochondrium. This he had noticed for four years. He lived near a river, in a rather damp place, but said he had not had ague, nor did he know anyone who had; nevertheless, the tumour was distinctly a very large spleen. A young woman had recently been under Dr. Allbutt's care, for what he called "acute splenitis"—that is, the spleen became hot, tender, and enlarged, and there were febrile symptoms at the outset. She was much benefited by bromide of potassium after long ineffectual treatment by quinine and other drugs. This boy's case seemed like that of the young woman, and bromide of potassium was ordered. For a week there was no improvement, but Dr. Allbutt's clerk made out during that time that the boy had suffered from "queer shakings" in a morning about the time the lump came and subsequently, and he had been cured of the shakings at Ripon Dispensary. Ten grains of quinine were therefore ordered at once, with a mixture containing two grains three times a day. On the next day but one, Dr. Allbutt went to the bedside and requested a student to diagnose the case (which was unknown to him). He seemed curiously at a loss, and others were called to the bedside with equal unsuccess. It became then evident that the spleen, which had been as large as a child's head two days before, had now wholly disappeared. This was a more rapid change than in the case recorded by Dr. Ogle, in this Journal for December 16, 1870. Twice, while in the house, this boy had "intermittent hæmaturia," which has been noticed in connexion with ague. But under the microscope, broken-up renal epithelium was found, and many blood corpuscles. There were no salts, except a few crystals of triple phosphate.

The third case was one called by Dr. Allbutt "spurious peritonitis." As certain other cases are called spurious hydrocephalus, so these not uncommon cases imitate tubercular peritonitis so closely that an immediate diagnosis is scarcely possible.

In the present case, a boy was brought to the Hospital, aged about 12, who had been losing flesh some months. His skin was harsh, his flesh wasted, his cheeks fallen, and his eyes rather sunken. He had suffered also, and was still suffering, from wandering severe abdominal pains, and from constipation alternating with diarrhœa. The appetite was capricious, and the tongue red. The pulse was about 100, and weak. On examination, there was no definite disorder in the chest, but the abdomen was tumid and doughy to the touch; it was tender, also, on percussion, and there were several tracts of indefinite dulness. Dr. Allbutt said that careful watching of the temperature for several days would generally decide the diagnosis, as in tubercle a higher evening temperature was to be expected. In spurious peritonitis the temperature might also occasionally reach 38° (C.), but not commonly or regularly. In the present case, the thermometer pronounced against tubercle and in favour of spurious peritonitis, which Dr. Allbutt attributes to disordered secretions, with the irregular bowels and tumid abdomen as a consequence, while the wasting is due to deficient assimilation. The indications for treatment are—to put the bowels in thorough order, to improve the secretions by alkalies, mild bitters, and podophyllin, and to put the patient upon bland and nourishing diet. When this treatment has set matters straight, a short course of cod-liver oil and mineral acid with gentian is generally sufficient to restore the health. At the same time he would remark that these cases, if neglected, might end in mischief of a more serious kind. The present patient was discharged in a month, quite cured, and looking fresh and well. Spurious peritonitis is more common among the ill-fed and neglected children of the poor, but it is seen also in the families of the richer classes.

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Medical Times and Gazette.

SATURDAY, JANUARY 14, 1871.

MILK: TOWN AND COUNTRY; EFFECTS OF TRANSPORT; SOUR PREPARATIONS OF—SWEET ESSENCE OF RENNET—KOUMISS.

The publication of Professor John Gamgee's elaborate paper on town and country milk suggests to us that a few observations on milk and its preparations may be acceptable. It may be remembered that, a year ago, we caused an extensive series of analyses to be made of the milk sold by the most eminent dealers at the West-end of London, and that the conclusion arrived at was, that good milk is to be obtained by applying to any well-known dealer with character and capital; and that, on the whole, the milk sold by the cow-keepers who have their establishments in or near town was superior in richness to that brought from the country—although we give no small praise to such associations as the Aylesbury Dairy and Reform Dairy Companies. Competition seldom fails to benefit the public.

There can be not much mystery in the production of milk. If town dairies, at any given epoch, yielded richer milk than country ones, it was solely due to the amount of care and capital invested in them. We may be quite certain that the best breed of cows, the richest food, and the most careful tending will be shown in the quality of the milk. If the town and suburban dairies of the present day excel in these respects, it is the interest of the country ones to try the same means. So long as cows of poor breed are scantily and coarsely fed and exposed to cold, so long the milk will be poor. But, if we are not deceived, we shall soon hear that country milk-dealers are fast rivalling the Londoners — buying the best and most nutritious food, such as cotton-cake, and uniting with these measures all the advantages of pure air and freer space.

We hear the objection raised sometimes that town milk is *artificial*, and country milk *natural*. If so, the artifice consists in imitating, so far as possible, those natural conditions under which milk is the richest—viz., rich food and warmth. The cockney idea of milch cows grazing in water meadows in January makes one shiver. Whether in town or country, rich food and warmth are essential; and if we have no sunshine or rich meadow grass in January, we must use the best substitutes—if we want good milk. If by "natural" people mean what comes of itself without care or cultivation, they will find that few articles of food worth having are natural.

As for the petty depredations—the skimming, watering, colouring, and the like—we must trust to competition and publicity, and believe we are safest in the hands of large capitalists. We have no belief that the countryman is better than the Londoner. *Cœlum non animum mutant*, etc.

We may concede, then, to the country dairies, that they may, by taking the proper means, rival the town ones in the quality of their milk. Now comes the question of transport; and here we adhere to what we have before said, that whilst for elder children and adults it does not matter, yet that for young sucklings, such experience as we have hitherto had shows that it is the safest to have the cow near at hand to the baby; and that a few cows dotted at intervals over a town for this purpose, or in the nearest suburb, would not contaminate the air more than horses or men, and would save much infant mortality. This *dictum* is based chiefly on experience. We know that babies have thriven on the milk of a neighbouring cow, whilst pining on that brought from the country. We know, also, that transport effects important changes in milk, and assume that this may be the reason of the difference.

Here two questions arise—What are the precise changes wrought in milk by transport? and Are these changes necessarily hurtful to milk as a food generally, putting the babies on one side?

On the first point, we may say that transport seems to induce a kind of molecular change in the curd, so that it does not *cake* nor fairly separate from the whey when submitted to curdling ingredients, but remains diffluent; and in this condition the cream does not rise into a distinct mass, insomuch that the master of a workhouse, to which such milk was supplied, described it as "all cream." Moreover, it seems that milk brought long distances, and not cooled first of all, is liable to turn sour quickly.

The fact of minute changes in the caseine, entirely due, as we believe, to the shaking and churning which milk undergoes *in transitu*, is substantiated by evidence furnished in the *Milk Journal*—a new periodical devoted to the interests of the milk, butter, and cheese trades, and calculated to spread a great deal of valuable information amongst the manufacturers. The writer in this journal, after noting the well-known fact that the specific gravity of milk is no test of the goodness of the milk, unless the quantity of cream be taken into account, proceeds to say :—

> " In the course of an examination of milk undertaken for this journal, the observation was made that there is another source of inaccuracy hitherto quite unsuspected. Skimmed milk consists mainly of water, caseine, milk-sugar, and a small quantity of mineral salts. Now, the exact molecular condition of the caseine influences the specific gravity of milk. In other words, samples of milk of the same strength will vary in specific gravity according to the exact molecular condition of the caseine. Especially are these changes in condition brought out if milk be kept for a while. This is illustrated by the following examples. . . .
>
> " We have had to notice the untrustworthiness of specific gravity determinations of milk—that is to say, the danger of judging of the strength of milk by its specific gravity. To be of any value at all, the specific gravity determination must be made while the sample of milk is very fresh. *After milk has been kept for two or three days, even in a closed vessel, its specific gravity falls in a very remarkable manner.* The following examples exhibit this in an extreme form. The specimens of milk had been kept in corked bottles for four days :—"

	Sp. gr. at 60° Fahr.	Percentage of Solids dry, at 212° F.	Percentage of Ash.
Sample *a*	. 1·0004	11·34	0·94
„ *b*	. 0·9960	10·48	0·75
„ *c*	. 1·0184	8·92	0·66

> Showing that the highest specific gravity sometimes accompanies the lowest percentage of solids. The reason of this want of correspondence between specific gravity and solid contents we have already explained."

We confess that we believe some error lurks here ; such a deficit in specific gravity as is represented by the difference between 1·030, the common specific gravity of milk, and 0·9960, less than the specific gravity of water, if real, can only be due to expansion of the milk, or to development of alcohol, or incipient generation of gas. Are we to believe that milk containing more than 10 per cent. of solids becomes lighter than water if kept two or three days ? We are sceptical ; but if true, it is an illustration of changes wrought by movement and time. But it still is matter for pure observation to decide,—Is milk altered in this way less wholesome for ordinary children ?

Most English people consider that, if milk is in the least soured, it is unfit for use ; and large quantities are thrown away in most families, who would not admit it to their tea-table. But, although sour milk may not be nice in tea, yet it is useful for many other purposes. It is good, for instance, in puddings, and with fruit. In many parts of the world, sour milk is a regular luxury ; and there is no reason why it should be discarded here.

We may recall to our readers' memory the paper by Dr. Ballot, of Rotterdam, " On Buttermilk as Food for Infants." Now, buttermilk, like sour milk, has undergone two of the changes which milk undergoes in the stomach—it is acid, and curdled ; and the curd has been comminuted by shaking. It is worth considering whether, in some cases of infantile atrophy, the changes which milk undergoes in the stomach may not be anticipated. For adults with feeble stomachs we administer *pepsine*, for infants we have *rennet*. It is customary in some counties to slightly curdle milk with rennet, and if it be intended for adults, wine, spice, and cream are added to the dish. But there are many children who thrive on plain *junket* (as it is called), and for these the *sweet essence of rennet* is more convenient for use than a portion of the veritable calf's stomach.(a)

(*To be continued.*)

ON THE PHYSIOLOGY OF DEATH BY HANGING.

To write, even in the most carefully scientific way, on death by hanging, is, of necessity, to treat on a subject that, in no sense, can be made matter of fascination. There is about the subject, nevertheless, that which calls for the consideration of the man of science. There is in it strange physiological interest ; and, as it refers to a mode of death which in these days—still very barbarous days—is carried out in our country, in America, and in other places, as the method of inflicting capital punishment, it must have in it some political interest also. Physiologist and politician, however, looking at the process of death by hanging, view it in widely different lights : the physiologist observes it as a process in which, after certain of the phenomena of life are abolished, other phenomena for a time remain ; the politician looks upon it as a process of ready and happy dispatch by the which he can clear off the earth those he thinks have no longer any right to exist upon the earth.

These are singular differences of apppreciation.

Recently, the distinguished Medical jurist, M. Tardieu, has entered upon a new study of the physiology of hanging ; and although he advances but little that was not before known in parts, and that was not before published by stray observers, here and there, he has done a good work in bringing together, in orderly array, a number of facts which bear one on the other, and give us, as he has combined them, more definite principles than were previously in our possession. We will, therefore, taking Tardieu's work as a text, briefly recount what seems to be best known.

Tardieu takes his information from various sources—from experiments conducted on the inferior animals ; from observations made by M. Faure ; from the experience of Fleishmann, of Erlangen, an enthusiast who allowed himself to taste of death, by the halter, to the extent of ascertaining all that can be felt by the hanged—who allowed himself, that is to say, to be hanged by skilful manipulators until he was insensible—and from the experience of persons who, having tried to commit suicide by hanging, have been rendered insensible by the act, but have been cut down before they were actually dead, and have been restored to life.

On perusing the facts in this way collected, we are struck at once by two facts. First, we discover that in many cases the actual time of death is very prolonged : in man, it is assumed, death commonly occurs *within ten minutes*, but it is often after a much greater lapse of time. Secondly we learn that the period of sensibility and of consciousness is extremely short, and that the conscious period itself is unattended with any acute pain. In certain cases Tardieu believes that death, or rather unconsciousness, takes place from syncope before the period of suspension, and that there is consequently no knowledge of the violent death, by the person killed ; in other cases, where the consciousness remains until the moment of suspension, there is either a brief interval of continued consciousness or immediate unconsciousness. In some persons, indeed, who have deliberately made their own preparations, and have suspended themselves, but have been cut down to be resuscitated, the recollection of every fact has passed away from the moment of suspension.

The sensations described by those who, after recovery from the insensibility caused by hanging, remember something of the early part of the process are extremely uniform ; they are four, usually, in number, but all are not present in each case. The first sensation is of intense heat felt in and within the head ;

(a) Warren's Sweet Essence of Rennet, prepared at M'Master, Hodgson, and Co.'s Chemical Laboratories, Dublin.

then flashes of brilliant light appear in the eyes, like those flashes which are noticed when the closed eye is struck sharply, or when an electrical spark is passed through the body near the eyeball; with these flashes of light there are vehement sounds in the ears, like deafening music—such, we imagine, as persons experience when they are passing into insensibility under chloroform or nitrous oxide gas; lastly, the lower parts of the body, the legs especially, appear to have become excessively heavy, benumbed, beweighted; and now, to the sense of the hanged, all is over, they remember no more.

It has been stated by some earlier authors that, in instances of hanging where the patients have recovered, they have described an experience of sensations sensually pleasant. Tardieu has taken extreme pains to investigate into the truth of this assertion, and the conclusion he has arrived at is, that there is no ground for it, whatever, in fact. In a few hanged persons, natural acts which are commonly under the control of volition are performed involuntarily, such as the passing of fæces and of urine, but even these occurrences are rare; and when, in men, there is emission of semen, the emission, Tardieu believes, takes place after insensibility, and during what he would consider the second stage towards death—the stage when the body is subjectively, but not objectively dead.

The period of conscious life after suspension by the neck is probably never extended beyond three minutes, and it may not extend beyond thirty seconds. If the cord press above the larynx, and the neck be not broken by the fall, the longer period of consciousness is maintained; if the cord press upon the trachea, the shorter period is ensured. After the cessation of subjective life, or that knowledge of life which belongs to the person passing through the ordeal of death, there remains a period of subjective life, when, to the observer who stands by, there are signs of motion. These consist of convulsive movements of an irregular kind, more or less severe, and of continued action of the heart. The convulsive movements last, as a rule, a very short time; the action of the heart a long time. We gather from all the authorities we can command, and from the experience of an eminent Surgeon to a county gaol in England, who, for a great number of years, was officially present at executions on the scaffold, that the heart continues to struggle on for at least ten minutes after the suspension. But the action is not always the same: sometimes it is so perfect that, for several minutes, a pulse can be felt at the wrist; at other times the power of the left side is quickly paralysed, and the motion that is observed in the chest is due mainly to the contraction of the right auricle and ventricle. The auricle (ultima moriens), in truth, continues to act so steadily that, in few cases, we think, has it ceased to act when the bodies of criminals, after the expiration of the usual time of suspension, are taken down. In one well-known case, to which Tardieu refers, the heart of a criminal was heard distinctly to beat one hour and a half after the supposed death. The beats were counted, and were found to number 80 in the minute; each beat distinct, and with slight impulse. On opening the thorax, the right auricle was discovered acting energetically and regularly, and so it continued to act for four hours after the time when the body was first suspended—the irritability remaining even to five hours.

With the cessation of the action of the heart, all ordinary indications of life are lost, and practically the body is quite dead; so that we may divide the process of death into three stages—(a) a stage of subjective conciousness, or semi-consciousness (partial stupor); (b) a stage of subjective death, but objective life; (c) a stage of objective general death. The first stage extends from thirty seconds to three minutes; the second, to ten minutes, or longer; the third, continuously until the occurrence of rigor mortis.

One observation we do not find noticed by Tardieu deserves to be added. It relates to the irritability of the muscles of the body generally. After the subsidence of the convulsions of which we have spoken, all the muscles assume quiescence, except the heart. It is the fact, however, that they have not lost their irritability; they simply wait for stimulus, and, under galvanism or heat, they retain their power of contraction as long as the heart itself. In cases of death by hanging, when the temperature of the air is low (at or below freezing point), the muscles have been made to contract vigorously more than an hour after a body has been removed from the scaffold.

Care has been taken by Tardieu and others to determine how long, after suspension, a body may be considered as recoverable. In one case, a woman was resuscitated who had been suspended seven minutes; but this was an extreme case, and the general opinion seems to be that five minutes, as computed by Dr. Taylor, is the period within which, in cases where the spinal column is uninjured, and the death has been by asphyxia, the restoration of life is possible.

To the physiologist, the facts relating to death by hanging are of value in that they convey to his mind the analogies of death from other and distinct causes. In death by hanging, as in nearly every form of sudden death, the phenomena are the same. The nervous system first fails in those parts of it which minister to the conscious life; next it fails in those parts of it which supply the muscles of volition, whereupon these muscles, separated from the controlling influence of nerve, are thrown into wanton convulsive movement, just as they are thrown into convulsion during hæmorrhage. A little longer, and the centre governing and supplying the semi-voluntary respiratory muscular system ceases to play; and later still—relatively much later—the heart ceases, in given order of cessation of its parts, left ventricle, left auricle, right ventricle, right auricle (ultima moriens).

The subjective symptoms during hanging are also allied closely to those of many other forms of death equally sudden, but apparently less violent. Whoever has inhaled nitrous oxide gas to absolute insensibility knows most of the symptoms endured by the hanged. The sense of stupor, the sense of noise, the sense of light in flashes, are fairly representative signs of both forms of insensibility; but two symptoms are described as connected with hanging which do not belong to other modes of death—viz., the sensations of heat in the head and of weight in the extremities.

To the politician who is interested in the question of capital punishment, the subject we have presented is in various ways of moment, whether he is for or against capital punishment. He may know, from what has been collected for him in scientific evidence, that the death, though violent, is not a death of torture; that unconsciousness is attained by hanging means as rapidly as it would be by the administration of chloroform; and that the convulsive struggles which in a few cases occur in those who are hanged, are not conscious struggles, but are the equivalents of the convulsive actions which so often come on during the administration of anæsthetic vapours. This is so far satisfactory; but there is a side of the subject which is less satisfactory. The evidence is clear that the period of actual death by hanging is much longer than is commonly supposed, and that, when the Lord Judge orders the condemned man to be hanged by his neck until he is dead—dead—dead, his Lordship often orders to be done what is practically not done. It would be right, therefore, in all cases, however small the risk of failure in producing ultimate death may be, to insist that there shall be a post-mortem examination of the executed criminal, and that the Surgeon, on post-mortem evidence only, should swear to the fact of death before the coroner. The coroner's order for a post-mortem is, we believe, in this country, all that would be necessary to render the dread legal ceremony of taking a human life complete to the end.

We turn over the pages of Tardieu to find much more that is of moment to Medical jurists; but we shall refer to him again, and shall rest now, content to have called attention to those parts of his work which have a direct bearing on the physi-

-ology of death, and on our national method of producing death, when the irrevocable penalty is presumed to be the proper penalty for the offences of the individual against the community and the State.

THE WEEK.

TOPICS OF THE DAY.

At the meeting of the Committees of the Royal Colleges of Physicians and Surgeons and the deputation from the Society of Apothecaries, which took place on Friday last, we hear that it was moved and seconded by the Presidents of the two Royal Colleges, and carried unanimously, that a Board of Examiners for this division of the United Kingdom should be appointed by the three Corporations, to examine and license candidates desirous of practising in Medicine, Surgery, and midwifery, and that the candidates passed by this Board shall receive the Licence of the Royal College of Physicians, the Membership of the Royal College of Surgeons, and the Licence of the Society of Apothecaries, subject to the by-laws of each Corporation. It was also settled that a sub-committee, composed of three representatives from each Corporation, together with the Registrar of the Royal College of Physicians (Dr. Pitman), the Secretary of the Royal College of Surgeons (Mr. Trimmer), and the Clerk to the Society of Apothecaries (Mr. Upton), as assessors, should meet to draw up a scheme for carrying out this arrangement. The first meeting of the sub-committee was fixed for Friday, January 13. We hear that the sub-committee includes Sir James Alderson, the President of the Royal College of Physicians; Sir William Fergusson, the President of the Royal College of Surgeons; and Mr. Morley, the Master of the Society of Apothecaries. It is no over-estimate to say that the announcement we have now made embodies the most practical measure of reform which the Medical Profession in England has witnessed since the passing of the Apothecaries Act of 1815. It is the more welcome since it is a spontaneous movement, not forced on us by the Legislature or by the Government, but emanating from the Profession itself. It must not be forgotten that the first impetus was given in the direction of amalgamation by the recommendation of the General Medical Council—a recommendation which was for a time lost sight of in the attempted legislation of last session. Greatly to the credit of the three English Corporations, they have determined to merge differences of opinion, and to unite in the formation of a National Board, which, although it is not a complete realisation of the one-portal system, is a considerable step in advance, and will establish, at least, uniformity in the education and examination of the great bulk of the Practitioners of England and Wales. We do not think it impossible that the Universities may before long be induced to join in the proposed scheme, and by agreeing to submit their candidates for Medical graduation to the examination of the new Board, establish a right to take part in the nomination of examiners or assessors. Such a course on the part of the Universities would fulfil in spirit and in letter the recommendation of the General Medical Council; it would establish the one-portal system as far as England and Wales are concerned, and seems to us in every respect a consummation devoutly to be wished by those who desire the consolidation of the Profession. But if the co-operation of the Universities cannot be obtained, or be indefinitely postponed, we shall not be the less glad to know that the great practical reform which was inaugurated on Friday last is to be carried out. There are no bodies in Europe which are better capable of instituting a thoroughly sound theoretical and practical examination for the testing of candidates for admission to the ranks of the Profession than the great Medical Corporations which have for long periods been engaged separately in the work, and it is to be hoped that the example they are setting may be followed by the Medical authorities of the other divisions of the kingdom.

We have before us two schemes of Medical legislation to be introduced during the ensuing session of Parliament. Both have their merits and demerits, and in both these seem tolerably equally balanced. One of these schemes emanates from the Royal College of Surgeons in Ireland, the other from the Reform Committee of the British Medical Association. Before proceeding to discuss them, however, we may express our opinion that there is a very faint chance of any Medical Bill passing both Houses of Parliament in the coming session. The state of Europe, the condition of the national defences, and our relations with foreign powers, fluctuations in public opinion, and the difficulties with which any Government under the present circumstances must contend, augur but little leisure, opportunity, or appetite on the part of our Legislature for minor matters of internal reform. We may be mistaken, but we shall be surprised if the present Government, or any one of its members, will, after the experience of last session, be inclined to give the necessary attention and time to introduce and pass a Medical Reform Bill. Of this we may be sure, that no Bill will pass without the direct support of Government; and that, even if that be obtained, any serious opposition—whether from any of the Medical authorities, or from the General Medical Council, or from any voluntary Medical Association—must in a session crowded with important business be fatal to it. Having said thus much as to chances of success, we proceed to notice the proposed schemes.

The scheme of the Royal College of Surgeons of Ireland is, we are bound to admit, far less Utopian than some other schemes emanating from the sister island. In the first place, it does not advocate the well-nigh impossible provision of a single Board for the whole Kingdom, nor its necessary corollary, a peripatetic company of examiners. The Council of the Irish College recommend that an Examining Board, formed by representatives of the Medical authorities, "should be provided for each division of the United Kingdom, so as to guard against the delay and inconvenience likely to ensue from the formation of a single Board authorised to hold examinations in succession or rotation." The Council of the College, however, apparently under the—we should hope—mistaken idea that any imputation of inferiority might be cast upon either of the three national examinations, recommend that the General Medical Council "insist" upon "the presence of representatives from the Examining Boards of the two divisions of the Kingdom at the examinations of the third, who shall take an active part in the examinations conducted by such Board." It will be at once seen that this provision presupposes a very large expenditure of money, and an equally large expenditure of time on the part of certain members of the Examining Boards—such an expenditure as would effectually prevent men in leading practice undertaking the office. The Council of the Irish College are of opinion that the General Medical Council should be remodelled, so as to "provide for a more direct representation thereon of all registered Medical Practitioners." To direct representation of the Profession in the General Medical Council we are, as our readers know, on principle opposed; but of this hereafter. With many of the principles of a Medical Bill enunciated by the Irish College we thoroughly accord—for instance, that increased powers should be given to the General Medical Council to insist upon the union of the several Medical authorities in each division of the kingdom to form Examining Boards; that the powers of the Privy Council should be limited to those of a Court of Final Appeal, in case of hopeless disagreement between the Medical authorities or the members of the General Medical Council; and that the diploma of the conjoint Examining Board should be the sole qualification for registration. But the great mistake of the scheme is that it would still permit all the Medical authorities to grant any of the degrees, diplomas, or licences they already confer, to all persons, whether they have or have not obtained their licence from the

National Examining Board, and the right to be registered as L.M.S.M.—Licentiate in Medicine, Surgery, and Midwifery. In other words, they open a direct door for illegal practice by unregistered persons, who may hold high Medical qualifications, and thus practically sweep away the one-portal system; and, secondly, the effect of the proposed Bill is really to add three more examinations to those which the seventeen Medical authorities have already instituted. This is a *reductio ad absurdum* which, in our minds, vitiates the whole of the (in some points) excellent scheme of the Irish College.

The Reform Committee of the British Medical Association is at least not to be charged with an excess of modesty. The Committee met at Birmingham on Tuesday, December 27, and as a first resolution decided—"To accept the responsibility which the withdrawal of the Medical Bill of the Government last session was declared by members of the Legislature to have thrown on the Association, and to prepare a Bill for the ensuing session of Parliament." Whatever individual members of the Legislature may have asserted in reference to the effect of the action taken by the British Medical Association, we can assure the Committee that they were not alone in their opposition to the Bill, nor are they alone responsible for its failure. The Bill, as it was received by the the Commons, was so utterly distasteful to all classes of the Profession and to the most influential of the Medical authorities, that it would assuredly have met opposition at every stage, and at that late period of the session it would have been impossible even for Mr. Gladstone's Government to have carried it. The Committee next resolved—"That the withdrawn Bill of the Government, with such modifications as the principles advocated by the Association demanded, should form the basis of the proposed Bill of the Association." We can have no objection to the Government Bill being taken as a basis of legislation, for in its original form it had many excellencies, and might have been easily made a most satisfactory measure. What the modifications are which the principles of the Association demand are contained in the following resolutions adopted by the Committee:—

> "3. That Clause 18 of the original Bill of the Government, which was expunged in the House of Lords, should be restored.
>
> "4. That the General Medical Council should be made representative of the whole body of the Profession, as well as of the Government, of the Universities, and of the Corporations.
>
> "5. That the Council should, with this view, be constituted on the principle of containing representatives of the Universities and Corporations in the proportion of one-half of its number; nominees of the Government in the proportion of one-fourth; and representatives elected by the registered members of the Profession residing in the United Kingdom also in proportion of one-fourth of the Council.
>
> "6. That the enactments of the Council so constituted should, as regards preliminary and Medical education, be binding on the Universities and Corporations.
>
> "7. That provision be made for rendering the Professional examinations practical."

The resolution which demands the restoration of Clause 18 of the Government Bill, as originally drawn, commands our hearty approval. It will be remembered that Clause 18 provided that the Medical authorities should not in future confer any of the qualifications mentioned in Schedule A to the Medical Act of 1858, except on persons who had obtained the licence to practise under the provisions of the Bill. In other words, it established in its entirety the one-portal system, and gave to the Bill its chief merit. Its omission rendered the Bill comparatively worthless; and if the Bill is to be made the basis of fresh attempts at Medical legislation, we entirely agree with the Committee of the British Medical Association that the restoration of that Clause is essential. The next resolution, if it be intended to imply that the whole of the Profession must be directly represented in the General Medical Council, is, we are convinced, a dangerous and impracticable one. Representation of the Profession through the Medical authorities to which they are affiliated we should welcome as a boon and real reform; but direct representation would be an apple of discord which we trust no British Minister would consent to throw amongst us. That it would be dangerous, we are certain, for the effect would be to introduce into the Council, not men who, by steady, scientific, and practical work, had raised themselves to the highest ranks of the Profession, but men whose pockets are deep enough to stand the large expenses of an election, and whose love of notoriety would impel them to undergo the worry and expense of a canvass. Besides, the direct representation of the Profession presupposes a machinery which does not exist. Returning officers, voting papers, clerks, and polling-places are not provided without money; and whence is the money to come? Is the Profession to be called upon to pay for its whistle, or is it supposed that Parliament will find the means? We should gladly see the General Medical Council made a more truly representative body, though we doubt very much whether any representation would give us better men than now sit upon it. But this chimera of direct representation will surely turn out a delusion and a snare.

The Profession in England will watch with great interest the efforts made by the Italian Government to drain the Pontine marshes and the Campagna. If Rome is again to be the capital of Italy, the malaria of the Agro-Romano must be got rid of. The Italian Government see this clearly, and they have constituted a commission of engineers and men of science, to inquire into the practicability of effecting it. The experiment is a most interesting one from a Medical point of view. In consequence of the late rains, it seems that all Rome, except the Seven Hills, is at present under a flood.

The deaths in the Small-pox Hospital, at Hampstead, have raised the mortality of that hitherto exceptionally healthy district. At the last meeting of the Hampstead vestry, it was reported by Mr. Lord, the Medical Officer of Health, that in the previous four weeks there had been seventy-nine deaths and seventy-seven births. Twenty-five deaths had occurred at the Small-pox Hospital, several of the patients having died within twenty-four hours after admission.

The last weekly return of the Registrar-General shows that the deaths from small-pox have decreased. The last return gives 79 deaths from small-pox and 112 deaths from scarlatina. The previous return showed 110 deaths from each of these diseases. The diminution in the mortality from small-pox is 31. The deaths, however, are still as numerous in the Eastern districts. In Bethnal-green there were 12 deaths, and 15 in Shoreditch. One case in Mile-end Town, Eastern District, was that of a Surgeon's daughter, aged 7, who had been vaccinated. She had acquired the disease through removal "into a house in which small-pox had lately been, without its being disinfected. This the mother learnt when too late."

We hear that Dr. Powell has been recommended by the Committee of Selection at the Charing-cross Hospital for the vacant Assistant-Physiciancy, and Messrs. Fairlie Clarke, and Bond for the vacant Assistant-Surgeoncy. The choice for the latter office will rest now with the Governors.

We understand that Mr. Frederick Churchill will not be a candidate at the coming election for Assistant-Surgeon to St. Thomas's Hospital. There are already several candidates in the field; amongst them are Mr. Wagstaffe, Dr. McCormac Mr. West, of Birmingham, and probably Mr. Barwell.

SMALL-POX.

One hundred and ten deaths from small-pox! This is the statement made last week but one by the Registrar-General as to the condition of affairs in London. Assuming that the fatality of small-pox is about 7 per cent. in a vaccinated population (probably it is higher than this in London), it seems that in the same period there occurred about 1500 new cases per week; and assuming, further, that the disease has an average duration of three weeks only in which it spreads abroad its contagious principle, we may consider that, in the course of the week, there might have been found in London between 4000 and 5000 cases of small-pox in various stages and degrees of severity. And, as usual, notwithstanding our Vaccination Acts; notwithstanding that there exists a Board specially entrusted with the duty of providing Hospital accommodation for cases of small-pox; notwithstanding the very ample powers given to vestries; and notwithstanding full warning that an epidemic was impending, when it fell upon London it found the metropolis unprepared. The Hospitals are all full and overflowing; cases are refused, and have to be treated as best they may be in wretched dwellings where isolation of the sick is an impossibility; infants abound who are unvaccinated, and no steps are taken to promote the protection of adults by re-vaccination; Medical Officers of Health are paralysed, for the very means of isolation and disinfection are denied them, and they can do little more than offer advice and distribute handbills; and so this disgusting and dangerous disease goes on spreading, and, what with official apathy, parochial parsimony, and conflicting jurisdiction as between vestries who have charge of one class of preventive measures and guardians who have charge of another, it is likely to go on spreading. And, what is almost worse than anything else, we hear complaints of a deficient supply of vaccine lymph for re-vaccination. One miserable tale has come to our ears, of a public parochial station at Islington, at which, last Saturday, a number of children came to be vaccinated, and there was no subject to vaccinate them from. They went away unvaccinated. Surely, if ever there were a case demanding an official inquiry this is one, and the guardians of the poor should be called upon to explain how it happened. So much for local efficiency!

But people are asking, moreover, what the Privy Council is about? and why, in the presence of an epidemic which is not confined to London, the Diseases Prevention Act is not put in force? and why the nuisance authorities are not directed to make the special provisions for the arrest of the plague of small-pox which they were directed to make for the arrest of the plague of cholera? Is it that they regard the Compulsory Vaccination Act as administered by local boards all-sufficient for the purpose? Is it that they are afraid of producing a panic? or is it that small-pox is a less contagious disease than cholera? For the life of us we cannot make out why this very obvious step is not taken. Everybody knows that small-pox is epidemic to an extent which only finds its parallel seven years back, and it would be a relief to the public mind to know that all possible means of checking it were being adopted. All that the Medical Department of the Privy Council has done is to issue a memorandum addressed to the guardians of the poor, calling upon them to appoint inspectors of vaccination where they have not yet appointed them, and to appoint additional temporary inspectors (non-Medical) where one is insufficient; to direct inspection of vaccination, principally in localities chiefly infected; to recommend the general adoption of revaccination; and to provide for daily vaccination at the residence of the vaccinators in cases of emergency. All this is very well so far as it goes, but we contend that it is quite insufficient to meet the present requirements. If small-pox is to be arrested, much more energetic measures are necessary, and they should be adopted speedily. The memorandum would have been in place if it had been issued six weeks ago; but now we are in the midst of an epidemic, and, besides the slow process of vaccinating or revaccinating a population, we require means of isolating the sick and of providing for the lodging of families while their rooms, clothing, etc., are being disinfected, by the establishment of houses of temporary refuge. The lack of facilities for carrying out these measures might be supplied, if the Privy Council would authorise the vestries in London and the guardians in the provinces to put in force the provisions of the Diseases Prevention Act.

THE BOMBARDMENT OF PARIS.

A DESPATCH which left Paris on the night of the 10th inst. by the balloon "Gambetta," and was received at Bordeaux on the 11th inst., contains an account of the damage effected within the city by the bombardment. It is stated that 2000 balls have fallen into the interior of the city, and many women and children were killed and wounded. The *Hospice de la Pitié* was struck, and the wounded from one ward had to be removed to the cellars. The *Val de Grâce* was also bombarded, and the shells had struck many other Hospitals; also schools, museums, and churches. It is complained that the enemy seemed to select Hospitals for his fire, thus outraging all the rules of war and humanity. If reports be true, however, as to the French themselves having been not very particular in the use, or rather the abuse, of the "red-cross" flag, and having collected together in buildings over which it waved, as indicating that they were solely intended for the reception of the wounded, arms and munitions of war in enormous quantities, we can hardly expect that the Prussians, who through their spies must have been kept well informed, should take much pains to divert their fire from Hospitals, real or ostensible. But from the enormous distance —between six and seven miles—which the shells falling into the city had to traverse, it is probable that they were merely stray shots, originally intended for the forts, and that direct aim could not have been taken. The concentration of horrors now devastating Paris—famine, cold, sickness, and the fire of the enemy—must soon bring matters to an end so far as the city itself is concerned. It is not expected, however, that the city will fall without another sortie, in which, in the words of one of the correspondents with the Crown Prince's army, "blood will flow not in drops but in gushes."

MORTALITY OF PARIS UNDER SIEGE.

FROM the correspondent of the *Daily News*, within the walls of Paris, we have the Paris death-list for the last week of the year 1870, viz., that ending 31st December. It is composed as follows:—Small-pox, 454; scarlatina, 6; measles, 19; typhoid fever, 250; erysipelas, 10; bronchitis, 258; pneumonia, 201; diarrhœa, 98; dysentery, 51; diphtheria, 12; croup, 16; puerperal diseases, 8; other causes, 1827; total, 3280. It will be seen that diseases of the alimentary canal do not figure highly in the above computation; cold is the chief instrument of evil. The total amount is alarmingly heavy, if not unparalleled; it shows an increase of no less than 550 deaths over the lists of the two previous weeks. Small-pox, typhoid fever, bronchitis, and pneumonia are each increased in their incidence. It should be observed that these weekly bills of mortality do not include or display the whole number of deaths which occur within the walls of Paris, the actual population of which city is now computed at more than two millions—2,005,709 souls. This is ascertained beyond a doubt by the system of rations at present in operation. Such a calculation, however, does not include the army and Mobiles, or war battalions of the National Guard. Moreover, the weekly bills take no account of Hospitals or institutions. The public Hospitals have their separate registration quarterly. We know, besides, nothing of the mortality occurring in the military Hospitals, ambulances, and other institutions. Considering that Hospital fever is raging, and the mortality of the Surgical cases extreme, the total mortality of Paris during the last week of the year cannot be estimated at less than 4000 for the two millions of inhabitants aforesaid. This is fearful! Such a death-rate sustained through the year would give 100 deaths per 1000, or one in ten. Let us compare this with the ordinary death-rate in England of 20 per 1000, which in some favoured places is as low as 17. As said before, cold is the great present minister of the king of terrors. According to a paper recently read at the Academy of Sciences, only on nine days of December has the temperature been above the freezing-point of water.

The average was 1.07° Centigrade, more than 2° below freezing by Fahrenheit's scale. In the fifty years from 1816 to 1866, the average of December was really 38° Fahrenheit, instead of 30° as now. The severity of the present season was forecast, as it would seem, some ten years since, by a certain M. Renou, in a paper to be found in the *Annals of the Meteorological Society of France*, vol. v., January, 1861. It is entitled "On the Periodicity of Cold." Therein he shows that every forty years there comes a group of cold winters, some five or six in number, of which a central one is the bitterest of all. In such sort there was a series which grouped themselves round the celebrated winter of 1709, a year of much disaster, as well as of strong misery to France. Then, again, there was a series of eight severe winters to be grouped round the year 1748. Next comes the hard winter of 1789-90, with its attendant group—a winter not a little influential on the revolution. After which, we find a series of bad winters, having their central frost in the season of 1829-30. M. Renou's researches go as far back as the year 1400, and it is from such data he has forecast the intensity of the present cold. After a dry summer, in which the rivers Seine and Marne, by which wood for fuel is generally brought in, were kept exceptionally low, thus delaying very much its transit, and lowering the supply, nothing could be more disadvantageous—nay, disastrous—than such a winter.

DR. ACLAND'S LECTURES ON HOSPITALS AND HYGIENE TO THE WORKING-CLASSES.

Dr. Acland, F.R.S., on Friday evening last, at the request of a number of the artizans employed in the construction of the new Fever Ward in the Radcliffe Infirmary, Oxford, delivered a lecture, open to the public, on Hospitals and their management, and the general care of the public health. A lecture from such a man, on such a subject, is nothing less than a public benefit. The example set by Dr. Acland is well worthy of imitation by men whose position and attainments entitle them to the public attention, and we are glad to learn that Dr. Acland's audience, composed chiefly of the working-classes and their families, was large and attentive, and appeared fully to appreciate the value of the instruction which he gave them. Dr. Acland impressed upon his hearers that the primary essentials of life and health, personal and public, were three only—good air, water, and food in sufficient quantity; and that clothing, fire, and habitations were secondary and accidental requirements—which statement, although as true of man in his most civilised state as when he first coursed through forests primeval, probably fell as a novelty on the ears of those to whom it was addressed. The remarks upon the inutility of the use of strong drugs while people neglect to secure the requirements of healthy life, were most opportune, and we trust they may not have fallen as the seed by the wayside, but may bear fruit a hundred-fold. His reply to the question, What is sickness? "that if he were a worse Physician he might answer more readily," must have appeared rather paradoxical to a non-professional audience, but his illustration of the analogy between the derangements to which a watch and the human body are liable, and how the delicate machinery of our frame might be thrown out of gear without fractures or any alterations in the structure, was particularly adapted to attract the attention and elicit the assent of intelligent artizans. He refuted the error that a Hospital in which there was a large mortality could not be well managed—whereas the very contrary might be the case; for when a Hospital had a good repute it was then that the very sick would wish to go to it. This was very judiciously expressed to a class of persons among whom objections to apply for Hospital relief are often based upon such erroneous grounds. In his description of several of the most remarkable of modern Hospitals, Dr. Acland pronounced the new St. Thomas's to be a triumph of sanitary engineering, but hinted that the outlay in its proportions and appliances might have been less, without detriment to its efficiency; and added that there is nothing more vexatious, and more likely to jeopardise the provision of what was an absolute and urgent need, than excessive demands of amateurs in Hospital construcstruction or sanitary affairs. The advantages presented by Hospitals as a means of instruction of women in the art of nursing the sick, and of cooking for them as well as for the healthy, are not sufficiently appreciated by the public generally. Dr. Acland thinks that, without actually becoming Professional nurses, women of the labouring and artizan classes might derive immense benefit, both for themselves and others, by undergoing instruction in the care and management of the sick. He was glad to inform his hearers that he had every reason to believe that a Cottage Hospital would shortly be built in Oxford by a charitable person. Such a building, with two wards, each containing three persons, could be constructed, with all complete arrangements, for £500, and would afford a means of caring for the sick on the best possible principles.

NAVAL ASSISTANT-SURGEONS.

The want of Assistant-Surgeons for the navy has been more or less felt through the last twenty years. Since 1866 there has been less urgency until the last half-year, when the Navy List has undergone great reduction, by means that have treated the Medical officers with less liberality than the combatants; this has renewed their dissatisfaction. The late competitive examinations have not been successful, and at present there is less prospect of candidates than ever. While men are dropping off rapidly from the service, it must be of interest to the Admiralty to ascertain what ought to be done to stop the gap. At this moment, Dr. F. J. Brown, of eminence in the Profession, once a naval officer, who retains the confidence of his former brethren in a remarkable degree, has produced an able pamphlet on the subject. He advocates the abolition of the title of Assistant-Surgeon, and the acquisition of Staff Surgeon's rank after fifteen years' service, as measures required to place Medical officers in their due social status on board ship. His facts and arguments seem to be precise and clear, but they must undergo judgment by those who may look less favourably on Medical wants than we can do. The more tangible points concern emoluments, where we notice that Dr. Brown scarcely advances beyond what he sought in 1865, but as concerns "retired pay" after long service, he requires that the Medical officers shall not be prejudiced relatively to others, as was done in the scheme for naval promotion and retirement of last year. We can only give our opinion that whatever drops from Dr. Brown's pen on this subject is worthy of credit, and we advise all inquirers about naval Medical affairs to read his pamphlet.

THE DURATION OF PHTHISIS.

An exceedingly interesting paper was read before the Royal Medical and Chirurgical Society on Tuesday evening by Dr. C. T. Williams, being an analysis of 1000 cases of phthisis, from records of private practice, kept by his father, Dr. C. J. B. Williams. The cases occurred in persons in the middle and upper classes of society, and the results were in striking contrast with those occurring in Hospital practice. All cases were excluded which had not been under observation for a twelvemonth, so that acute tuberculosis was excluded from the list. The results showed that phthisis is essentially a chronic disease, lasting on an average many years, and that this duration was not materially influenced by the mode of origin, whether by pleurisy, pleuro-pneumonia, or tubercle; nor did it seem to be so by heredity. On the other hand, age seemed to exercise a material influence—the older the patient attacked, the more chronic became the complaint. The paper also showed that chronic bronchitis might end in true phthisis, taking the word in its widest sense, as signifying the deposit and ulcerative removal of cheesy matter, whatever might be its origin, with the constitutional symptoms accompanying that change. The most important lesson to be learnt from the paper was the great importance and the valuable influence of care in maintaining life, even after phthisical disease had decidedly made its appearance and had considerably advanced.

WHAT LADY-DOCTORS MAY COME TO!

The advocates of Medical education for women have but slight reason for gratitude to their Medical ally who writes to a daily contemporary, urging the necessity for a hundred lady-Doctors being spread through this country with a sufficient amount of education to enable them in midwifery cases to apply instruments, chloroform, and electricity, and to do what is necessary under the Contagious Diseases Act; and a hundred more to go to outlying hamlets in Australia and New Zealand that would not support a regular Doctor of the Edinburgh regulation-pattern, but where a lady-Doctor, half apothecary, would be accessible. If no more attractive career than this can be laid out for female Practitioners of Medicine, the lady Medical students, about whom there was such a turmoil the other day in Edinburgh, ought for the remainder of their days to bless the majority of four who decided against their admission to the classes of the Royal Infirmary in that city.

MEMORIAL TO THE LATE MAURICE H. COLLIS, M.B., SURGEON TO THE MEATH HOSPITAL.

We are pleased to learn that the many friends of this distinguished and regretted Surgeon are about to present to the Meath Hospital a memorial bust of him, to be placed in the entrance-hall of the Institution, where he laboured for many years, and in which he received his death-wound. A committee has been formed for the purpose of receiving subscriptions, etc., for the above object. The members of the committee are—George H. Porter, Esq., M.D., Surgeon-in-Ordinary to the Queen in Ireland; Philip C. Smyly, Esq., M.D.; James H. Wharton, Esq., M.B., colleagues of the deceased; Yeo B. Owens, M.D., J.P.; and Edward B. Stanley, Secretary to Meath Hospital.

BEAR'S-FLESH AT ROMAN DINNERS.

The bear was eaten by the Romans, but it is clear that it was considered a rarity, and not relished by everybody. In the famous narrative which Petronius gives of the dinner at Trimalchio's, he represents a man who had dined at another house dropping in to dessert, and describing the feast he had had at the house he had just left. "We had," he said, "a joint of bear, which my wife Scintilla was rash enough to taste, and almost vomited up her gizzard. On the other hand, I ate more than a pound of it, for it tasted like boar itself; and for my part, I say, that if bear eats man, man has a much greater right to eat bear."

FROM ABROAD.—BELLADONNA IN SMALL-POX—PROFESSOR PIRIGOFF ON THE WOUNDED AT THE WAR — PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

M. Barbier describes the advantages to be derived from belladonna in the treatment of variola in terms of such unmixed eulogy, that we should have paid no attention to the statement had it not been placed in a prominent part of the *Lyon Médical* for December 18, and bearing his signature, although this last is not rendered more intelligible by having subjoined to it the word *subridens* in a parenthesis. However, his statement, trustworthy or not, is that, thrown in the midst of an epidemic outbreak of variola, he remembered some of the wonders recorded to have been done by small doses of belladonna in scarlatina; and, if in one exanthem, why not in another? Accordingly, he administered the remedy right and left, in all stages and at all ages, and had the satisfaction of finding that, while other Practitioners were having their heavy percentages in mortality and disfiguration, not a single one of his patients was lost; the magic drops procuring abortion from the disease on the very first day, and speedy restoration to pristine health. "Do not take," he naturally exclaims, "what I am saying for phrases and vain words; they are figures easy of verification" — the means of which, however, he has not yet supplied. One of the most remarkable circumstances is that one in possession of so excellent and so simple a remedy for a disease which is now devastating so many localities of his unhappy country, hesitated whether he should at once make it public, "in view of the general interest, or wait for some other cases more and more conclusive"—if such a thing were possible. Happily, this ethical question was settled by a little Professional rivalry, for, learning from a newspaper that a Dr. Severns had just discovered that belladonna is an infallible preservative against epidemic variola, his course at once became clear, and the article we are commenting on was the immediate result.

As some of our readers may be disposed to pay more attention to M. Barbier's statements than we think they deserve, we subjoin the formulæ which he recommends. Belladonna is, he says, alike a preventive, an abortive, and a curative—and curative, too, at all periods of the disease. "At whatever moment the Practitioner is called in, he may arrest the progress of the disease, just as the alarm bell arrests the course of a railway train." As a *curative* agent, from one to six centigrammes of the extract of belladonna, or from eight to thirty-two grammes of the syrup of the French codex, should be given during the twenty-four hours, the remedy having to be continued for three or four, or at most, five days. This is for an adult, and the doses for other ages must be regulated accordingly. As a *prophylactic*, a formula is borrowed from an old friend, somewhat out of fashion just now—Hahnemann—viz., extract of depurated juice of belladonna, one decigramme; water, thirty grammes. Eight drops *per diem*, in four doses, for a child of 10 years of age. This is, at least, familiar ground, whatever we may think of its solidity. For those who wish to be getting on a little faster, there is Godelle's formula—Powder of belladonna root, fifteen centigrammes; sugar, three grammes: divide into sixty doses; two or three of these to be given daily to a child a year old, sextupling them for adults. All persons concerned with the sick, and all who are confined in ships, schools, prisons, or blockaded towns, are enjoined to avail themselves of this agent. M. Barbier calls upon his *confrères* in general to give the means a fair trial, and guarantees an amount of success that will form hereafter a great feature in the progress of science.

On his recent return from the seat of war, Professor Pirigoff communicated to the Petersburg Society for Aid to the Sick and Wounded, who had sent him there, his general impressions. The activity exhibited by volunteer societies was, he observes, truly enormous; but, nevertheless, there still was a woful lack of Medical aid on the battle-field, as may be judged from the fact that the wounded at Gravelotte, amounting to about 10,000 men, had only six Surgeons for their aid. In the Prussian army about forty Surgeons had been killed, so sad a loss being incurred because the Medical officers are obliged to attend the wounded when under fire. Any special attention can only be paid to the wounded in Hospitals, which were often placed at great distances from the field of battle, and the transport to which was accomplished either by common country carts or luggage trains. At a later period of the war, however, special and convenient trains were organised for this purpose. For patients who were destined for the Provincial Reserve Hospitals, what were called "Etappen-Lazareths" were arranged, having in view the furnishing the wounded with a night's rest in a comfortable position, and the administration of suitable restoratives. All the patients whose condition admitted of their being moved were, after their twenty-four hours' delay, forwarded by the next military train to their destinations, having a suitable attendant with each train. Counting the sheds (*barracken*), there existed thirty-three Reserve Lazareths, furnishing 4800 beds, besides three Peace Lazareths. In the erection of all Reserve Lazareths, the rule has been observed of allowing not less than 1200 cubic feet for each bed. Each Lazareth has its own equipment of surgical instruments and appliances. Professor Pirigoff remarks, as we have already found Professor Billroth doing, that he never among the wounded met with a patient wounded by the balls of the mitrailleuse; while among the dead many bodies were found perforated with twenty-five or more of these missiles. Wounds of the head, too, were of very infrequent occurrence. He is of opinion, with respect to the new weapons, that although the numbers sacrificed are larger, yet the wounds produced are of a slighter character than used to be the case.

From Weissenberg, to which place he first repaired on the declaration of war, Professor Billroth passed to Mannheim, where he was located as General-Inspector of the Lazareths established near it, and at once had an immense amount of work thrown on his hands. At Weissenberg there had prevailed great concord among all persons who concerned themselves with tending the sick, so that no difference whatever prevailed between the Johanniters and the members of the different aid societies. When he came to Mannheim, therefore, he was much surprised at finding great irritation prevailing against the Johanniters. Reports had already reached him of the mischief which occurred from the accumulation of unemployed persons at Nancy belonging to the Johanniter and the volunteer societies, which, instead of co-operating with, were intriguing against each other; and a third element was added to the confusion by the military Surgeons and the Etappen commanders. All persons who are not required for the mechanical duties of transport and care of the wounded should be peremptorily ordered backwards or forwards, and the war-loafing Johanniters, delegates, Doctors, assistants, and volunteer nurses, whether of high or low degree, should have been ordered away by the Johanniter commander, in place of being, as was sometimes the case, protected by him. A too stern commander, with military force in the background, in this point of view, would have proved far preferable to no command at all, or one that was too lax. On their arrival at Mannheim, the Johanniters at first did not sufficiently take into account the excellent arrangements that had been made at great sacrifice, and were either ignorant or careless of any of the peculiarities of the North Germans, assuming, on the part of the King of Prussia, control over all volunteer societies, and placing themselves in opposition to the conditions they found in existence.

Professor Billroth, himself a North German, interrupts his narration to apostrophise the war and the advantages that are to accrue from it. He says—

"Certainly the wounded are to be pitied, and still more are those to be commiserated in whose circles they spread joy and love, and for whose wants they provided with their labour. You know that I am one of those Surgeons who, in the most doubtful of cases, make the extremest efforts to do all that is possible to secure recovery; and this, in my eyes, is the strongest proof I can furnish to you, whether theoretical or practical, of the estimation in which I hold the life of an individual, even should he be a criminal. But when the development of our great German family comes into question, as in this war, then do I think we should tear ourselves away from the humanitarian bewilderment amidst which soft-hearted molluscous natures so easily thrive after many years of peace. In face of the destiny of our great race, all tender sensibility for well-loved personalties must retreat to the back-ground. Everyone, idol though he be in his own large or small circle, may then find out how superfluous he is among the whole; for that no man is indispensable, and that the world continues its calm progress over all their bodies, is, as I see more and more plainly every year, only too true. Trivial as it is, however, therein lies the surety of a prolonged national life, and, above all, of an abundant mental activity and labour. Only in the infancy and old age of a people can individuals exercise extraordinary influence on the fate of a State."

(*To be continued.*)

REMINISCENCES OF "AN OLD GUY'S MAN."

No. II.—JOHN MORGAN.

Mr. John Morgan was the second son of Mr. William Morgan, who, for more than fifty years, was the actuary of the Old Equitable Life Assurance Office, close to Blackfriars-bridge. Mr. William Morgan began life as a Medical student, and came from Glamorganshire to London, as he told me, with sixpence in his pocket and a "club-foot." He was nephew to the celebrated Dr. Price, whose mathematical talents were well known, and, from his calculations on the value of lives, was solicited to found a life assurance office. Other engagements interfered with this project, and therefore Dr. Price recommended his nephew, Mr. Morgan, to apply himself to mathematics, and actually taught him the multiplication table. From that time Mr. Morgan continued with his uncle, and became one of the most eminent authorities in his department as actuary.

From childhood, Mr. John Morgan showed an intense interest in natural history, and began to skin and stuff birds and small animals almost as early as he could use a knife and his fingers. His father was an excellent carpenter, and skilful in the use of the lathe, and taught all his sons to use their eyes and fingers in similar employments. I believe that early education of the hands had a great effect in rendering Mr. John Morgan so beautifully neat, steady, and dexterous an operator and manipulator. He was patient and thoughtful in watching the habits of all living creatures that came under his notice; and it was remembered against him for many years, as a joke, that when very young he was taken into his mother's bedroom, soon after a confinement, to be reproved for mischief, and on coming out he remarked, "How savage she is now she has got a little one!" thus proving his keen notice of *one* habit of the female animal! In course of years Mr. John Morgan made a nearly perfect collection of stuffed "British birds," many of which were in their transition plumage, at that time a puzzling circumstance to naturalists. Among these, the "gulls" were least known. He was frequently of service, freely rendered, to the late Mr. W. Yarrell, during his researches for the materials of his well known and beautifully illustrated "British Birds." When Mr. J. Morgan became one of the Surgeons to Guy's Hospital, he felt constrained to part with his favourite collection of birds, saying "he must either be a showman or a Surgeon, and suspected that the latter would *pay* the best."

Mr. John Morgan was apprenticed to Sir Astley Cooper, with Tyrrell, Key, Travers, and others who afterwards did honour to the school. He lectured on Anatomy and Surgery, and in my time established a ward in Guy's Hospital entirely devoted to diseases of the eye. At that time he was working out many facts in physiology and comparative anatomy, using the microscope more than was prudent, which caused a violent attack of iritis. On recovery, Mr. Morgan continued his researches in comparative anatomy, in conjunction with Mr. Thomas Bell. He thought much about the possibility of curing tetanus and hydrophobia, and instituted some very interesting experiments, in conjunction with Dr. Addison and Dr. Hodgkin, as to the effects of some of the most powerful Indian poisons, hoping by their means to stay the convulsive spasms which characterise the two above-named diseases. Many of these experiments originated with Mr. Morgan—as I have reason to know, from having been permitted to witness them. His neat, steady dissection and manipulation, causing the least possible injury to the neighbouring parts, were of importance to the success of such researches. The results were published in the joint names of "Morgan and Addison on Poisons." As an operator, I think he excelled all his colleagues. His amputations were most masterly. He was the first to use the metal sutures for closing his flap amputation especially, and also for other large wounds, using for that purpose a soft, ductile, fine iron wire. This method, I think, went out of use at Guy's after Mr. Morgan's death, to be again brought into extensive use, with the substitution only of fine silver wire. He also paid much attention to the cure of venereal diseases, and, at the time Carmichael's interesting book was attracting much attention, adopted the theory of the different forms of venereal disease, and was always content to "just *touch* the gums" in the use of mercury, never wishing to go further than that slight symptom of the specific effects of the remedy on the constitution. In the phagedenic sloughing forms of sores, he made it a point of treatment, and taught us, that opium internally, and strong nitric acid externally, to the sores were our sheet anchors—mercury never, until the sores had assumed a more healthy appearance, and then only when they showed a disposition to become sluggish in healing. At one time, I think, a book was contemplated on the subject, but the appearance of Carmichael's volume and Bacot's practical treatise may have induced Mr. Morgan to relinquish the design. I never knew him perform an operation without much, and often very anxious, thought—never for show, never without absolute necessity and a hope of success.

When I knew him as an oculist, he used to place his patients in a large high-backed chair, and sit before them at a convenient height, and in this (to me) very inconvenient position, he could trust to his hand and eye to perform section of the cornea; and this was done when we had no chloroform, and must follow the retreating cornea as it dashed away from the point of the knife. He was ambidexter to a great degree.

I think Mr. Morgan was the first in modern days to attempt the removal of a diseased ovary, after Dr. Blundell had successfully removed the whole uterus. Mr. Morgan's operation was not undertaken without much previous thought and trouble. He frequently visited and witnessed the veterinary Surgeons and, so to speak, the empiric operations on beasts of different ages, before he ventured to operate on the case which he hoped to benefit, but the patient died, and so ended for a long time the attempt to relieve women of ovarian tumours in a way which now astonishes us, and which would have been scouted as absurdly untrue and impossible forty years ago.

Mr. Morgan's dissection of, and investigations into, the anatomy and physiology of the reproductive organs of the kangaroo have not yet been surpassed. They are recorded, and beautifully illustrated, in one of the volumes of the Linnæan *Transactions*. He kept female kangaroos for months in his back-yard in Broad-street-buildings, taming them, so as to be able daily to examine them, by the hand put into the pouch, to find out when, or how, the little immature creature came to hang attached, as if organically, to the first-used nipple; but, I believe, he never succeeded in making that part of the history quite clear. His dissections of the mammary organs were masterly in a very high degree.

Mr. Morgan was one of the first, and certainly one of the most energetic, originators of the now fashionable Zoological Gardens in the Regent's-park. He published a small volume of lectures on diseases of the eye, for the use of his pupils, and this book was fully illustrated by very characteristic drawings. The diagrams, of large size, which illustrated his lectures, were mostly sketched by himself, and coloured by Canton, then of Guy's Hospital.

I have already mentioned that Mr. T. Bell, whose name has for years been familiar as one of the most distinguished writers on various subjects of natural history, was associated with Mr. Morgan as a friend and fellow-inquirer. I do not think it possible to express with more truth and feeling than this friend has done, in a recent letter to me, the esteem in which those who knew Mr. Morgan best held (and, after many years of separation by death, still hold) the memory of his character.

Professor Bell writes—and I need make no apology for thus giving his sentiments—"No one had greater opportunities of judging of his (Mr. Morgan's) merits than I had. He was (and I say this with the greatest confidence) the most philosophical and thoughtful Surgeon at that time attached to 'our school.' His treatment of disease, the necessity, or the contrary, of an operation in any particular case, were subjects on which he invariably devoted much thoughtful consideration; for no man was more entirely free from all taint of empiricism, or more original in judgment. The work in which he and I were most closely associated was, of course, that of comparative anatomy, in which we jointly laboured for a considerable period, our manipulations being almost wholly conducted in my own dissecting-room. His contributions to physiological and anatomical science, with reference to comparative anatomy in particular, were all marked by the thoughtfulness and *simple truth which so entirely characterised his mind*. As an operating Surgeon, he was certainly unequalled in my time—for here, also, the same characteristic thoughtfulness was as conspicuous as in his scientific studies. I need not speak to you of his sincerity and warmth, and unchangeableness in friendship, and his affectionate heart. Those qualities were unsurpassed in anyone I have ever known, and no one can speak with greater confidence and authority on this point than I can. Our friendship was most intimate for many years, and never for one moment darkened by a cloud."

Mr. Morgan's health was never very strong. He suffered during most part of his life from what were called bilious headaches.

During the time that Dr. Bright, with the assistance of Dr. Addison, and, though last not least, with the assistance of Mr. Morgan's *other* most intimate and trusted friend, Dr. Hodgkin, whose indefatigable industry and patient investigations have never, to my mind, been properly acknowledged—I repeat, during the time Bright was making out the disease, now called after his name, and watching its symptoms, Mr. Morgan was marking the approach of the same symptoms in his own body. With the courage natural to him, he said little or nothing about it, till one day he found himself on the floor of his consulting-room; and when he came to himself (as I have been informed) he went to his solicitor and told him to make his will while he stayed there, and could sign it—knowing only too well, from the course of that disease, that such an attack might recur. Mr. Morgan left a family, none of whom, he told me, should ever enter our Profession; but two sons have done so since their father's death. One of them I know to be still living: may he "do honour to an honoured name."

Mr. John Morgan's eldest son succeeds his uncle and grandfather in the old "Equitable," where it is to be hoped he may be as successful and beloved as they were before him.

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,
Now prisoner of War at Versailles.

(*Continued from page* 23.)

The clock just struck eight, and the battle was still continuing, when we arrived at the château of Borny, about one mile in the rear of the battle-field, there to establish our ambulance. We already found the yard of the castle filled with wounded, crying for water and surgical aid. The engagement, though lasting but four and a half hours, had been quite severe; scarcely any territory had been lost or gained by either party. The third corps and the Imperial guard alone were on the field, and the latter troops were even held in reserve, so that the losses had fallen solely upon the above-mentioned corps. The rest of the army was, and had been for the last twenty-four hours, in full retreat, trying to form a junction with MacMahon, by way of Gravelotte and the north-west. It was to check this retreat that the Germans attacked Bazaine's rear-guard, and hence the battle of Borny.

I am not now prepared to give any particulars of the wounded which fell into our hands. The number cared for by us that night amounted to between 450 and 500. It was a busy scene—surgeons, priests, and peasants all assisting. We immediately took charge of the church, of the deserted houses, and the barns of the little village to shelter our wounded as soon as they had received a first dressing. The trumpets had sounded "victory" all along our lines, and we, the uninitiated, were thinking "all was well," when suddenly, about one o'clock in the morning, we received orders to evacuate the village as soon as possible, and transport our wounded to Metz; the army was in full retreat. Waggons, carts, cacolets, and everything which could be got together, were now put into requisition. The more severely wounded were put upon stretchers, and carried by our *infirmiers*, or placed upon wheelers, and thus brought to town. By three o'clock in the morning, two hours after the order had been given, the village of Borny was cleared, and our train of wounded *en route*; none but the dead had been left behind.

I must state that upon our first arrival in Metz from Nancy, quarters had been assigned to us in the Caserne du Génie, a large building then empty, forming the three sides of a quadrilateral, with a vast court, and provided with 1200 beds. M. Lefort ordered our wounded to be taken there; but before twenty-four hours had elapsed every bed was occupied. Too few preparations had been made in Metz for the reception of wounded; consequently, our caserne being empty, and a full corps of Medical officers in attendance, the greater part of them were shipped over to us. Just imagine what the results must have been, from 1200 wounded crowded into one hospital! but with it all, the only successes, so to say, which have been obtained during the entire *blocus* of Metz were from the wounded of this first battle; afterwards, the infection became so terrible that to operate was almost certain death.

Borny cost the French near 2000 men in wounded and dead. Owing to position, the losses of the enemy were much greater, and especially in killed, as I remarked in riding over the battle-field the next day. An armistice having been agreed upon on the 15th (the day following the engagement), to last from 10 a.m. to 5 o'clock p.m., M. Lefort took a portion of our ambulance to go over the battle-field and gather the wounded, in case some should have been left unattended. This work, however, had already been done by the Prussian ambulance established at the château of Colombey, two miles from Borny. The number of wounded here in their hands was seventy-six, of which four were officers. The Surgeon-in-chief of the ambulance—Dr. Lentz, I believe—kindly allowed us to take charge of them, the officers having given their parole not to serve during the war. When our little train arrived in Metz that evening, citizens and soldiers received us with open arms. This, our first success, had worked wonders with the army; our uniform became known, and many an officer gave it the first salute.

Little thinking that we should ever be in want of anything for our own wounded, we sent next day to the Knights of St. Jean, connected with the Prussian ambulance at Colombey, who had expressed a willingness to accept these articles, wine, cognac, chocolate, tea, and sugar. Inasmuch as the cessation of hostilities on August 15 had been specially agreed upon for the purpose of burying the dead, General Coffinières, commander of Metz and its fortifications, ordered a company of pioneers from fort St. Julien to join us on the battle-field. They were the cause of a little incident which gave proof of the watchfulness of the German Uhlans. While we were engaged in taking charge of our wounded in Colombey, horsemen came galloping up to announce the departure of a body of men from fort St. Julien. We assured them that these were soldiers sent for the purpose of burying the dead, and that no violation of the armistice need be feared. The Uhlans were right—for, sure enough, the French pioneers had come out "armed to the teeth." Word was sent them to stack arms before they were allowed to approach the field and dig their trenches for the dead.

Speaking of the dead, I shall always remember the little hollow road leading from "La Ferme de Bellecroix" to the château of Colombey. It presented a sad picture, indeed. The hottest of the fight had occurred here; the French dead were lying very close to each other, and most of them shot in the head. The road is deep, ravine-like, hiding one almost up to the shoulders, so that nothing but the head is exposed. A French battalion of the line had taken position here. About 150 yards opposite is a wood, which was occupied by the German Jägers—a fact which may account for the precision of the fire. One of the most horrible sights I saw that day was a portion of a dead body, with head, shoulders, and upper portion of trunk wanting. A shell must have struck the unfortunate man near the region of the lumbar vertebræ, exploding as it struck, for nothing could be found of any part of the body above the pelvis; at a distance of from four to five yards was a portion of the stomach, to which was yet attached the small intestine, and in perfect communication with the sigmoid flexure and rectum, left in place. Not far from the little hollow road just mentioned were lying twenty-five or thirty Prussian fusiliers, all in line. I imagine they must have been mowed down by a discharge from a mitrailleuse; I do not know what else could have done the work. As regards the mitrailleuses, I have never yet been able to get an exact account from any German Surgeon as to the manner of wounds produced by this new engine of destruction. Some say they have never seen any wounded from that *canon*; some deny its effects altogether; while others tell me that the person struck by it is riddled and torn to pieces. I am rather inclined to believe the latter story, which, if true, would also go to prove that the mitrailleuse is not the terrible instrument which the French think it to be; and that, lest it can be fired at a given distance, the balls hold together, instead of scattering, and therefore the mangling of the body which receives the discharge. Twenty-five balls, very similar to, only a little larger than, those of a chassepôt, form a charge.

(*To be continued.*)

BUILDING SITES.

On the evening of Monday, the 9th inst., Professor Ansted read before the Royal Institute of British Architects an interesting paper "On Building Sites," which, however, he treated from an architectural rather than a sanitary point of view.

As an illustration of the importance of geologic considerations to architects, he pointed to the leaning tower of Pisa, and the cathedral in the same city, wherein there were no straight lines, owing to sinking of the foundations in various parts. As examples of buildings exactly adapted to their sites, he selected the pyramids in the plains of Egypt, and the rock temples in its stony parts. In Greece, again, the peculiar character of the hills, and the building-stone they contained, gave the peculiar impulse to their classical architecture; whilst the Gothic, originating under conditions totally different, developed in a totally different fashion. Modern towns being mostly situated on the banks of rivers, the alluvial deposit brought down by these most frequently formed the basis of modern city buildings. And this deposit was not always safe, as, if the rock surface on which it was laid down were inclined, a slip might take place, especially if these rocks were non-absorbent. Sometimes non-absorbent rocks were broken up on the surface, when they readily admitted of water to a certain depth, but there was then no means for it to escape, and its presence might induce disease. Of rocks ordinarily encountered, limestones were usually permeable; the harder schists not so, except through cracks. Clays were also impermeable, but their characters were not constant; and in this, as in other particulars, they were followed by the shales, which were mere hardened clays. In river valleys the building sites were ordinarily in clay, alluvial, or boulder deposits. And it must not be forgotten that rivers tend to change their courses from time to time, so that the character of a deposit in a river valley was far from constant. In considering the propriety of selecting a building site, the natural drainage must be remembered. And here a knowledge of the texture and stratification of the subjacent rocks was all-important. Clay was less healthy than well-drained sites, but modifications arose from the subjacent rocks and the conditions of those rocks. He also alluded to Pettenkofer's views on ground-water as bearing on this subject. The water supply was also considered, and it was pointed out that a supply drawn from a porous soil subtended by impervious rocks, the whole being covered by decomposing organic matter, must be unsafe. In warm and dry climates, where the rocks contain air, this would be given off in hot weather, and absorbed in cold; if decomposing organic material were also present, the effluvia would be poisonous; and this he considered to be the cause of the unhealthy condition of certain of the Mediterranean towns. They would be better for a layer of clay above these rocks.

The only speakers who considered the subject of the paper from a sanitary point of view were Dr. Letheby and Dr. Druitt.

Dr. Letheby remarked that the paper dealt with the buildings rather than with the people they were to contain. From the latter point of view, both soil and building material were too much neglected. Pettenkofer's views he thought were especially worthy of attention. During the last cholera epedemic in the East-end of London, certain spots were exempt, and he thought the soil had much to do with it. In the City of London Union twenty-six cases occurred in one room at one time, and in all about fifty, occurred here, but nowhere else in the building. This room stood on a porous foundation, the rest did not. A school at Limehouse stood in the midst of a cholera district, yet was unattacked. It turned out to be situated on a little island of clay. There were many such instances—places not being affected, although using the same water which elsewhere was supposed to propagate the contagion—and he attributed their safety to an impermeable soil. Yet these soils were generally unhealthy; they were cold, and rheumatism prevailed above them. He also alluded to the effect of drainage in lessening the mortality of phthisis in Salisbury and other places; to the absorption of dangerous emanations by porous material in Hospitals; and to the influence of the soil in water supply.

Dr. Druitt thought the architect somewhat hardly treated; too often the site was selected before he was consulted, and he had to do his best with it; just as patients would count on being cured without putting themselves to the slightest inconvenience, and with an utter disregard for regimen. The paper and the discussion taught them how complex a thing life is. Dr. Letheby seemed paradoxical; by draining, phthisis was diminished, but typhoid increased, but each *item* was true. Pettenkofer's views were, that with a low level of ground-water, typhoid and cholera prevailed; but his views were not so diverse from those ordinarily entertained. In gravelly soil there was a constant flow of water; if this was low, old cesspools were dried up, received air, and so were able to give off poisonous emanations. Whether taken as drink or inhaled in vapour, foul water seemed the vehicle of cholera. He also alluded to the bad effects of made ground as a basis for building. He thought they explained certain maladies like scarlet fever. If there were any truth at all in their doctrines, health must suffer from the effects of made ground.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

January 10.

That even a very inefficient vaccination is better than none at all is, I think, being strikingly manifested in the epidemic of small-pox of which this town is at present the subject. Up to the 8th inst. there had been 147 admissions into the sheds in Ashfield-street, which, since the decline of relapsing fever, have been specially set apart for the reception of patients suffering from variola. Full reports are daily made by Dr. Robertson, the very able Medical officer in charge of these sheds, of the age, residence, condition as to vaccination, the particular form of disease, etc., in each case. These reports are forwarded to the Vestry Clerk as soon as they are made up, and it is to the kindness of the latter gentleman that I am indebted for an opportunity of inspecting them, and being able to give a few notes on them.

Firstly, of the indications which the patients presented of having undergone vaccination. I find that 37 were returned as having been not at all, or, at best, but very imperfectly, vaccinated; 39 as having had only one cicatrix each, of which seven are specially noticed as being faint and seven more as being large; 56 as having two marks each, the report noticing ten of these double marks as large and six as small; 8 as having three marks each; 3 as having four; and 1, and only 1, as having five.

Altogether there have been 37 deaths, or almost exactly 1 in 4. But the important feature is the manner in which these deaths are distributed. Thus, of the 37 not vaccinated, 19, or more than one-half, died; of the 39 with one mark, 5; of the 6 with two marks, 10; and of the 8 with three marks, none. Of the 3 with four marks, 1 died, but a special note is placed on his admission-card as to his being the subject of advanced phthisis when attacked. When, moreover, the numbers of those who died with one or two marks on the arm are closely inspected, it is very instructive to note how the mortality rises in those cases where the word "faint" is appended concerning the cicatrix, and falls where the cicatrices are specially noted for their large size. Thus, of the 7 whose arms presented a single large cicatrix, not one died; while out of the 7 where the mark is stated to have been "faint" or "small," 4 died. Of the 10 cases, again, where the two cicatrices were specially indicated as "large," there was no death; while of the 6 with two faint cicatrices, 3 died. And it should be borne in mind, as showing that there could not be any effect of even an unconscious leaning in the mind of the gentleman making the report towards magnifying the value of vaccination, that the returns giving the state of the arm, etc., etc., are made up daily and transmitted to the central office, while those of the deaths are not able to be given until days, and in some cases weeks, afterwards.

As in all epidemics, there are some peculiar cases. Thus, one patient was admitted with her face deeply scarred from a previous attack, who yet suffered on this second occasion from a very severe confluent small-pox.

As pointing, again, to a mode of conveying the disease during an epidemic: two young men, engaged in a pawnbroker's shop, were seized, one after the other, though there were no other cases in or very near to the house. Of the character of the disease in each case, complete returns, owing to the temporary absence of Dr. Robertson, were not made. In 108 cases, where the returns give the type, 57 are mentioned as discrete, 33 as semi-confluent, and 18 as confluent. The notices of the residences of those attacked are indicating the daily extension of the epidemic over a wider area, so that we cannot as yet entertain any good hope of its end drawing near.

BIRMINGHAM.

CHRISTMAS AT THE CHILDREN'S HOSPITAL.

This is quite the pet Hospital of Birmingham, and the children in it have not been forgotten at this festive season—everything having been done in the shape of dolls, articles of clothing, and monster Christmas trees to interest and amuse the little inmates, whose eyes brightened up at the choice and variegated display. The history of the charity, which may not be devoid of interest, runs thus:—A few influential gentlemen, most of them Professional, hit upon the idea of projecting it, amongst whom figured conspicuously Dr. Heslop. Six beds formed its nucleus, lodged in the dingy locality of Steelhouse-lane, at the old Eye Hospital. The funds and friends quickly increasing, the institution soon became crowded, when, at the beginning of the year just passed, it was proposed to remove it to the Lying-in Hospital, which had become vacant, in Broad-street, and to convert the Steelhouse-lane building into an out-door department. This arrangement has been carried out, and the result is, after considerable alterations and improvements, a commodious Hospital, of pleasing exterior, situated in one of the best localities of the town, in juxtaposition with the aristocratic neighbourhood of Edgbaston. The charity consists of three excellent wards—one detached for the reception of fever cases and other contagious diseases. There are fifty-three beds in all, and at the present time only two are unoccupied; these are in the fever ward. The Hospital is established on the free system, all cases being admitted, the only restriction being as to age; none above 10 can enter. It is supported by voluntary contributions, and boasts of a goodly list of donors and subscribers. The patients are derived, not from amongst the pauper population, but from the pretty-well-to-do classes, who are, however, unable to pay doctors' bills. The nurses are of a superior class, having been educated at the Training Institution. The out-door department in Steelhouse-lane affords relief to about 10,000 patients a year. The detention in Hospital averages about fourteen days.

The Medical charities of Birmingham have received over £10,000 during the past quarter, £6,000 clear accruing from the festival towards the funds of the General Hospital, and £4085 18s. 3d. net for the "Amalgamated Medical Charities," which is collected the last Sunday in October, now popularly known as "Hospital Sunday."

GENERAL CORRESPONDENCE.

AMALGAMATION OF MEDICAL SCHOOLS.

Letter from Dr. E. Headlam Greenhow.

[To the Editor of the Medical Times and Gazette.]

Sir,—An article on "The Amalgamation of Medical Schools," published last week by one of your contemporaries, appears to me calculated to convey so erroneous an impression of the position of the Middlesex Hospital Medical College with respect to the suggested amalgamation, that I venture to trouble you with the following brief explanation of the real state of the case, so far as the Middlesex Hospital is concerned, and request you will have the goodness to allow it to appear in your journal of the present week:—

No active steps are being taken, or have at any time been taken, by the Middlesex Hospital staff or Medical School towards amalgamation with either of the other Medical schools named in the above-mentioned article; neither are any negotiations now on foot to bring about that object. In fact, the question of amalgamation with any other Medical school has never, since I have been a member of the staff, been brought under discussion at any meeting of the authorities, lay or Medical, of the Middlesex Hospital.

It is true, indeed, that about eighteen months ago, certain members of the Middlesex Hospital staff, of whom I was one, were invited privately as individuals, but in no way as representatives of our School, to meet certain Medical Professors of University College, in order to discuss the possibility of drawing up a scheme for amalgamation. At the close of the deliberations we stated our readiness to consider any scheme for amalgamation which might be proposed by the authorities of University College, and, if we approved of it, to submit it to our colleagues, and ultimately to the lay authorities of the Hospital. From that time, however, up to the present moment, we have received no further communication on the subject.

I can readily believe that, especially in view of the recent regulations of the College of Surgeons, the means of securing a much wider field of Hospital practice must be a question engaging the anxious attention of the Medical Committee of University College Hospital, but I cannot help thinking that your contemporary has been premature in publishing the fact, as he has certainly been mistaken in supposing that any negotiations have as yet been opened with the Medical Committee of the Middlesex Hospital towards the accomplishment of the union said to be projected.

I may further say that, on the part of the Middlesex Hospital staff and Medical College, there is no desire to enter upon any such negotiations, unless it be clearly established that the solution of the great Medical question of the day—viz., the improvement of Medical education generally, rather than the improvement of the position of any individual Medical school—is to be the real object of the suggested amalgamation.

I am, &c.,
E. Headlam Greenhow, M.D.,
Treasurer to the Middlesex Hospital Medical College.
Upper Berkeley-street, January 9.

CAMBRIDGE EXAMINATIONS.

[To the Editor of the Medical Times and Gazette.]

Sir,—Would you permit me to point out that you do not appear to have understood that the two older Universities, though requiring much less in amount than London, require far greater accuracy. Certainly, all the London degrees are far more difficult to obtain than the Oxford and Cambridge ones; but the former University too much encourages breadth, without remembering that depth is ever more important. Consequently, I, for one, rate the Oxford and Cambridge pass degrees as little less valuable than the corresponding London ones. But I may be permitted to express my astonishment at the surprising letter sent you by "A Cambridge M.A." He has fallen into the great error of basing his argument—that the Cambridge M.B. of to-day is as hard to get as the London one—on the fact that, nearly twenty years ago, the London B.A. was not a very good degree. So rapid is the progress of the age, especially in the severity of the London examinations, that we cannot even refer to bygone ages.

The old Universities are, as a rule, frequented by better trained men than those who go to Burlington House—men of greater wealth and higher status, and who have hence enjoyed greater advantages. Moreover, the London University is open to everyone, without restriction of any kind, or proof of preparation; and hence, not a few men go up who could not pass anywhere—being as deficient in intellect as in learning, but who swell the total of rejections. Still, in spite of all this, the London standard of rejection is tremendous; and the following figures will, judging from "M.A.'s" letter, be quite new to him, at least :—

		Candidates.	Failures.
Matriculation	(1869)	816	427
First B.A.	,,	189	94
Second B.A.	,,	141	73
M.A.	,,	16	5
Second B.A.	(1870)	about 145	84

My evidence will seem all the more impartial as I am an Oxford man, though I have passed five examinations at the London University, and also failed twice. It may be fair to add that, so different is the curriculum at the rival Universities, or, rather, the course for their degrees, that it is not easy to compare the amount required by each, and strike a fair estimate of the severity of any of the three bodies. Let me add that, though no doubt it is very much easier to get the Cambridge M.B. than the London one, the more careful training of the former man and the greater accuracy of his knowledge will seldom put him to shame.

I am, &c.,
An ex-University College Man.

THE ARMY MEDICAL DEPARTMENT.

[To the Editor of the Medical Times and Gazette.]

Sir,—Herewith I enclose a *form* which has lately been issued to all regiments, so as to account for the expenditure of all medicines and Medical or Surgical appliances in Hospitals. I am quite of opinion that any extravagant outlay of drugs, etc., should be checked, and any waste inquired into, but the worry and annoyance to keep the enclosed form correctly—not to speak of the great loss of time—are something too much. That a Hospital Surgeon can at the end of each day sit down and calculate how many fractions of grains each soldier has had in the day, look over prescriptions, and separate their component parts, calculate how many square inches of lint each patient has had, or add up the ounces of linseed meal for each poultice, is, I think, asking too much. In fact, much of the return must be guess-work, and if delayed for a day or two would take hours and hours to work up. We hoped, after the oft-quoted Crimean experience, that forms and returns would be simplified and diminished in number; and so at first they were, but it seems now that every day adds to their number, and I do not think, at the same time, adds to their use, or to the credit of their authors. We must wait, I suppose, for another war to sweep away all the rubbish with which our departments are encumbered. It is a subject for thought, as to whose great genius we are indebted for the form I send you. Surely there can be no work to do at the office in Whitehall-yard if time can be found for compiling an affair like this. I venture to say that at no civil Infirmary would such a form be attempted to be kept, nor do I think that at our model institution, "Netley," it is done. Our returns and requisitions for medicines, etc., are minute and dear enough, and any undue extravagance in any particular could be seen, and explanations called for, without a vexatious and stupid return such as this.

I am, &c.,
A Surgeon of Twenty-five Years' Service.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 3, 1871.

Richard Quain, M.D., President, in the Chair.

Annual Meeting.

Mr. **Hulke** read the report of the Council, which showed the Society to be in a very flourishing condition. Their numbers were 474 members, and they had increased during the year. The report of the Committee on Lardaceous Diseases had not yet been finished, but was expected to be so soon. Their balance-sheet showed £102 7s. 9d. in their favour.

The adoption of the report was moved by Dr. Powell and seconded by Dr. T. Fox.

The ordinary business of the Society was then proceeded with,

Dr. **Heywood Smith** exhibiting a specimen of Diseased Kidney from the body of a patient who died three weeks ago. Her stomach had always been large from childhood, and she occasionally passed thick water. He tapped the cystic kidney with a fine trocar. This had been done before by Mr. Savory, in St. Bartholomew's Hospital, two years and a half ago. Death followed. Her liver was very large, and the right kidney was large and healthy. The left formed an enormous cyst, and weighed 9 lbs. It contained calcareous masses.

Dr. **Dickinson** thought most of the new formation fatty. This was often so with local congestion, ending in contraction. Something of the same kind was seen after pleurisy.

Mr. **Hulke** exhibited some drawings of Rodent Ulcer of the Face. As to its essential nature, some said it was cancer. It began in middle life and invaded all the tissues, cicatrising at one spot and progressing at another. It did not, however, invade the lymphatics. Some thought it affected connective tissue only. Of the three cases recorded, two occurred in laundresses, one in a farmer. In one the ulcer began in the chin, and eroded the jaw. It had hard edges, and gave rise to an offensive discharge. It was gouged, and had nearly healed. The connective-tissue corpuscles were proliferated. In another the ulcer was on the left side of the face. Its base and margins were indurated. Its hard tissue was composed of cellular elements alone. In the third the ulcer was on the cheek, uneven of surface, increasing and cicatrising.

Mr. Arnott said that in one of Mr. Moore's cases the structures were like those of epithelioma. He had himself seen one with the characters of rodent ulcer and the structure of epithelioma. There was no glandular affection. In another the diseased parts had been removed four times, and the patient was still alive. The edges were like ordinary hard cancer, but there was no glandular affection.

Mr. Hulke next showed a specimen of Sarcoma of the Lower Jaw. The patient, a brewer, had a tumour in the middle of the jaw, which did not, however, distort the line of the teeth. A small hard tumour had previously been removed from his lip. It looked rather like a recurrent fibroid. It was removed, and the patient did well; but it again returned. Its texture was fibrillated, and it contained various-shaped cells. Histologically it was scirrhous.

The same gentleman also exhibited a Fibroma of the Transversalis Fascia from a woman, aged 32. It was of the size of a goose's egg, and was situated in the right groin, and was movable, except at its base. It was removed, and the patient did well.

Dr. Murchison exhibited some Renal Calculi and Gall Stones, which had passed the same way. The patient, a lady, had in 1866, suffered from biliary colic. At the end of the year a swelling appeared below the ribs, which was supposed to be an abscess. It was opened; but there was no bile in it. Three or four weeks after, a stone passed, and subsequently nine came away; but still no bile. Fresh symptoms of renal calculus on the right side came on, and a tumour appeared in the right groin, but went away. The opening in the side closed in 1869, and the patient seemed well. This year pain came on in the right side, with rigors and vomiting. The urine was examined, and found healthy. Then came a lot of pus, and the urinary calculus was found.

Dr. Murchison also showed another Biliary Calculus, which had been passed through the parietes. This was not very uncommon. In this case the common duct was obstructed. The patient, a lady aged 42, had been subject to violent attacks of pain in the side. A tumour formed below the ribs. It was opened, and a viscid fluid escaped, containing no bile pigment. The opening remained patent, and some small hard bodies escaped from it. Great pain was experienced on this side, and one morning she awoke drenched with bile. None passed by the bowel, but there was little jaundice, and hardly any bile in the urine. Another calculus came away, and then that which was impacted; after which the wound gradually closed and healed. The quantity of bile passed was enormous—as much as one or two pints a day, sometimes an ounce and and a half per hour.

A third specimen was a Mediastinal Tumour—a lymphadenoma—from a female, aged 21. A similar growth was found in the kidneys. Fifteen months before, she had suffered from rheumatic fever; after that she suffered from a pain in the chest. In August this year she had a fit of coughing, after which the pain was increased. She became livid, and was slightly dropsical; her dyspnoea was subject to slight exacerbations, and there was some bulging on the right side. The second heart-sound was weak. Behind there was tubular breathing, but no dulness. She died in a fit. It was possible that many of the tumours in this situation were really of this kind, and not cancerous.

In reply to Dr. C. T. Williams, Dr. Murchison said the mass might have originated in the thymus; it involved all the structures round about.

Mr. Croft showed a specimen of cured Popliteal Aneurism, the patient having died of an aortic one. The patient was a man aged forty. He first tried flexion, but the man could not stand it. By means of tourniquets the flow of blood was arrested, and the tumour gradually decreased. There was then no sign of internal aneurism, but after going home he brought up some blood, and died. Blood was found in the pleura. The course of the blood to the mouth was not quite apparent. The healed aneurism was pervious.

Mr. Squire exhibited a specimen of Direct Inguinal Hernia from the body of an elderly woman. She had asthma, and the cough made the hernia worse. It became incarcerated, but the symptoms were not very bad. An operation was performed, and she was relieved, but died, apparently from cold. There was no fluid in her peritoneum.

After the election of office-bearers, and other business, alluded to in our last, the meeting dispersed.

OBITUARY.

WILLIAM CALLENDER TIDY, M.D.

On Christmas-day, at his residence, "The Hollies," Mare-street, Hackney, aged 72 years, died William Callender Tidy, M.D. King's College, Aberdeen, the oldest Medical Practitioner in the parish, and whose gentle and amiable character endeared him to patients and friends. Highly honourable with all his Professional brethren, he often cast upon their troubled waters the softening influence of his own benevolent nature, and, by the quiet humour he so abundantly possessed, put a new phase on a fancied injury. A scholar and a gentleman, how will he be remembered by some of those who constituted our local book society, as one whose influence would stifle any unkind remark or illiberal inuendo! Thus passed away one of those gentle, ministering spirits, who sustained by his manner the desponding sufferer, presaging a brighter world to hopeless affliction.

MEDICAL NEWS.

Royal College of Surgeons.—At the recent preliminary examination in Arts, etc., for the Fellowship and Membership of this institution, which was conducted by the College of Preceptors, 303 candidates were examined—viz., 82 for the Fellowship and 221 for the Membership. For the former distinction 61 were successful, and for the latter 104. The following are the names of the successful candidates for the Fellowship, viz. :—

Adams, J.
Aldridge, C.
Anningson, J. W.
Basham, W. R.
Bate, G.
Bellingham, J.
Blakiston, A. A.
Bloxam, J. A.
Boyle, E. C. C.
Bull, J. W.
Carter, R. W. F.
Chaoner, O. H.
Chavasse, J. F.
Cheeseman, G. E. A.
Clapham, W. C. F.
Coates, H.
Corbin, A. F.
Cummiog, R. F.
Dalton, A. E.
Davies, F. J.
Day, E. J.
Good, D. O. J.
Green, J.
Harding, G. C.
Hall, W. H.
Higgins, C.
Iliff, P.
Ilott, H. J.
Jones, D. J.
Law, W. T.
Leavens, R. C.
Manders, H.
Marshall, E. G.
Marshall, J.
Massiah, B. J.
May, S.
McHardy, M.
Powell, A. E.
Plumbe, J. T.
Pycock, H. A.
Ransom, R. A.
Riog, C. G.
Roche, A.
Sauoders, E. H.
Sherwood, A. P.
Smalley, H.
Snell, G.
Sobey, A. L.
Steele, H. F. A.
Stevens, A. F.
Stevens, G. J. B.
Stevens, H.
Stevenson, L. H.
Stockwell, W.
Thaine, L. L.
Thomas, R. T.
Webb, C. L.
Williams, W. R.
Willcock, W. H.
Winckworth, C. G.
Young, A.

The following passed the preliminary examination for Membership, viz. :—

Allen, G. W.
Allen, R. G.
Anningson, T.
Atkinson, H. S.
Baedeker, F. W.
Bain, A.
Baker, H. M.
Bardin, J. W.
Barrow, L. A.
Bernays, H. L.
Bigger, S. F.
Boothroyd, A. E.
Brandreth, C. L.
Bridgeford, W. A. S.
Briggs, W. H.
Brock, C. De L.
Brown, T.
Bruce, P.
Buckland, A. G.
Bucklaud, F.
Bush, E.
Cameron, C. H. H.
Clark, W. T. M.
Collyns, R. T. P.
Cresswell, W. G.
Culhane, F.
Curwen, C.
Davis, C. H.
De Gruyther, E. J.
Eales, B. H.
Earle, E. J. V.
Edwards, C. A.
Evans, F. W.
Ferguson, J.
Fort, T.
Gould, E. G.
Griffith, D. C. B.
Grimmer, J. M.
Guy, Jr. R.
Habgood, H.
Haines, G. H.
Harding, A.
Harrison, A.
Harvey, W. G.
Hayes, C. H.
Henley, E. W.
Hetherington, G. H.
Honeywill, S.
Hooker, J. S.
Hopgood, W. C.
Horne, J. F.
Howard, E.
Howitt, T. W.
Johns, W. S.
Johnson, W.
Jones, V. L. W.
Jubb, A. H.
Kellard, J. T. W.
Kevern, H. E. S.
Kinch, G. H.
Knox, C. F.
Latham, W.
Layborn, W. K.
Lloyd, T.
Lyne, H.
Lyster, C. B.
Macintire, J. H. L.
Maltby, W. B.
Martin, T. J. H.
Martland, E. W.
Mason, J. W. B.
Master, G. R.
Maynard, H.
Muddle, E. J.
Ormond, F.
Nankwell, F.
Newton, J.
Parkinson, S. G.
Parslee, E.
Paul, E. W.
Pearless, W. R.
Pendleton, J. N.
Perry, C. E.
Phillips, C. H.
Pickford, J. K.
Piers, H. O.
Pilling, E. T.
Randle, M.
Rhodes, C.
Rhodes, W.
Rhys, J.
Richards, T.
Roberts, W.
Robertson, C. A.
Ross, A. R.
Sampson, H. M.
Scully, J.
Shaw, E. J.
Shaw, H. G.
Smith, S.
Smith, W. N.
Spooner, F. H.
Street, A. W. F.
Symonds, C. J.
Tudge, J. M.
Turner, A. F.
Turtle, W. G.
Wakefield, A.
Walsh, H. W. D.
Ward, T. W.
White, A. O.
White, H. C.
Williams, H. H.
Willis, C. F.
Young, A. S. W.

The next preliminary examination in Arts for both Fellowship and Membership will take place in June. The first primary or anatomical and physiological examination for the present session will take place on January 14, for which, it is stated, about 80 candidates have entered their names. The pass or final examination will take place on Friday next.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 5, 1871:—

Langley, Noah Beldom, Cricklade, North Wilts.
Rastrick, Edward Elliott, Southsea, Hants.
Turner, Frederick Harry, High Wycombe.

The following gentlemen also on the same day passed their First Professional Examination:—

Hill, Thomas Wood, St. George's Hospital.
Wade, Reginald, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Carruthers, William Hodgson, M.D. Edin., M.R.C.S. Eng.—Senior House-Surgeon to the Royal Infirmary, Manchester, *vice* Bontflower.

Curran, John Waring, L.R.C.S. Ireland.—Surgeon to the Mansfield Woodhouse Infirmary.

Darby, J. T., M.R.C.S. Eng., L.S.A.—Physician's Assistant to the Royal Infirmary, Manchester, *vice* Mr. Sutcliffe.

Dobie, William, L.R.C.S. Edin.—Surgeon to the Police, Bingley, Yorkshire.

Grigg, W. C., M.D.—Medical Officer to the Out-patients of Queen Charlotte's Lying-in Hospital, *vice* Dr. Cholmondeley, deceased.

Harrison, Richard, M.R.C.S. Eng.—Assistant House-Surgeon West London Hospital, Hammersmith, W.

Hunt, Joseph, M.R.C.S. Eng.—Resident Surgeon at the Birmingham General Dispensary.

Lee, Edward Samuel, M.R.C.S.E. and L.S.A.—House-Surgeon West London Hospital, Hammersmith, W., *vice* T. L. Brown, resigned.

Rouch, J. Ryall, F.R.C.S.—Surgeon to the Metropolitan Free Hospital, *vice* John Warner, resigned.

Smith, Protheroe, M.D.—Corresponding Member of the Imperial Academy of Medicine of Rio de Janeiro.

Sutcliffe, A. E., M.R.C.S. Eng., L.S.A.—Junior House-Surgeon to the Royal Infirmary, Manchester, *vice* Mr. Carruthers.

Wilson, James Mitchell, M.B. and C.M. Univ. Glasg.—Medical Officer and Public Vaccinator for District No. 4 of the North Witchford Union, Cambridgeshire.

NAVAL APPOINTMENTS.

Admiralty.—The undermentioned officers have been placed upon the Retired List of their rank, in accordance with the provisions of her Majesty's Order in Council of February 22, 1870:—Surgeons: Robert Mungle and Alfred S. Pratt, from December 23, 1870; Assistant-Surgeon Joseph E. N. Blake, from August 5, 1870; Assistant-Surgeon Dr. Thomas St. J. Clerke, from October 5, 1870.

BIRTHS.

Eddowes.—On January 6, at Castle-street, Shrewsbury, the wife of William Eddowes, M.R.C.S. Eng., of a daughter.

Maurice.—On January 1, at Marlborough, the wife of Dr. James Maurice, F.R.C.S., of a son.

Trend.—On January 3, at Southgate-road, London, N., the wife of Dr. Henry G. Trend, of a son.

Walker.—On January 8, at 10, Ovington-gardens, S.W., the wife of Arthur De Noe Walker, M.D., of a daughter.

Walters.—On January 4, at Reigate, the wife of John Walters, M.B., of a daughter.

Whipham.—On January 4, at 37, Green-street, Grosvenor-square, the wife of T. Whipham, M.B., of a son.

Whitmarsh.—On January 10, at Albemarle House, Hounslow, the wife of William Michael Whitmarsh, M.D., of a daughter.

Wright.—On January 2, at Romford, Essex, the wife of Alfred Wright, M.R.C.S., of a daughter.

MARRIAGES.

Cousins—Clarke.—On January 5, at St. Pancras Church, Alfred Walter Vaughan Cousins, of the Colonial Civil Service, Straits Settlements, and fifth surviving son of Captain Cousins, of Boundary-road, St. John's-wood-park, to Annie, youngest daughter of Joseph Clarke, M.D., of 6, Mecklenburg-square, London.

Currie—Wavell.—On January 4, at Square Church, Halifax, Donald Currie, M.D., of Oak Craig, Wemyss Bay, North Britain, to Sophia Elizabeth, daughter of E. Minson Wavell, Esq., of Field House, Halifax.

Fuller—Passau.—On January 5, at St. Mary's Church, Lewisham, Leonard Fuller, of 4, College-park, Blackheath, fifth and youngest son of Hugh P. Fuller, Esq., M.R.C.S. etc., of Abbey-road, N.W., to Janet, youngest daughter of the late Frederick Owen Passau, Esq., of Lewisham, Kent.

Hallett—Martin.—On November 12, 1870, at Kiddapore Church, Calcutta, Holt S. Hallett, C.E., fourth son of Thomas Purbam Luxmore Hallett, of Lincoln's-inn, Esq., barrister-at-law, to Charlotte Annie, eldest daughter of C. Martin, M.D., late of Middlewich, Cheshire.

Horne—Gibson.—On January 5, at St. George's, Bloomsbury, Octavius, youngest son of the late B. W. Horne, Esq., of 33, Russell-square, and Mereworth, Kent, to Harriet, second daughter of John Rowland Gibson, F.R.C.S. Eng., of 10, Russell-square, W.C.

Leedam—Edwards.—On December 28, at Christchurch, Waterloo, Henry Leedam, Cambridge-house, Seaforth, to Amy, daughter of the late Edwin Edwards, F.R.C.S., of Crewe.

MacDougall—Forsyth.—On January 5, at St. Thomas's Episcopal Church, Edinburgh, H. R. MacDougall, M.D., Surgeon, Bombay Army, third surviving son of the late Admiral Sir John MacDougall, K.C.B., Dunollie, Argyllshire, to Caroline Harriet, youngest daughter of the late James Forsyth, Esq., of Glengorm, Mull, Argyllshire.

Place—West.—On July 7, 1870, at St. James's, Sydney, John Scott Place, of Glamorganshire, to Helen Mary, fourth daughter of the late George West, M.D.

Roberts—Gammon.—On January 5, at St: Giles's Church, Camberwell, J: C. Roberts, M.D., M.R.C.S., of Nunhead, to Jeanette, younger daughter of C. Gammon, Esq., The Chestnuts, Peckham-rye, and Barge-yard, Bucklersbury.

DEATHS.

Gains, George Edwin, Surgeon, 2nd Battalion, 6th Royal Regiment, at Buttevant, on December 28, 1870, aged 45.

Gogel, Dr. Jean Noe, at Frankfort-on-the-Maine, on December 31, 1870.

Hill, Ann, widow of the late John Hill, M.D., of Leicester, at Kingston-on-Thames, on January 8, in her 85th year.

Kendell, Fanny Mouncey, eldest daughter of D. B. Kendell, M.B., at Heath-house, near Wakefield, on January 4, in her 22nd year.

Low, Alexander James, M.D., late student of St. Bartholomew's Hospital, at his father's residence, St. Brelades, Jersey, on January 5, aged 30.

Siordet, Lewis Davis, only son of Dr. James Lewis Siordet, of Mentone, at the residence of his great-uncle, John James Siordet, Esq., Clapham-common, on January 5, in his 11th year.

Tegart, Frances, widow of Edward Tegart, late of Dover-street, at 8, Gloucester-place, on January 6, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Alderbury Union, Wilts.—Medical Officer for the Third District. Candidates must have the qualifications required by the Poor-law Board. Applications and testimonials to Mr. Thomas Jesse, Clerk to the Guardians, Bedwin-street, Salisbury, on or before January 19, election on the 20th.

Cheltenham General Hospital and Dispensary.—Surgeon. Applications and testimonials to D. Hartley, Esq., Secretary, on or before January 21.

East London Hospital for Children and Dispensary for Women, Ratcliff-cross, E.—Surgeon. Applications and testimonials to the Secretary at the Hospital on or before January 23. Election the following day at 3 o'clock, p.m.

East Ward Union.—Medical Officer for the Workhouse at Kirkby Stephen. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and be registered. Applications and testimonials to John Whitehead, Esq., Clerk to the Guardians, Appleby, on or before January 14, election on the 16th inst.

"Hamadryad" Hospital Ship for Seamen of All Nations, Port of Cardiff.—Resident Assistant Medical Officer; must possess a Surgical qualification, and be unmarried. Applications and testimonials to D. Roberts, Esq., 17, Church-street, Cardiff, on or before January 16.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Midhurst Union.—Medical Officer for the Milland District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board and be registered. Applications and testimonials to Mr. E. Albery, Clerk to the Guardians, Midhurst, on or before January 16. Election on the 17th.

Newcastle Dispensary.—Two Visiting Assistant Medical Officers; must be duly qualified and registered. Applications and testimonials to Mr. H. E. Armstrong, at the Dispensary, on or before January 26. The duties will commence on February 24.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

Skirlaugh Union.—Medical Officer. Candidates must have both Medical and Surgical qualifications and be registered. Applications and testimonials to Mr. T. A. McCoy, Clerk to the Guardians, Beverley, Yorkshire, on or before January 26. Election the following day.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Alderbury Union.—Dr. L. O. Fox has resigned the Third District; area 6310; population 1541; salary £80 per annum.

Beaminster Union.—Mr. George S. Jolliffe has resigned the Fifth District; area 5031; population 1630; salary £40 per annum.

Bosmere and Claydon Union.—The Coddenham District is vacant; area 15,107; population 3685; salary £70 per annum.

Christchurch Union.—Mr. J. Fitzmaurice has resigned the Western District; area 16,515; population 6115; salary £70 per annum. And the Workhouse; salary £15 per annum.

Hollingbourn Union.—Dr. H. V. Sandford has resigned the Fourth District; area 15,312; population 3664; salary £80 per annum.

Longtown Union.—Dr. Divorty has resigned the High District; area 48,637; population 3291; salary £30 per annum.

Midhurst Union.—Mr. Thos. D. Atkins has resigned the Milland District; area 8855; population £1449; salary £55 per annum.

Royston Union.—Mr. R. Pyne has resigned the First District; area 10,008; population 5172; salary paid per case. And the Workhouse; salary £45 per annum.

Skirlaugh Union.—The Skirlaugh District is vacant; area 18,310; population 2336. Also the Workhouse, salary £60 per annum.

APPOINTMENTS.

Bethnal-green Parish.—Edward John Adams, M.R.C.S.E., L.S.A., to the Workhouse.

Gateshead Union.—George P. Blackett, M.R.C.S. Eng., L.R.C.P. Edin., to the Whickham District.

Haslingden Union.—James Galloway, M.B., M.C. Univ. Glasg., to the Edenfield District.

Manchester Township.—Andrew Harris, M.R.C.S. Eng., L.S.A., as Senior Assistant Medical Officer at the Workhouse Hospital in New Bridge-street.

Medway Union.—Walter Buchanan, M.R.C.S.E., L.S.A., to the Second District.

Pwllheli Union.—Robert H. Owen, L.R.C.P. Edin., L.F.P. and S. Glasg., L.S.A., to the Aberdaron District.

Steyning Union.—Edmund Young, M.R.C.S. Eng., L.S.A., to the Fourth District.

Uckfield Union.—Thomas Holman, M R.C.S. Eng., L.S.A., to the Framfield District.

The Hunterian Oration.—Sir William Fergusson, Bart., will deliver this address on Tuesday the 14th proximo.

The College Lectures.—Professor Wilson will resume his course of Dermatological Lectures early in the ensuing month.

Dr. C. A. Gordon, C.B.—The latest intelligence received from Deputy Inspector-General Gordon, who is still in Paris, is dated the 2nd inst. We are happy to hear that he continues in good health, although, of course, undergoing very considerable privations, and exposed to all the risks of the siege.

Medical Charities.—Miss Elizabeth Cowen, lately deceased, has bequeathed £300 to the City of London Hospital, and £200 to the Royal Free Hospital, free of legacy duty, and on a contingency happening, the residue of her property to be equally divided amongst such Hospitals in London and Westminster as her executors may think fit.

Arts Examinations.—At the recent preliminary examination for the Fellowship and Membership of the Royal College of Surgeons, the total number of candidates was 303—viz., 82 for the former, 221 for the latter distinction. For the Fellowship, 61 passed, 11 failed to reach the required standard, but obtained a sufficient number of marks for the Membership, and 10 were altogether rejected. Of the 221 candidates for the Membership, 104 were successful, and more than half were rejected—viz., 117. It will therefore be seen that out of the total of 303, 127 were rejected.

The mortality amongst the persons admitted into the temporary Small-pox Hospital, at Hampstead, exhibits the following striking results:—Deaths amongst the vaccinated, 1 in 24¼; deaths amongst the unvaccinated, 1 in 3. We learn that the managers of the Metropolitan Asylum District have had hands at work night and day on further temporary accommodation.

The next meeting of the Association of Medical Officers of Health will be held at 7·30 p.m. on Saturday, January 21, at the Scottish Corporation Hall, Crane-court, Fleet-street, when Dr. Robert Barnes will bring forward for discussion the question—"How far is the present prevalence of small-pox to be attributed to the plan recently introduced of limiting the number of public vaccinators?" Dr. T. Spencer Cobbold, F.R.S., F.L.S., will read a paper "On Entozoa, in Relation to the Public Health, especially as regards Sewage Irrigation." Illustrated by drawings and specimens.

At the meeting of the General Committee of the Queen's Hospital, Birmingham, held on January 6, 1871, the following resolution was moved by the Rev. Dr. Wilkinson, Rector of Birmingham, seconded by Mr. Furneaux Jordan, F.R.C.S., Surgeon to the Hospital, and carried unanimously:—"The Committee of the Queen's Hospital have received with regret the communication from Mr. West of his intention to make application for the post of Honorary Surgeon to St. Thomas's Hospital, London, as they fear, from his distinguished attainments and special qualifications, he will probably be successful in his application, and they would in such case be deprived of the services of an officer who has discharged his duties in this Hospital to the great advantage of the Institution, and to the benefit of the patients who have been placed under his charge; nevertheless, they cannot withhold the expression of their best wishes for his success in his application."

Harveian Society of London.—The following gentlemen have been elected officers of the Society for the year 1871:—*President:* Victor de Meric, Esq. *Vice-Presidents:* William Hickman, M.B.; M. Berkeley Hill, Esq.; James R. Lane, Esq.; Charles Royston, M.D. *Treasurer:* Henry William Fuller, M.D. *Hon. Secretaries:* J. Brendon Curgenven, Esq.; H. Cripps Laurence, Esq. *Council:* W. H. Broadbent, M.D.; John Hall Davis, M.D.; W. Tilbury Fox, M.D.; T. Carr Jackson, Esq.: Edmund Metcalf, Esq.; Thomas Morton, M.D.; Arthur H. Nowell, Esq.; W. B. Owen, Esq.; Charles W. Pearce, Esq.; Edwin Etty Sass, Esq.; J. G. Westmacott, M.D.; F. B. White, Esq.

Pills by the Million.—The firm of Messrs. Cox, Son, and Co., of the Tasteless Pill Manufactory, Brighton, received the other day a telegram from a west-end firm, to know whether they could undertake the making of a million quinine pills within a fortnight—400,000 pills to be delivered in the first week, and 600,000 in the second. Messrs. Cox, Son, and Co. undertook the work, and a large number of men are now constantly employed from early morning till late at night, and we understand there is every probability of the contract being completed within ten days. Each pill contains a grain and a half of quinine, and nearly 1000*l.* worth of this drug will be used, its value being calculated at the present market price, 6s. per ounce. The original order is evidently given for the sick and wounded in the war.

Treatment of the Sick and other Poor.—A meeting of noblemen and gentlemen interested in the welfare of the sick-poor in our workhouses, was held yesterday at the Ship Hotel, Charing-cross. Dr. Rogers, the President of the Poor-law Medical Officers' Association, was called to the chair, and with the Rev. W. H. Foy, M.A. (late Chaplain of St. George's-in-the-East), Mr. Dexter (Kensington), the Rev. Henry Solly, the Rev. Edmund Auriol, M.A. (Rector of St. Dunstan's-in-the-West), Mr. Blanchard Jerrold, and the Marquis of Towshend, addressed the meeting. It was subsequently unanimously resolved—1. That, having regard to the exposures of workhouse mismanagement and malversation of public moneys shown at the recent official inquiries held at St. George's-in-the-East and Kensington, conjoined with the facts elicited in evidence at the recent trial in the Court of Queen's Bench (Catch *v.* Shaen), it appears, in the opinion of this meeting, desirable to revise the Association for the Improvement of Workhouse Infirmaries, and for securing a radical reform in the administration of the poor-laws. 2. With the view of taking such action as will convince the ratepayers of the Metropolis and the public generally that reform in our administrative arrangements is necessary for the removal of these manifold abuses, it is resolved that a Committee be now formed, with power to add to their number, for the purpose of framing such regulations as may be needed, and generally carrying out the objects of the Association. 3. That Mr. J. T. Dexter be appointed Hon. Secretary, *pro tem.*" Expressions of sympathy were received from several gentlemen who were not able to be present at the meeting.

The Severe Weather.—Mr. Thomas L. Plant thus concludes an article on the public health, in the *Birmingham Daily Gazette* of January 6:—"If the promotion of health had not been made the constant study of municipal rulers of many of our large towns, there is no doubt that such trying years as 1868, 1869, and 1870 would have proved the saddest on record for great mortality. We are now passing through a phase of weather which is more destructive to human life than any other meteorological vicissitude. It is more fatal than fever of every known type. This great enemy slays the old and the young, the rich and the poor. It has no respect for rank. Thousands and tens of thousands perish under the rigour of this terrible blast or frigid wave. The annual death-rate of the ten large towns for the week ending December 31 was no less than 32 per 1000, which is an increase of 6·5 per 1000 on the previous week. No one can wonder at this, seeing the intense cold which has prevailed. The mean temperature of the twelve days ending January 1 was 22·5°, being 14° below the average, and the lowest ever known or registered for twelve consecutive days. Such terrible cold in this climate is incompatible with human endurance. The sufferings of the poor must be dreadful at this time. To alleviate the calamity by prompt measures of relief to the poor during this most inclement season, will tax all the efforts of the authorities in every town throughout the kingdom."

Paris, December 30.—The vin ordinaire is giving out. It has already risen nearly 60 per cent. in price. This is a very serious thing for the poor, who not only drink it, but warm it and make with bread a soup out of it. Yesterday, I had a slice of Pollux for dinner. Pollux and his brother Castor are two elephants, which have been killed. It was tough, coarse, and oily, and I do not recommend English families to eat elephant as long as they can get beef or mutton. Many of the restaurants are closed owing to want of fuel. They are recommended to use lamps; but although French cooks can do wonders with very poor materials, when they are called upon to cook an elephant with a spirit lamp the thing is almost beyond their ingenuity. Castor and Pollux's trunks sold for 45 fr. a lb.; the other parts of the interesting twins fetched about 10 fr. a lb. It is a good deal warmer to-day, and has been thawing in the sun; if the cold and the siege had continued much longer, the Prussians would have found us all in bed. It is a far easier thing to cut down a tree than to make it burn. Proverbs are not always true; and I have found to my bitter experience of late that the proverb that "there is no smoke without a fire" is untrue. The Tupper who made it never tried to burn green wood.—*Diary of the Besieged Resident, Daily News.*

Composition and Quality of the Metropolitan Waters in December, 1870.—The following are the returns of the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	20·33	0·089	0·110	0·005	15·4	4·2
West Middlesex	19·17	0·065	0·110	0·001	15·0	3·6
Southwark & Vauxhall	19·47	0·073	0·110	0·004	15·0	4·0
Chelsea	19·40	0·144	0·110	0·005	14·9	4·0
Lambeth	21·17	0·090	0·125	0·005	15·4	4·2
Other Companies.						
Kent	26·60	0·004	0·175	0·000	20·0	5·6
New River	20·69	0·021	0·091	0·001	15·5	3·8
East London	21·11	0·041	0·125	0·002	15·6	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was more or less turbid—viz., the Southwark and Vauxhall Company and the Chelsea Company.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 101,063,124 gallons; and the number of houses supplied was 482,880. This is at the rate of 31·1 gals. per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 29·3 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

H. Letheby, M.B.

NEW BOOKS, WITH SHORT CRITIQUES.

Clinical Instruction in Insanity a Necessary Element in Clinical Instruction. By John Sibbald, M.D.

⁎ An earnest and urgent appeal to common sense and humanity. It is true that, as a rule, the Medical student, during the whole course of his studies, never sees a case of insanity, and is not even instructed in the theory of the disease or malady, and yet he may be called upon in the very first days of his practice to diagnose and treat the mentally afflicted—may have to determine whether the patient has to be deprived of his liberty or is safe to be kept in society. We commend Dr. Sibbald's pamphlet to the serious attention of the Profession and the public.

The Animals' Friend Almanac.

⁎ A sheet almanac, issued by the Society for the Prevention of Cruelty to Animals. Illustrated by several admirable and striking engravings of the heads of animals.

The York Star

contains the comment of an able paper "On the importance of Combining the Physical with the Intellectual in the Education of Youth," by a patient in the "Retreat."

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

A Man is almost too savage; we suspect in some cases atrophy of certain organs exists, and not hypertrophy.

A Subscriber.—The books were sent to all registered Medical men. Write to Dr. Pitman, the Registrar of the Royal College of Physicians.

Dr. Drysdale.—The existence of *over*-population is an assumption. There may be too many persons in one place, and for this the remedy is dispersion. The real wealth of a country is its people. There is plenty of subsistence, but unequal division. Where poverty and starvation prevail, it is through want of energy, or want of economy, or, in some instances, oppressive laws.

C.—The marriage of relatives intensifies family peculiarities, good and bad. We believe that a scrofulous family breeding in-and-in might be exterminated; the same with *weedy* persons, with large heads, tendency to rickets.

Dr Minor.—By a recent regulation of the English Post-office, a *newspaper* must be unstitched, otherwise it will be charged in transmission through the post as a *book packet.* Our whole edition is, therefore, unstitched. The enclosure came safely to hand.

Q. asks whether an account was ever rendered of the funds of the late Workhouse Infirmaries Association, and whether any balance remains. He should apply to Mr. Ernest Hart or Dr. Anstie.

R. W. will find the information he requires in Weightman's "Laws of the Medical Profession."

Preston.—A mere *canard*, written by some foolish and spiteful person in the town. We shall have something to say on the subject next week. There is another side to the picture.

T. B., Leeds.—The author is a gentleman in large practice in one of the Midland boroughs, and Surgeon to the Hospital there.

Nimmo.—The fee should not exceed five guineas.

A. B. C.—It is a moot point; but the facts appear to be in favour of its contagious character. The subject is treated of fully in Copland's "Dictionary of Practical Medicine."

Calumet.—A Poor-law Medical Officer can claim the coroner's fees (if duly summoned under the provisions of the Medical Witnesses Act) in respect of evidence given at an inquest held on the body of a pauper who has died in a workhouse, not in the Hospital building.

A Partner.—The gross receipts may convey no adequate idea of the *net profits*; these can be ascertained by proper examination, and the *absolute* value of the partnership determined. The gentleman alluded to is highly respectable, and would no doubt carry out the negotiations to the satisfaction of all parties.

Querist, Middlesborough-on-Tees.—The election of Dr. McCuaig as Surgeon to the North Riding Infirmary, to say the least of it, was most irregular; and if the laws of the institution are of any value, it is illegal. Let the facts speak for themselves. Dr. McCuaig retires from practice at Middlesborough, and resigns his appointment of Surgeon to the Infirmary. The vacancy caused by this resignation is filled up. After a time, Dr. McCuaig returns to the town, and commences to practise his Profession. He makes application to the Governors of the Infirmary at their ordinary quarterly meeting "to be placed on the Medical Board." A motion to so place him is carried by a small majority of a very small meeting, subject to the protests of some gentlemen present. Now, then, let us examine the laws which are supposed to regulate the proceedings connected with the Infirmary. Here is the law relating to the election of Surgeon to the Institution:—

"XIV.—That whenever a vacancy shall occur in the office of Physician, Surgeon, Treasurer, House-Surgeon, Secretary, or Chaplain, the House Committee shall direct a special court to be summoned for filling up the same, of which public notice shall be given within seven days after any vacancy shall have been declared by the House Committee; and that no election shall take place sooner than twenty days from the date of the declaration by the House Committee. (For the form of advertisement see Appendix, No. III.)"

It would naturally be thought that, with such a law before them, the quarterly court would have hesitated before electing Dr. McCuaig. Is it in force, or is it in abeyance? If in force, whatever sophistry may be advanced to the contrary, the election is illegal; if in abeyance, the sooner all law is dispersed with the better. It may be said there was no "vacancy," and the court had the power of adding to the Medical Board. Grant this, and you have a fine specimen of that "tyranny which works with the machinery of freedom."

Marriage of Cousins.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Although not a Medical man, I should esteem it a favour to be allowed to reply to the "query" of an "Inquirer" in the last number of the *Medical Times and Gazette.* "Inquirer" asks—"If two brothers married two sisters, would a marriage between their children (being thus doubly related) be essentially different from the case of ordinary cousins?" I think the reply is, that whatever organic disease existed in the respective families would thus be doubly intensified in the children of the cousins.

"Inquirer" then proceeds to ask further—"Is there sufficient proof that such a marriage would probably be productive of marked deterioration in offspring?" This, I take it, must depend upon the proof of whether any or what organic disease existed in the respective families of the original couple.

Although this is a theory of my own, I was gratified to find, only the other day, that it was corroborated by the opinion of an eminent Medical man of whom I was making inquiry with a view to information on the subject of consanguineous marriages. He started with the broad proposition that such marriages resulted in deterioration of offspring, and stated that statistics proved the fact.

Upon my remarking that if that were so it utterly annihilated the belief that all mankind sprung from a single pair, according to the received account, as Adam's sons must have married Adam's daughters.

Brothers must in the first generation have married sisters, and even in the second there could have been no more remote relationship than that of cousins within which to contract matrimony. Consequently, the human race must have deteriorated both physically and mentally from the very first. I am now, as I was then, eliminating the moral feature, and trying to avoid the importation of any theological theory or element into the investigation; but yet it was the social rather than the physical evil that led to the Levitical prohibitions. At all events, it is an historical fact that this intermarrying continued unchecked for many generations of extreme longevity.

The reply of my Medical informant was, that at that time man was comparatively free from disease, although liable to contract it—hence the immunity under such circumstances; and that, even now, if two cousins, comparatively free from disease themselves, married, they would have as healthy an offspring as if they were in no degree related; but that, as almost every family had some specific taint, the union of its members only intensified it. If this be correct, the deterioration of the offspring of a consanguineous marriage is, *per se*, and without reference to any organic disease in the parents, a mere vulgar error.

I am, &c. W.

COMMUNICATIONS have been received from—

Dr. Gray; Mr. J. B. Curgenven; Mr. George Elder; Dr. W. Carter; Messrs Taubner and Co.; Calumet; A Surgeon of Twenty-five Years' Service; Dr. Sibbald; Mr. W. Tyrrell; Dr. Swete; Messrs. H. S. King and Co.; Messrs. Allen Bros. and Co.; Querist; Dr. Waters; Mr. G. C. Boase; Dr. Grigg; Dr. Heywood Smith; An ex-University College Man: Dr. Laslett; Mr. R. Harrison; Mr. Weightman; Mr. J. F. West; A Man; Dr. J. J. Phillips; A Subscriber; Dr. Carruthers; Professor Laycock; Mr. H. Arnott; Dr. Ballard; Dr. Gray; Dr. B. W. Richardson; Mr. J. Chatto.

BOOKS RECEIVED—

The Naval Medical Service: its Present State and Prospects; with Suggestions for its Improvement, by Frederick James Brown, M.D. Lond. —Clinical Instruction in Insanity a Necessary Element in Medical Education, by John Sibbald, M.D. Edin.—Indian Medical Gazette, December, 1870—Scarlet Fever for Ten Years (1860-70) in the Parish of St. George, Hanover-square, by Dr. C. J. B. Aldis—Dr. Henry R. Silvester on the Discovery of the Nature of the Spleen—The Westminster Review, January, 1871—Braithwaite's Retrospect of Medicine, July to December, 1870—The Management of Infancy, Physiological and Moral, by Dr. A. Combe, tenth edition, revised and edited by Sir James Clark, Bart.—Statutes and Rules for the Government of the Infirmary at Middlesborough—The Practitioner, January, 1871—East and West, edited by the Countess Spencer—Lectures and Essays on the Science and Practice of Surgery, Part I., by Dr. Robert McDonnell.

NEWSPAPERS RECEIVED—

New York Medical Gazette—Medical Press and Circular—Nature—Pharmaceutical Journal—The Malvern News—Woodhull and Claflin's Weekly.

APPOINTMENTS FOR THE WEEK.

January 14. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

16. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Dr. Morell Mackenzie will exhibit his Eclectic Inhaler. Mr. Henry Smith will show a Tooth-plate accidentally swallowed. Dr. Carpenter (of Croydon) will read a paper "On the Causation of Scarlatina."

17. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Anthropological Society, 4 p.m. Anniversary.

Pathological Society, 8 p.m. Specimens to be exhibited:—Mr. James Adams, "Fracture of Head of the Radius." Dr. Crisp, "Ulcer of Stomach, with Fatal Hæmorrhage; Cancer of Tongue." Mr. Wagstaffe, "Cystic Sarcoma of the Lower Jaw." Mr. Whitehead, "Peculiar Sputum." Mr. Holmes (for Dr. P. Martyn), "Tumours of Hands and Feet." Dr. Payne, "Pyæmia from Opening of Scrofulous Abscess into Vein; Cysts from Peritoneum containing Air."

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

18. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Hunterian Society. 7½ p.m.: Meeting of Council. 8 p.m.: Dr. Sutton, "On Herpes of the Tongue, Pharynx, and Larynx."

Society of Arts, 8 p.m. Meeting.

19. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society, 8 p.m. Dr. Farquharson, "On some Forms of Pneumonia."

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

20. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Tyndall, "On the Colour of Water, and on the Scattering of Light in Water and in Air."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 7, 1870.

BIRTHS.

Births of Boys, 1173; Girls, 1195; Total, 2368.
Average of 10 corresponding weeks, 1860-69, 2160·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	902	926	1828
Average of the ten years 1860-69	787·8	798·6	1586·4
Average corrected to increased population	...	...	1745
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	9	13	16	1	4	1	4	2	5
North ...	618210	16	1	31	1	5	2	6	..	2
Central ...	383321	6	3	9	...	6	1	2	3	3
East	571158	36	8	13	...	15	4	2	2	2
South... ...	773175	12	9	40	2	6	2	4	2	7
Total	2803989	79	34	112	4	36	10	18	9	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·809 in.
Mean temperature	31·1°
Highest point of thermometer	45·9°
Lowest point of thermometer	19·2°
Mean dew-point temperature	26·7°
General direction of wind	S.S.E., S.W., W.S.W.
Whole amount of rain in the week	0·07 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 7, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Jan. 7.	Deaths Registered during the week ending Jan. 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3258469	41·8	2368	1828	45·9	19·2	31·1	-0·50	0·07	0·18
Portsmouth ...	125464	13·2	73	46	46·0	19·2	33·3	0·72	0·19	0·48
Norwich	81787	10·9	69	57	43·0	18·0	29·2	-1·56	0·09	0·23
Bristol	173364	37·0	121	129	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	39	53	45·9	4·9	29·3	-1·50	0·19	0·48
Birmingham ...	378574	48·3	257	203	48·8	13·0	30·6	-0·78	0·21	0·53
Leicester	101367	31·7	75	70	44·5	9·7	28·4	-2·00	0·25	0·63
Nottingham ...	90480	45·3	47	59	44·7	11·0	27·6	-2·44	0·08	0·20
Liverpool	526225	103·0	333	566	48·0	19·1	32·8	0·45	0·37	0·94
Manchester ...	379140	84·5	232	279	...	...	...	...	...	...
Salford	123851	23·9	87	73	47·0	10·9	30·0	-1·11	0·53	1·35
Bradford	148030	22·5	86	122	40·0	6·7	26·8	-2·89	0·52	1·32
Leeds	266108	12·3	92	170	48·0	7·0	27·6	-2·44	0·19	0·48
Sheffield	255247	11·2	191	138	47·0	10·7	28·8	-1·78	0·34	0·86
Hull	135195	38·0	79	56	...	...	...	...	...	..
Sunderland ...	103037	31·2	41	48	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	96	92	45·0	13·0	30·4	-0·89	0·10	0·25
Edinburgh	179944	40·6	124	122	48·7	29·0	37·6	3·11	1·20	3·05
Glasgow	477627	94·3	423	359	46·6	30·0	35·4	2·89	2·19	5·56
Dublin (City, etc.†)	322321	33·1	146	221	51·5	28·0	38·2	3·41	...	...
Total of 20 Towns in United Kingd'm	7336961	34·4	4979	4691	51 5	4·9	31·1	-0·50	0·43	1·10
Paris—Week ending Jan. 7	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Dec. 31 ...	622087	68	...	318	...	...	14·7	-9·62	...	...
Berlin—Week ending Jan. 7 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·809 in. The highest barometrical reading was 30·7 in. on Sunday, and the lowest was 29·44 in. on Saturday.

The general direction of the wind was S.S.E., S.W., and W.S.W.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

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☞ A sample of Chloralum Wool will be sent post free to any Medical Man or Chemist on receipt of one shilling in stamps by the CHLORALUM COMPANY, No. 1, Great Winchester-street-buildings, London, E.C.

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Sold also Wholesale by all Drug Houses and Druggists' Sundrymen, and Retail by all Chemists.

CHLORODYNE.

SPECIAL NOTICE.

The absurd statements that have recently appeared in Medical and other Journals respecting the constituents of Chlorodyne (each analysis differing widely), J. T. Davenport is compelled to further CAUTION the Profession against using any Compound under the name of Chlorodyne but the genuine, which alone has gained such extraordinary celebrity.

J. T. Davenport appends Medical testimony in confirmation of the above.

The wonderful efficacy of Chlorodyne being universally acknowledged, it must be evident to all that the assumption of the name to any other Compound than the Genuine is not only dishonest in obtaining money under false pretences, but still more unprincipled by injuring the health of the Patient and causing discredit to the Physician. Even death has resulted from the use of spurious Chlorodyne when benefit had been previously experienced from the genuine; and this melancholy circumstance has no effect in restraining these heartless proceedings.

From Dr. J. WILSON, Castleton, Yorkshire.

I require to use a considerable quantity of Chlorodyne in cases where no other medicine is of the least avail; and my object in wishing a supply from your own establishment is that I am frequently deceived by getting a *Spurious* article from other places, although I never order anything but the genuine Browne's Chlorodyne.

From JAS. ATKIN, M.D., Medical Officer, Fever Hospital, Oldcastle, Co. Meath.

Having ordered from our Druggists "Chlorodyne," I was not only *disappointed in its effects*, but annoyed when I received a spurious compound. I have been in the habit of using your Chlorodyne with great advantage to my patients and satisfaction to myself.

From F. E. BARTON, Esq., Surgeon, Dover.

I have now used your Chlorodyne in numerous cases, and have much pleasure in adding my testimony to its very great efficacy as an Anti-spasmodic and Anodyne, having found it especially valuable in those cases in which Opium does not agree well with the patient.

From Lord FRANCIS CONYNGHAM, Mount Charles, Donegal, 11th December, 1868.

"Lord Francis Conyngham, who, this time last year, bought some of Dr. J. Collis Browne's Chlorodyne from Mr. Davenport, and has found it a most wonderful medicine, will be glad to have half a dozen bottles sent at once to the above address."

"Earl Russell communicated to the College of Physicians that he received a despatch from Her Majesty's Consul at Manilla, to the effect that Cholera has been raging fearfully, and that the ONLY remedy of any service was CHLORODYNE."—See "Lancet," 1st December, 1864.

THE WAR.—EXTRACT OF LETTER.

25, Wetter Strasse, Bonn-on-the-Rhine, August 26th, 1870.

I have for some years used Dr. Collis Browne's Chlorodyne, and have a high opinion of it as a sedative. I have within the last fortnight used it with some Prussian soldiers severely wounded with the Chassepot: it answered admirably. In severe cases of Chassepot wounds the patients were harassed with cough, especially at night. The Chlorodyne completely allayed, and finally removed, it. I should consider it quite invaluable as a remedy to give where primary amputation was requisite, but the patient in too low a state from shock to the nervous system to allow of operation until rallying of the condition admitted of it.

(Signed) CHARLES MADDEN, Retired Surgeon, Bengal Army.

To Mr J. T. Davenport, 33, Great Russell-street, London.

CAUTION.—Vice-Chancellor Sir W. Page Wood stated that Dr. J. Collis Browne was undoubtedly the Inventor of CHLORODYNE, that the whole story of the Defendant, Freeman, was deliberately untrue, which, he regretted to say, had been sworn to.—See "Times," 13th July, 1864.

The Sole Manufacturer of Dr. COLLIS BROWNE'S Chlorodyne is

J. T. DAVENPORT, 33, Great Russell-street, Bloomsbury-square,

Who alone received the Recipe, and who is the Only Authorised Maker.

ORIGINAL LECTURES.

LECTURES DELIVERED IN THE PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

Lecture II.—On Leucocytes—(*continued*).

Various methods have been adopted for the electrical stimulation of living contractile corpuscles. The most marked effects are produced when discharges from Leyden jars are employed. It is, however, much more convenient to use induced currents; but the apparatus must be so arranged that the effects resemble those of statical electricity. Hence, of the two currents which are respectively produced in the secondary coil at each opening and breaking of the primary currents, the direct, which occurs at the opening, and which is of shorter duration but greater intensity, is preferable.

In operating on leucocytes, or, indeed, on any other contractile cell, a single shock must be given at a time. For this purpose the primary current must be opened in the manner described at the end of last lecture, and the operation repeated or not at the interval of a few minutes, according to the effect produced. A single shock with the secondary coil pushed up so as to surround the primary one, produces an appreciable change in the appearance of the corpuscles, the outline of which seems to become harder and more distinct, while the processes are retracted. After one or two more shocks it assumes the spheroidal form, as shown in *b*, Fig. 3 bis. If at this point the excitation is discontinued, it begins to recover, but does not re-assume the vaguely defined outline and flimsy appearance which it had before. The processes are no longer acuminated, but rounded or knobby, as in *c*. If the shocks are repeated, and more particularly if the corpuscles are subjected to them in rapid succession, as when the induction coil is worked in the usual way, they are disorganised and destroyed. They become larger and more transparent, while their nuclei and the coarser granules they contain come into view; the effect produced being such as to remind one of that of very dilute acetic acid.

Fig. 3 bis.

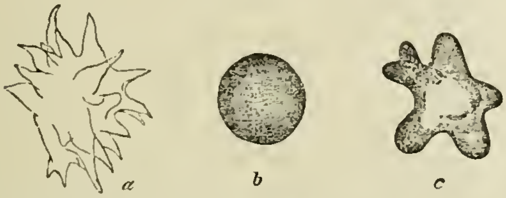

Fig. 3 bis.—*a*, an amœboid leucocyte; *b*, a dead leucocyte; *c*, a leucocyte which, after having been acted on by the electric stimulus, has begun to resume its movements.

Observation VI.—Action of the Electrical Stimulus on other Living Cells.

The action of the electrical stimulus on leucocytes may be illustrated by comparing it with the phenomena which attend the excitation of other cells by the same methods. The most instructive object of observation is the cartilage cell, partly because it stands in so close a relation to the connective-tissue corpuscle that it may be inferred that its physiological properties are the same, but more especially because it may be so easily studied in the living state. The thin ensiform cartilage of the frog, and the cartilages of the shoulder-girdle of the newt, are admirably adapted for the purpose, and have been studied by Heidenhain and Rollett.

For our present purpose, the broad thin cartilages of the shoulder-girdle of the newt are the best objects. Any of these cartilages may be examined, even by high powers, almost without any preparation. If a newt is used, all that is necessary is to divide the integument covering the thorax in front by an incision in the middle line. The sharp edges of cartilage on either side project into the wound, and may be at once snipped off and transferred to the under side of the cover-glass of a putty cell, on which a drop of frog's serum, or, still better, of aqueous humour, has already been placed. The cartilage cell thus observed is very unlike the same structure as usually seen in the dead state. Like the living leucocyte, it consists of slightly cloudy grey protoplasm, which, if it does not entirely occupy the cavity of the matrix which belongs to it, at all events appears to do so, for there is no indication of space between it and the inner surface of the capsule. The nucleus appears as a faintly, but at the same time clearly, defined spheroid, in addition to which a few fat granules can also be distinguished.

Fig. 6.

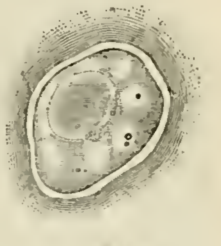

Fig. 6.—A living cartilage cell. The nucleus is not so granulous as it ought to be, but in other respects the representation is true to nature.

We now electrise the bit of cartilage by placing it between the tinfoil points, and sending through it a few opening shocks. The changes observed are similar to those we have already seen in the leucocyte. The protoplasm mass becomes much more distinct; its outline, which was before lost in that of the hole it occupied, is now hard, and, if the excitation is continued, we shall have no doubt whatever that it has contracted to a much smaller size than before, and, further, that it has assumed an irregular outline, as if the contraction were unequal. So far the phenomena are the same, but there are some important points of difference. The cartilage cell, when it has once shrivelled up, is no longer capable of recovery. If, indeed, we except the peculiar bulgings of its contour, its condition resembles very much that of cartilage cells which have died of themselves, instead of being killed suddenly by electricity. All dead cartilage cells appear to occupy less space than they do in the living state.

Fig. 7.

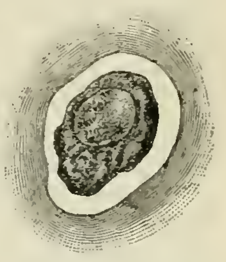

Fig. 7.—Action of the electrical stimulus on the cartilage cell. Usually the nucleus is invisible. That it is seen in this instance depends on its position.

In accordance with the plan of these lectures, I will abstain from drawing any inference from the facts we have been considering, excepting in so far as may be necessary to bring them into relation with each other.

We have seen that, to all appearance, a living leucocyte is a mass of transparent, homogeneous material; that it may draw itself together partially or completely—either shrivelling itself into a spheroid, or extending itself in one direction by contracting in another; that the movements thus produced are rendered more active at higher temperatures than at lower, but that if the warming is carried too far they cease by the production of a permanent state of contraction; that so long as a leucocyte is in relation with consistent surfaces, it is capable of locomotion, but that in liquids it has no such power, but obeys the law of gravity implicity; that it is endowed with the faculty of taking into its interior such granules or corpuscles, of a size not greater than itself, as it may happen to come into relation with; and, lastly, that it is singularly dependent on surrounding conditions for the maintenance of its vital properties—in other words, that its life cannot continue even for a very short time at temperatures or in media which differ from those which are natural to it.

Such are the facts. A very few words will be sufficient to point out their practical—*i.e.*, pathological—bearing. You already know that leucocytes are to be found in a great many different situations, and under a variety of circumstances, in the living body. We have studied them principally in the blood, but we have also seen them (in Professor Lortet's experiment) escaped from the blood-stream in countless myriads into the cavity of the swimming-bladder which we inserted under the skin of our rabbit. This liquid, you well know, is called pus, and the process by which it is produced is called suppuration. Now, from this and other similar facts, it was for a time supposed that suppuration always depends on emigration of the blood leucocytes; and if we were to look merely at this one result, we might easily believe so. At the beginning of many acute inflammations, the formation of pus is so rapid that we cannot hesitate to admit that the leucocytes have come out of the blood; but in the later stages we always find the plainest indication that the corpuscles are formed in the tissues. To prove this, there is no experiment which is more satisfactory than the one I have just referred to; for while, on the one hand, the crowding of the bladder with corpuscles, in so short a period as twenty-four hours, affords evidence of locomotion which, to my mind, is scarcely open to question, the production of innumerable young leucocytes from masses of protoplasm, or, as Dr. Beale calls it, "germinal matter," which is derived from the surrounding connective tissue, is still more certain.(a)

ON THE COLOURED BLOOD CORPUSCLES.

OBSERVATION VII.—DR. NORRIS'S EXPERIMENT.

Before coming here, you have already learnt that the blood corpuscles are greenish-yellow discs, of circular or oval contour; that they owe their colour to hæmoglobin; that the oval corpuscles of reptiles are nucleated; the circular discs of man and the mammalia apparently homogeneous; that the opposed surfaces of the latter are not flat, but hollow, and that the corpuscles are consequently thinner in the middle than at the sides. When a drop of human blood is examined under the microscope, next to the form, the most striking fact which presents itself is the tendency the corpuscles have to stick together in rolls by their concave surfaces. The cause of this tendency is not known; but an experiment has been lately made by Dr. Norris, of Birmingham, which deserves our attention as a help towards understanding it. This experiment has for its purpose to show that, in order to account for the phenomenon in question, all that is necessary is to assume that the corpuscles, when in the living state, attract each other, and that when once in contact they adhere. The experiment may be made in a variety of ways, the best being that which the author himself recommends.

Floating in this basin are a number of little corks, shaped, like blood corpuscles, into circular discs. They are about half an inch in diameter, and a tenth of an inch thick. To prevent them from swimming horizontally on the surface, each of them is weighted near one edge by inserting into it a little plug of lead. By this contrivance the surfaces are kept vertical, while in other respects their movements remain free. The liquid in which they float is not water, but petroleum; but the little corks, before they were put into it, were thoroughly wetted. Consequently, they attract each other, just in the same way as drops of oil do on the surface of water, or drops of water on the surface of oil. Let us now agitate the liquid, so as to separate the discs from each other, and then leave them to themselves. They at once coalesce, and soon you see them forming themselves into *rouleaux*. They are drawn together (if I may so express myself) because they have a liking for each other, and an objection to the liquid in which they float. They form *rouleaux* because they are disc-shaped.

So far as it goes, this experiment is a very instructive one, but, as I said before, it is not an explanation of the phenomenon; for we do not, as yet, know *why* the corpuscles of blood which have just been removed from the body attract each other, whereas those of blood which has been deprived of its fibrine by agitation have no such tendency. Within the vessels they do not do so, even when the blood is quite motionless. When, however, a living tissue is irritated mechanically or chemically, or exposed to a temperature slightly above the normal, the corpuscles stick together in a most remarkable manner, suggesting to the observer the inference that by their adhesiveness they produce that "stasis" which in mammalian animals appears to be the very first phenomenon in the process of inflammation. In the inflammatory "stasis," however, it is to be noticed that the aspect of the adherent corpuscles is very different from that which they present in ordinary *enroulement*. We shall have the opportunity of observing, when we study the circulation, that they coalesce so completely that the capillaries in which the blood has become stagnant, look as if they were injected with a homogeneous, red, transparent mass.

OBSERVATION VIII.—PROFESSOR ROLLETT'S EXPERIMENT.

We shall next give our attention to the apparently homogeneous material of which the corpuscle consists. Is it really of the same substance throughout—a mere lump of transparent matter—or is it a vesicle? We shall find that neither of these alternatives expresses the probable truth. One of the grounds for adopting the former view is, that the corpuscle is so wonderfully extensile that it can be drawn into lengths or broken up mechanically into the smallest bits; and that, when this is done, the material of which each thread or particle consists presents exactly the same appearance. There are various ways of showing this. The best is that recommended by Professor Rollett, the results of which you see here.

Defibrinated blood has been introduced into glycerine jelly (which will keep, for a short time, liquid at the temperature of the body), and allowed to solidify. If we place a section of the mass under the cover-glass, and examine it, we shall find the corpuscles assume the most remarkable appearance. Some retain their original form, but most are drawn out into prolongations of various lengths, or are otherwise misshapen.

Another way by which the corpuscles may be comminuted is by introducing a very small drop of fresh blood under a cover-glass, and then suddenly lifting it off and replacing it. The effect of this operation (especially if once or twice repeated) is to break up many of the corpuscles into fragments of all sizes. If frog's blood is used, the field is also full of free nuclei.

Further, when the blood corpuscles have been squeezed out of shape by mechanical agency, they show a remarkable tendency to return to their original form, and hence must be thoroughly elastic. It is not difficult to show this out of the body, but it can be studied much more advantageously in the living vessels. In studying the capillary circulation in the transparent membranes of the frog, you will have opportunities of seeing how the individual corpuscles squeeze through narrow channels, elongating themselves into threads during their passage, and immediately after resuming their original form. All these phenomena lead us to believe that the corpuscles are not vesicular, for if there were a membrane it could hardly fail to come into view when the structure is either drawn into threads or broken into particles, as we have seen it.

We have next to show that, even though we admit this notion as proved, it does not follow that the corpuscle is homogeneous. On the contrary, there are strong grounds for thinking that it consists of two substances—one of which is concrete, the other in a state at all events approaching fluidity—the fluid not being enclosed in a cavity, but pervading the substance, or soaking through it. This idea has been variously expressed. Thus, Professor Brücke conceives the blood corpuscle as a porous structure of colourless hyaline substance (œcoid), the pores of which are occupied by a coloured living pulp (zooid). Professor Stricker entertains a similar view as regards the colourless part, but differs from Brücke as to the constitution of the zooid, which he designates as the body (*Leib*) of the corpuscle.(b) This notion is founded partly on the fact that when saline and saccharine solutions are added to the blood corpuscles of the amphibia, they present an appearance as if the colouring matter were retracted from the circumference and collected round the nucleus, sometimes surrounding it as a simple envelope, at others stretching from it in rays towards the periphery, but principally on the two experiments which we are now about to repeat.

OBSERVATIONS IX. AND X.—PROFESSOR BRÜCKE'S ŒCOID AND ZOOID.

The first experiment (Brücke's) consists in the addition of a solution of boracic acid (2 per cent.) to fresh batrachian blood—that of the newt being preferable. At first, the contour of the corpuscles changes, more or less, from oval towards circular, while the nuclei become eccentric. Soon the colouring matter gathers itself round the nucleus in the manner already indicated; so that the nucleus looks as if it were stained with or without assuming a stellate form. Professor Stricker's ex-

FIG. 8.

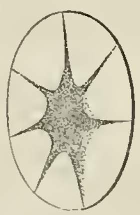

FIG. 8 (diagrammatic, copied from Rollett).—Optical section of blood corpuscle of newt, showing the stellate form assumed by the precipitate (zooid) when produced by carbonic acid gas, after previous dilution with water. This form is observed under other circumstances as a product of feeble acid reaction. Thus, when blood to which water (three parts to one), or solution of chloride of sodium, or sulphate of soda, has been added, is subjected to electrolysis, corpuscles in which the coloured material is gathered round the nucleus are found in the neighbourhood of the positive—*i.e.*, acid—pole. See Rollett, "Untersuchungen aus dem Institute für Physiologie und Histologie." Leipsic, 1870, p. 1.

(a) The mention of the term "germinal matter" suggests to me another practical application of our subject, even more direct than that we have already made. According to the distinguished physiologist and pathologist to whom we owe that term, the material, by the conveyance of which, through the air or other media, contagious diseases are believed to be propagated, consists of living protoplasm, which has resulted from the repeated division or "proliferation" of leucocytes. It would lead me too far to pursue this notion to its consequences. All that I need to do is to point out its *primâ facie* improbability. If a leucocyte cannot live in dry air a single second, nor even in its natural liquid if the temperature rises above 110° Fahr., how can we suppose it possible that the virus of those diseases which are conveyed through the air for considerable distances, or that of vaccine which may be stored for months on vaccine points, can owe its activity to vital properties identical, or even analogous, to those of leucocytes.

(b) Brücke, "Ueber den Bau der rothen Blutkörperchen." Wiener Akad. Berichte, bd. lvi., S. 79. Stricker, "Mikrochem. Untersuch. der rothen Blutkörperchen." Pflügers Archiv, i., 590.

periment is not quite so simple. We require the movable stage which we employed at the last lecture for studying the effects of temperature on leucocytes. This time we use it, not merely for the purpose of applying heat to our preparation, but in order that we may subject it to the alternate action of moisture and gases. You observe that there are two brass tubes, which project from the front of the box, and end in vulcanite connecting tubes, H and I. Each of these tubes communicates by a separate opening with the central cavity, which we used before as a moist chamber. The vulcanite tube, H, ends in a glass T tube, one branch of which leads, by a delivery-tube, to a simple apparatus for disengaging carbonic acid gas, the other to a mouthpiece. Both of these tubes are furnished with proper clips or pinch-cocks, by means of which the experimenter may either blow in atmospheric air or admit a stream of CO_2. The apparatus we use is of the simplest construction. It consists of a common bottle, with a perforated cork, to which the delivery-tube is adapted. The bottle contains marble in fragments, and has a small hole in the bottom of it. When it is plunged into a larger vessel containing dilute hydrochloric acid, the acid liquid enters by the hole, and continues to act upon the marble so long as the stream is unobstructed; but as soon as I leave hold of the clip, it is driven out of the bottle by the accumulating gas, when, of course, the action ceases. A washing bottle should be interposed between the bottle and the T tube.

FIG. 3.

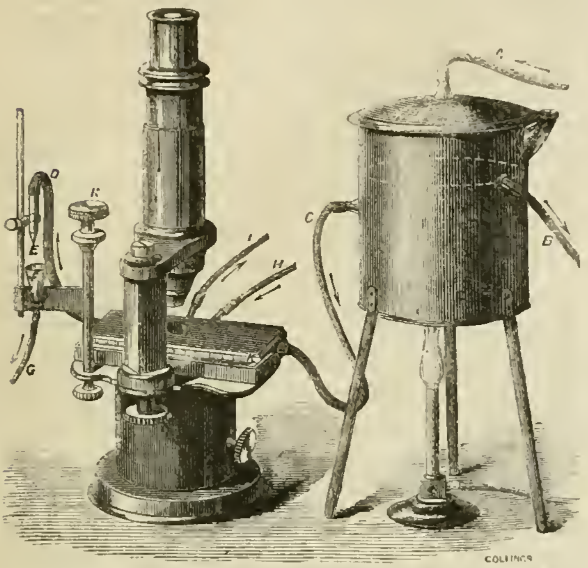

FIG. 3.—Prof. Stricker's warm stage. In the vessel A B C the water is maintained at a constant level (indicated by the dotted line) and at boiling temperature. A, supply tube; B, waste tube; C, tube leading to the stage; D, tube by which the hot water leaves the stage, terminating in a conical dropper, E; F, funnel for collecting the drops which fall from E; G, waste. The rate of flow is determined by varying the height of E, by means of the sliding screw on which it is supported. It admits of more exact adjustment by means of a fine screw which works in the axis of the vertical column, on which the escape tube is supported. This column is firmly fixed in the stage of the microscope; its axial screw terminates above in a milled head, K.

The experiment, when made in a somewhat different form, is of great interest in relation to the changes which occur in respiration. Our present object, however, is to learn from it some facts as to the constitution of the blood corpuscle, by observing the effects of various degrees of dilution with water—first in common air, and then in an atmosphere of carbonic acid gas.

A drop of water having been placed, in the same way as before, on the floor of the chamber, an extremely thin layer of blood is carefully spread over the surface of the cover-glass, which is then inverted and put in its place. The principal facts to be observed are the following:—1. By carefully warming the object, so as to evaporate some of the water, the blood may be diluted so gradually that the various stages in the reaction may be studied with the greatest precision. In the first stage—that which is attained when the warming has been carried just far enough to cloud the dry part of the cover-glass—the corpuscles look paler, but are not altered in any other respect. The nucleus is still invisible, for water has no special action upon it. If the dilution is carried further, the colouring matter is discharged, while the nucleus remains as before—pale and scarcely visible. 2. The effects of passing carbonic acid gas through the chamber differs according to the degree of dilution. If the drop of blood is not diluted at all, the corpuscle is entirely unaltered in shape and appearance. The change of colour, which, as we shall see on a future occasion, is produced, cannot be appreciated without the aid of the spectroscope. But if the blood has been previously diluted, there are remarkable changes, both of form and appearance. The corpuscle, which was previously an oval disc, is now, more or less, spheroidal, and its nucleus, which was before indistinguishable, comes prominently into view as a granulous-looking object. In the second stage of dilution, the precipitation which appears to be the cause of this remarkable change is much more complete, and is not limited to the nucleus. The whole of the colourless area which represents the corpuscle becomes granular. 3. Either effect is quickly removed on the substitution of common air. In other words, the precipitate produced by carbonic acid gas is redissolved in oxygen. 4. When the first degree of dilution is employed, the observation may be repeated in the same quantity of blood several times. Sooner or later, however, a point is reached at which the precipitate becomes permanent, and in this case many of the corpuscles assume an appearance which corresponds exactly with that which we saw before in blood treated with boracic acid solution; the granular *entourage* of the nucleus extends in radiating lines towards the circumference of the corpuscle (see Fig. 8).

What is the nature of the coloured precipitate? We shall see, when we come to speak of the coagulation of the blood, that an albuminous compound exists in the blood corpuscles (fibrino-plastin, paraglobulin), of which it is the characteristic peculiarity that if a stream of carbonic acid gas is passed through a dilute solution of it, it is thrown down as a granular precipitate, which can be redissolved in oxygen. As there is no other immediate principle in the blood corpuscle to which this reaction fits, we need have little hesitation in concluding that the precipitate (or, to use Brücke's language, zooid), consists of paraglobulin in union with colouring matter. That it is really contractile, or, in any other sense, more alive than the rest of the corpuscle, is at present rather matter of speculation than of fact. All that can be established in this direction seems to be that it differs from the rest of the corpuscle (the œcoid) in being much more liable to alterations of form and appearance—for it is to it that (if I may be allowed to use a word much more current in its German than in its English form) the extreme *lability* of the coloured corpuscle is referable. You will find this statement fully borne out by the experiments we have still to make.

OBSERVATION XI.—DR. ROBERTS'S EXPERIMENT.

The coloured constituent of the blood corpuscle (the zooid) may be demonstrated in a very striking manner by a method discovered some years ago by Dr. Roberts, of Manchester, which we practised in the histological part of the course.(c) A drop of solution of tannin (about four grains to the ounce) is placed on a slide, and then a droplet of blood taken fresh from the finger is added, and the two well mixed with a glass rod, in the usual way. The effect produced is most surprising; indeed, at first sight, altogether incomprehensible (see Fig. 9). The corpuscle, which was before homogeneous, is divided into two parts, one of which has an irregular, but strongly-defined, hard outline, and is deeply coloured; the other is pale and colourless—indeed, all that can be seen of it is a faint circle, the diameter of which corresponds with that of a blood disc. The coloured refractive appendage presents considerable varieties, both of size and form. In one instance, it merely projects from the colourless spheroid as the cornea does from the globe; in others, the round knob is as large as the spheroid itself, and between these two there are all gradations. When the prominence is seen in profile, it appears as if separated from the remainder of the corpuscle by a sharply-defined line, so that it might be supposed to correspond to a membrane interposed between the coloured and the colourless substance. These remarkable appearances are rendered still more striking

FIG. 9.

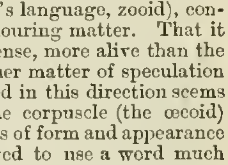

FIG. 9.—Action of tannin on the human coloured blood corpuscles (700 diam.).

(c) "On the Effects of Magenta and Tannin on the Blood Corpuscles." *Proceedings* of the Royal Society, 1863.

by the addition of solution of aniline, which stains the projections intensely.

There can, I think, be no question that we have again to do with Brücke's zooid, which seems under the action of the tannin to shrink together in such a way that it can no longer be contained in its spongy dwelling, and makes its exit *en masse.* That it is coloured by aniline, is easy to understand, if we suppose it to consist partly of a material akin to protoplasm, for all such substances in the dead state are apt to be stained by aniline.

Observation XII.—Solution of the Zooid.

It has long been known that, when water is added to blood in quantity, the blood corpuscles are apparently dissolved in the diluted LIQUOR SANGUINIS. This solution is, however, only partial; for, if the liquid is examined under the microscope, each corpuscle is seen to be represented by a colourless spheroidal residue. This residue was formerly described as the membrane of the corpuscle, rather in conformity to the notion that, being a cell, it must have a membrane, than because the structure in question possessed membranous characters. We now recognise it, not as a membrane, but as the porous structure already referred to as the œcoid.

There are many other methods by which the zooid may be compelled to relinquish its dwelling without altering the density of the serum at all. So long ago as 1851, Dr. Chaumont discovered that the vapour of chloroform had this effect. That of ether acts in the same way, but not so rapidly. More recently, it has been shown by Rollett that the same effects are produced by freezing, as well as by electrical discharges and induction currents. In all of these cases (as you have already seen as regards some of them) the blood undergoes a remarkable change of appearance. In the natural state, blood, even in the thinnest layers, is perfectly opaque. You may judge of this by looking at it either by transparent light (as, *e.g.*, in a very thin capillary tube) or by reflected light, spread out in a thin layer over the surface of a porcelain capsule. In the former case the blood presents the appearance of a solid-looking band in the axis of a glass rod, in the latter it appears as a bright scarlet patch, completely concealing the white surface, and obscuring the light which would otherwise be reflected by it. If, however, the blood has been subjected to any of the processes above mentioned, the appearances it presents in the two cases are materially altered. The blood in the tube looks bright, because it is translucent, whereas that on the porcelain looks as dark as if it were venous, because the corpuscles from which the light shone, reflected by countless convex surfaces, are now scarcely more refractive than the liquid in which they are immersed. In other words, blood in the natural state has the character of an opaque pigment, such as vermilion; whereas in the altered state it resembles a lake, such as carmine—a fact which Rollett, who, as I have stated, has studied these changes with great exactitude, expresses by the terms *deckfarbig* and *lackfarbig*, as applicable to the former and the latter respectively.

The details of the methods we employ for demonstrating these reactions will be given in the next lecture.

LECTURES ON ANALYTICAL PATHOLOGY.

DELIVERED AT

Guy's Hospital.

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Lecture XII.

ON THE VARIETIES OF TUBERCLE, AND THE RELATION OF TUBERCLE TO INFLAMMATION.

At last lecture we called in question the constancy and value of the so-called miliary tubercle and its two varieties, grey and yellow. What I say, then, is this: that although some tubercles are comparatively yellow and opaque, and some comparatively grey and pellucid, yet it is wholly futile and wrong to suppose that tubercles can be divided into yellow and grey; and to know this will greatly help us in considering the rights of the contest between those who have affirmed and denied their identity.

The question in discussion in reference to grey and yellow tubercle has been this: Are they only stages of the same thing, or are they distinct kinds of tubercle? Those who hold them to be stages, pointing to the fact that in the same lung you see yellow tubercles, and below these, grey tubercles with yellow centres, and yet below these, grey tubercles. They thought this showed that in spreading down the lung from above, the newer tubercles are found commencing grey, and the older ones are growing yellow in their central older point, while the yet older ones above these are quite turned yellow. On the other part, the holders of the belief that the grey and yellow tubercles are different in kind, are driven or drawn to this belief by the greater impression they receive from a fact equally true—namely, that in examining different cases you find in some the tubercles all to have a prevailing yellow colour, while in some other cases they have a prevailing grey colour.

Now, in asking this question there are really three distinct questions asked confusedly; these are—1. Does grey tubercle ever turn yellow? 2. Does grey tubercle ever not turn yellow? 3. Does yellow tubercle ever appear without being grey at first? Look carefully at each of these questions. An affirmative answer must be given to each. No doubt grey tubercle does turn yellow at its centre. No doubt grey tubercle does not sometimes so turn yellow. And no doubt tubercle is sometimes yellow from the first.

To understand how this is, we must see that there is another element, which those who treat the question as an alternative between stage and kind leave out of consideration. This element is the element of *intensity.* A yellow tubercle may be an older tubercle than grey, or a different kind from grey; or it may be a *more intense tubercle than grey.* Let me dwell on these points a little more. I stated that the question asked in reference to these celebrated two forms of tubercle is practically this question: Is the grey a stage of the yellow, or is it a different kind?

Now, I want you to see plainly that there is yet another sort of difference, besides these of stage and kind, and that sort of difference is—difference in degree. We said that grey does soften into yellow, and that it does not soften into yellow; and that the yellow comes without it. Now, the first of these propositions would argue an identity of kind, but the second and third appear at first to militate against the supposition of identity in kind. Are they really opposed to the supposition of identity in kind? No; because the absence of a grey stage is due to high intensity, the presence of a grey stage to low intensity of the tubercle—a lower or higher degree, not a different kind; just as in inflammatory lymph we get a plastic, pellucid, greyish matter, called "plastic lymph," or a yellowish, opaque, solid or liquid substance, called "puriform lymph," or pus. We know in the case of lymph and pus that their difference is one of intensity, because we are able ourselves experimentally to determine the production of one or other by graduating the intensity of cause. If you draw a thread soaked in croton oil through the testis of a dog, you get the production of pus, and some gangrene perhaps; if, instead of croton oil, you use a thread either clean or with some less irritating substance on it, you get a less and less degree of inflammation, according as it is a less and less irritating substance that you employ. And hence you recognise purulent and gangrenous as the extreme severity of inflammation, and the plastic as a lower degree of the same. Or, if you proceed another way in the judgment of these relations, you will find, on examining, that at the focus of irritation you get the production of pus, while a grey plastic lymph is produced further from the focus; so that, when the pus is fully formed, the grey plastic matter organises to form a sac, and encloses the pus.

These facts prove beyond doubt that the plastic lymph in inflammation is the same thing as, but lower in intensity of causation than, the pus. Now, we are not able to cause tubercles in this way directly by graduated degrees of causation, but analogy will, I think, convince us that the yellow and more pus-like tubercle is an intenser one than the grey or more lymph-like tubercle. And there is more than analogy in support of this, for the severer and more rapid the tuberculisation of the patient, the more yellow is the tubercle found to be. And again, on quite another hand, the yellow tubercle is destructive of the substance it occupies to a greater extent than the grey, in which you generally still see remains of the tissue; while again, further, the elements of the grey tubercle, like those of plastic lymph, show more or less tendency to elongate and organise. If we are right in using this simple analogy, and rightly use it, it clears a way to remove all the difficulty.

But if it be found that a yellowness supervenes on the grey tubercle as a result of oldness, and that, on the other hand, a severity of intensity produces a yellowness in the tubercle not preceded by greyness, it may be fairly asked—Is the yellowness which comes from oldness of the grey, the same yellowness as that caused by severity in the originally yellow tubercle? This is a question of fact to be settled by observation. You will find, I believe, after examining specimens very carefully, that the yellowness of grey tubercle is a fatty degeneration of, and a breaking up of, the elements of grey tubercle. These elements you will find to be not quite the same as those of the originally yellow tubercle; they are often elongated and tending to form fibres, which may unite together and produce true tissue, so that some grey tubercles in this way reach a healed condition, the tissue so produced assimilating in the lung to the nature of pulmonary fibre, which is elastic. The little knot becomes horny, and the tubercle is then said to be "cornified." This drawing shows the result of such cornification. The greyer the tubercle—that is, the more lymph-like—the more chance of this occurrence. I have already said there are all degrees of greyness toward yellowness. Now, the yellow change in this grey plastic fibrillating tubercle produces fatty degeneration of these more fibrillar elements, at last breaking down to pulp, while the yellow tubercle is from the first composed of round cells with no plastic tendency to elongation, but very early becoming fatty. This tendency to fattiness in either case is the cause of the yellowness; but in the grey tubercle the supervening fattiness comes more slowly over its longer-shaped and better-lived plastic elements, while in the yellow it comes more swiftly over its round and pus-like aplastic elements, these never showing tendency to elongate, but being round and pus-like; yet even these elements are at first not fatty, and a small zone of grey colour can with care be always detected around the yellowest of tubercles. Thus, then, the yellowness of the late stage of grey, and the original yellowness of yellow tubercle (which we see is also a late stage, but so quickly reached as to be practically original), are the same yellowness, in that both are due to fatty degeneration and consequent opacity; but, in that the things that so change yellow are not quite the same in structure, the slowly faded grey tubercle has certain difference from the quickly faded yellow; but, further, in that the difference between the slowly faded grey and originally yellow elements is one of intensity of cause, they are not different kinds of tubercle. So, I think, the truth seems to be this way—that grey becomes yellow tubercle, and yellow tubercle arises without grey (evidently) preceding; but the yellow tubercle which comes on upon the grey is not quite the same as the yellow tubercle that originates yellow. Yet the yellowness is of the same nature, in either being only fattiness. But the difference between them is made by the nature of the things which become yellow by fat: which things in the greyer tubercle are, on the average, more elongated, in the yellow tubercle more rounded, the elongation and roundness of element being in their turn parallel in nature to the like varieties of form in elements of common inflammatory lymph, and by analogy and by direct evidence shown to be, as in the case of lymph, the results of less or more intensity of action in the cause of the disease.

Pray observe that the difference in regard of yellowness is only one of degree; the tubercles that are apparently originally yellow always and invariably have a short stage of greyness, this stage not showing itself all through the tubercle at one time—for, little as it is, the tubercle is a spreading, growing thing—but showing itself in the outer zone, which is last produced and youngest, and which, as I said before, is always grey, however narrow it may be.

So much for the relation of grey and yellow tubercle; now as to the relation of this to inflammation. If you see only small tubercles in a lung, you are content to say they are tubercles, and leave out of account the question of inflammation. They are tubercles, and you would no more care to inquire whether they are, nevertheless, inflammation than you would care, having recognised a psoriasis, to ask whether it was an inflammation. It is a psoriasis. But in some cases you find that, though some tubercles are small knots of firmish consistence, you see in the same lung other patches of larger size, and others yet larger; so that from the little tubercles to the large patches there are intermediate gradations. Now, the large patches are granular, and sink in water, and are softish, breaking down easily when pressed, and exuding a yellow-looking opaque juice when so crushed down—and, in short, they have all the qualities which characterise the so-called grey and red hepatisations of the lung in acute pneumonia. Then arises a great difficulty—for the tubercles have pneumonia in such a relation that you cannot but see that the one is the cause of the other.

I say you have pneumonia with the tubercle; and, indeed, there is no doubt that the characters (in the cases which I am referring to) and state of the larger masses are, in all essential points, the same as those in pneumonia arising from other causes.

Now, you cannot think the pneumonia indifferent to the tubercle: you must allow some relation between them; and these are the questions that arise—1. Does the tubercle *cause* the pneumonia, as one thing causes another and a different thing. 2. Does the tubercle *become* the pneumonia, by expansion of its area and diffusion of its influence over greater space in a less time.

Those who hold the first view will say the tubercle has *set up* a pneumonia. Those who hold the second view will very likely, when pressed, say that that the patch of pneumonic-like formation is "*really tubercle*," a patch, not of pneumonia, but of soft "diffuse tubercle." Now, if these two views are allowed to conflict against each other, so that one is made to contradict the other, each makes the other absurd to its own satisfaction, and goes away overmuch satisfied with itself.

For, if we look disinterestedly at the question, we shall see that its solution lies here—*that there is no such thing as the pneumonia or common inflammation, which is so easily assumed to be at hand* by those who would hold the first view, and say that tubercles set up that simple pneumonia. All pneumonias have their habits; there is no common pneumonia which has no special habits. There is no simple pneumonia to which other pneumonias stand in such relations that their peculiarities are additions to the characters of simple pneumonia, which simple pneumonia waits to apply itself around indifferent causes. The stock of simple pneumonia is plentiful in theory, but you do not find it in real lungs. In real lungs all pneumonias have their distinctive characters. *Every inflammation is intensely specific.* It is very much with it as with the tribe of cats. The lion and tiger are not common cats with additional lion and tiger peculiarities, any more than common cats are lions and tigers with common peculiarities. If we look over the pneumonias that occur in a year, we find that no pneumonia has the characters and distribution of the tuberculous pneumonia except tubercles be present with it—that is, *except it be a tuberculous pneumonia.* It is quite a peculiar thing, and its characters, so far as they vary from the characters of other pneumonias, vary towards the characters of tubercles, and in any lung vary indefinitely towards those characters, so that at last you find them to be tubercles. I shall be told that Magendie and others have put mercury into the lungs, and made artificial tubercles with surrounding common inflammation. But I beg to say that I could easily have seen that these were not tubercles, and am quite willing to challenge anyone to deceive me with such productions—they are only naked-eye-deceiving models of tubercles. Besides, he never made anything like the expanded formations of pneumonic phthisis, of whose graduation into tubercle I have been speaking; nor can they be made. He produced the pneumonia of mercury's irritation, which is a different-looking pneumonia, and a different pneumonia from phthisical pneumonia.

In this discussion of the question, I have purposely avoided using the term inflammation. I have used the word pneumonia, because it will probably carry with it the signification of the produced matter due to the inflammatory change in the lung. From what I have already said on hypertrophy, you know what I should say if the question of inflammation is brought as an alternative to tubercle. I should say the question is an unmeaning question—it is not right to say a stupid question; it asks what cannot be answered, unless you mean by it—Did the phenomena of pain, heat, swelling, etc., which are the true and only meaning of inflammation, accompany the tubercle? This they certainly do sometimes; perhaps always. It is affirmed, I believe correctly, that *the formation* of tubercle always goes with an augmented heat of the body, ascertainable thermometrically.

The formation of a tubercle is as much inflammation as the formation of a herpes or a lichen, and as little; and as you get an inflamed lichen or psoriasis, so you may get an inflamed tubercle. In the case of the cutaneous disease, you would think anyone trifling with your time if he should ask whether the inflamed psoriasis is a psoriasis *plus* an inflammation; and so I think you should think of anyone who asks the question in reference to tubercle. It is as much tubercle as it was before when it is inflamed; but now it is so intense that the phenomena of pain, etc., the vital reaction to excessive change, are brought out along with the vascular phenomena which evince, characterise, and indeed create them—which vascular phenomena are the old and present and future import of the word "inflammation"—the subjects of the treatment directly addressed to inflammation, and the causes of such phenomena, additional to the cell-production of the tubercle, as are due to the vessel dilatation, blood stagnation, fluid oozings, etc., that the vascular reaction or inflammation brings to pass.

I will conclude this lecture with an analogy which, I hope, will serve to place the relations of the various formative diseases clearly. If you asked What is light? you would be told it is vibration. If you asked What is sound? you would be told it is vibration; and so, probably, scent is vibration, while some vibrations give a sense of touch. But though your mind sees all these as vibrations, yet your senses in a way analyse the vibrations, and your eye discerns the light of its vibrations, and your ear the sound of its vibrations, and so on and on; so that your senses do a service that is in a way opposed to that of your mind, and in their way are cleverer, and certainly more practical, than your mind, which would never have found out that vibrations are light, however well it knows that light is vibrations. And no one ever did or ever will tell us what it is that, added to vibrations, makes them light, or sound, or scent. Now, it is in a very similar way that, when you ask What is *inflammatory formation?* you are told it is cell growth; and when you ask What is tubercle? you are are told it is cell growth; and so tumour, and a lot more. The viewing of these different things with sufficient eye-power by the microscope evidences this beyond doubt or question. The foundation of all these is one and the same thing—the production of nucleated cells, which grow when they are produced. This is common to them all, like vibrations to light and sound; yet the result of these growths is to produce here a tubercle, and here a patch of lymph, and there a tumour; and clinical experience—that is, the watching of the phenomenal results of the cell growth—evidences the differences between them. Clinical experience, as it were, further analyses the life of cells, as the senses analyse vibrations; but what it is that, added to cell growth, makes it become tubercle, or tumour, or lymph, you do not know, and never will know. It is very likely that your mind is not able to frame the question which anticipates the solution of the problem.

ORIGINAL COMMUNICATIONS.

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CLINICAL NOTES OF THE VARIETIES OF IMPERFECT SPEECH PRODUCED BY BRAIN DISEASE.

By ROBERT DRUITT, M.R.C.P. Lond., etc.

Case 2.—Sudden Confusion of Speech, with Right Anæsthesia—Gradually-increasing Brain Disease—Death—Abscess in Middle Lobe of Left Hemisphere—Cheesy Granules outside Left Thalamus.

March 30, 1849.—Was desired to see Mr. Cornelius A. T., aged 41, clerk at a house of business in Bruton-street. The patient, well known to me as a man of scrofulous appearance, fair, and reddish-haired, solitary and fanciful, temperate, and having always enjoyed good health. A mother and one sister epileptic, one brother insane.

Says that ten days since, while in a shop in Bond-street, he suddenly felt slight nausea and pain in head, with slight numbness of right arm, and inability to put the right name to things. Was greatly alarmed; tried, but could not pronounce his own name, or the names on the shop-fronts in his way home. These symptoms have persisted to the present time. He has been much excited of late about Chartist rioters.

Find his face flushed and head hot; pupils natural; pulse 80, full; can make himself understood by signs and gestures, but cannot find the right name for anything; uses an unintelligible jargon: calls bread and cheese "blob and lob," but knows the right word when found for him. Ordered cupping in the nape to 15 ozs.; four grains of calomel and a black draught; effervescing mixture; low diet.

March 31.—A good night; hesitation of speech but slight; urine natural.

April 1.—Tongue slightly furred; head much less uneasy; pulse, in bed, 60, soft.

3rd.—Much better; head nearly free from uneasiness; speech very slightly affected. Fish and milk diet; aperients; blister to nape. Went to Peterborough on the 4th for a holiday.

27th.—Has been in the country, going on well till yesterday, when he found that his walking-stick dropped from his right hand, which has felt benumbed since. In trying to open a gate, he could not feel the latch, and cut his fingers against the iron, without knowing it; cannot feel the way to his right pocket, nor button his shirt with his right hand; complains of slight pain at left side of occipital bone; has difficulty in putting the *right endings to words.* Calomel, gr. ii. h. s.

28th.—Better; pulse 70; tongue furred; appetite good; diet of fish, pudding, vegetables, etc. Tartar emetic one-sixth of a grain daily; blister.

29th.—Still less confusion; arm less numb. Ordered one grain of calomel every night, till slight ptyalism should ensue; continue the tartar emetic.

May 4.—Slight tenderness of gums; thinks himself better. Omit the pill.

6th.—Says he feels decidedly stronger in the head. Continue ant. tart.

9th.—A return of numbness, with chilliness last evening; speech less perfect; calls rice, "faice" or "fash"; cannot find the word "shave"; has sensation of aura on right side of nose. Repeat the calomel gr. j., o. n., and the ant. tart.

12th.—The confusion of speech returns if he is at all agitated; tongue furred; mouth not sore. Repeat the calomel twice daily and the antimony.

15th.—Gums tender; slight headache and feverishness.

20th.—Much the same. A seton to the nape; continue the antimony and calomel.

26th.—Dr. Ferguson saw him in consultation. He recommends the calomel to be given up, as it seems to have impaired nutrition without lessening the symptoms. Carbonate of ammonia gr. v. ter die, with infusion of hops. Seton removed.

30th.—Looks better, and is in better spirits; the symptoms now are, occasional numbness of *either* hand, and more disturbance of speech.

June 9th.—Health better; speech very defective; feels unfit for business.

12th.—*In statu quo.* Tinct. ferri mur. ♏v. bis die.

23rd.—Is sick and drowsy, he fancies from eating a bun. Omit steel; give an aperient pill and draught.

24th.—Difficulty of speech very great; slight headache; sickness, and disturbance of digestive organs.

28th.—Great confusion of speech; numbness of right arm and right side of face; appetite restored.

July 8th.—Observed, for first time, that mouth was slightly drawn to left side, and some inability to prevent saliva dribbling. Seton again; mild aperients; good diet.

18th.—Slight dimness of vision and diplopia; losing flesh.

19th.—Sees double. When he closes either eye the *sinister* image vanishes. (N.B. The word *sinister* used in the same sense as in heraldry, to denote the left side of the thing looked at, opposite the right side of the looker.)

August 14.—Symptoms aggravated; appetite at times voracious; tongue coated; bowels constipated.

21st.—Right hand and arm partially palsied; creeping sensations about right side of face; speech worse than ever; diplopia such that he cannot pour water into a glass if both eyes be open.

September 11.—Consultation with Dr. Cursham. From this date debility gradually increased, and functions failed; he became perfectly speechless; unable to hold water, and unconscious when it passed; bowels obstinate; much pain in region of left parietal protuberance; slept much; intellect clear to the last. Died on October 4.

October 5.—*Post-mortem.*—Assisted by Mr. C. R. Walsh and Dr. T. Peregrine. Head: Skull remarkably dense, ivory-like, and easily separating from dura-mater. When calvarium raised, bulging and increased size of left hemisphere of brain observed. No serous effusion. Much superficial congestion. Firm adhesion of the arachnoid surfaces, of the size of a shilling, at a point corresponding to left parietal protuberance. The right hemisphere, which was first examined, was perfectly healthy throughout. No effusion in either ventricle. On the outer side of the left thalamus nervi optici, where it is in continuity with the substance of the hemisphere, there were found a few distinct yellow friable tubercles, not larger than a quarter of a hempseed each. Between this and the point where the cerebral and dura-matral arachnoids adhered, there was in the midst of the middle lobe of the brain the cerebral substance softened, infiltrated with semi-purulent serum and small coagula. The junction of the diseased and healthy portions was definite and abrupt; the centre of the diseased portion was soft, broken-down brain, mixed with thin purulent matter, the circumference infiltrated with lymph and serum of reddish orange colour and jelly-like consistence. The ventricle and anterior and posterior lobes not affected; the left tractus opticus apparently smaller than the right. Heart thin and soft. Lungs free from tubercle. Abdomen not examined.

In this case, the thing first noticed was failure of the power to connect the patient's thoughts with articulate speech, with no defect of articulation, for he could pronounce any word found for him, but could not find it himself; after this the supervention of anæsthesia and paralysis of the right side; the aura, followed by paralysis of the right face. There was no perceptible squinting, and the eyes could be directed to any object; but the image formed on that portion of the retina which proceeds from the left tractus opticus was dim and displaced, and vanished when either eye was shut. The pain in the head, referred to the left parietal protuberance, where the abscess would have pointed had it been possible, was noteworthy.

So far, I have faithfully abridged the notes written twenty-one years ago. But in the original notes, I designate the case "tubercular" on the ground of the scrofulous diathesis, and of the character of the yellow, cheesy granules found. But they may have been clot. As some of my brethren are disposed to return to the old depletory system, I may observe that this case, though met with prompt depletion, turned out no better than Case 1, which had none; and that I fear the calomel and antimony used to reduce inflammation and "promote absorption" had no good effect on the progress of the disease.

LEUCOCYTES OR SARCOPHYTES.

By CHARLES J. B. WILLIAMS, M.D., F.R.S.

I AM much pleased to find that my able friend Professor Sanderson is directing the attention of his pupils and of the Profession to those wonderful bodies, the recently termed *leucocytes*, long known as the lymph globules and pale blood corpuscles, mentioned by Hewson, but first described by J. Müller, and subsequently noticed and measured by Gulliver. They were first observed to play a peculiar part in the circulation in the frog's web by Dr. W. Addison (*Medical Gazette*, January, 1841), and a few months later, without the knowledge of Dr. Addison's observations, I described these corpuscles as taking a prominent share in the process of inflammation in the same animal (Gulstonian Lectures, *Medical Gazette*, July, 1841, and "Principles of Medicine," 1843). The increased number of these colourless corpuscles under the influence of irritation, and their remarkable tendency to adhere to the walls of the bloodvessels, and to cause their obstruction in inflammation, appeared to me of the highest import in connexion with this process. The appearance of similar bodies on the outside of the inflamed vessels led to the notion of exudation; and these similar products of inflammation were called *exudation globules*. The fact of these bodies passing through the walls of the bloodvessels was first distinctly announced by Dr. W. Addison; but neither this observation, nor the more precise and unequivocal one of Dr. Augustus Waller, three years later (*Phil. Mag.*, 1846), seems to have attracted the attention which it deserved. The fashionable doctrine of cytogenesis of tissues threw the white corpuscles and exudation process into the shade, till three years ago, when they were again brought to light by the re-discovery of Cohnheim, since which these bodies have been carefully investigated, and found to possess not only the power of migrating and pervading membranes, but also the vital endowments of spontaneous motion, absorption, digestion, assimilation and growth, and propagation by fission, by germiuation, and by endogenous proliferation. In fact, these little bodies are morsels of that living protoplasm, or, as Dr. Lionel Beale terms it, germinal matter, which is the instrument and material of nutrition and growth in animal and vegetable structures. So, also, in disease we have to look to modifications in the properties of these representatives of organic life for the true nature of morbid products, such as lymph, mucus, pus, and tubercle. Here is a wide and rich field for investigation as to the origin of disease in these elementary forms, and as to the influence of agents on them. For example, take the following most suggestive observation of Max Schultze—"The great majority [of white corpuscles of the blood] are characterised by the lively movements they are capable of performing. . . . In freshly-drawn human blood, these [finely and coarsely granular amœboid cells] appear as more or less rounded or irregularly shaped forms. At a temperature of from 95° to 104° Fahr. lively movements, resembling the creeping movements of an amœba, occur; when the temperature, however, is raised above 104°, the movements cease and the cells harden." (Stricker's "Histology," Sydenham Society's edition, vol. i., p. 414.) Be it remembered that the temperature of the body often exceeds 104° in pneumonia and acute phthisis.

But the object of this communication is not only to express my sense of the importance of the subject in its relations to pathology, but also to suggest a more correct and expressive name for these elementary flesh-germs. The word "leucocyte," used by Dr. Sanderson and some French authors, was, I think, originally applied by Professor Bennett, of Edinburgh, and, meaning white cell,(a) was suitable enough to distinguish from the red corpuscles of the blood the white globule which was generally supposed to be a cell; but now we know that, although the pale corpuscles do sometimes possess a cell-wall, and always assume a cellular character in their change into pus globules, yet many of those circulating in the vessels are not cells, but mere little lumps of jelly, and it is in this state only that they exhibit the active motions and other vital properties which associate them with amœbæ and other forms of living protoplasm. A formed cell with a wall could never pass through the invisible pores of the coats of vessels and other tissues, as we now know the pale corpuscles do. We want, therefore, a term which may express something of the nature and properties of these bodies. The name sarcode (*σαρξ* and *οδεύω*, to travel) was given by Dujardin to the living contractile substance which he was the first to discover in the lowest animals, and it has been applied to other forms of moving protoplasm.

The best word that I can think of for flesh-germ is "sarcophyte" (*σαρξ* and *φυτὸν*, a growth) or "sarcoblast" (*σαρξ* and *βλαστὸς*, a sprout). I prefer sarcophyte, and the term is not the less appropriate because the termination "phyte," more frequently applied to vegetable than animal growth, reminds us of the fact that similar protoplasms are common to both kingdoms.

COUNTRY *VERSUS* TOWN MILK.

By JOHN GAMGEE, Esq.(b)

(*Concluded from page* 39.)

The rinderpest proved the possibility of extinguishing the lung plague and foot and mouth disease. It compelled us to draw largely on the country for milk, and the third system now in force is steadily developing. It consists in the growth of country dairy farms for the supply of large towns, and a concentration of town cows in the suburbs. There is no reason why suburban dairies should not thrive in supplementing the country produce; but, whereas the distant farmer only contributed to a limited extent formerly in this respect, he now threatens to render town cow-feeding a matter of secondary importance.

It is somewhat remarkable that, whereas of old the London "sky-blue" generally condemned was a mixture of town milk and water, there are those who hesitate not to insist on the importance of having a town product in preference to country milk. It is said that babies should be supplied, as they but rarely have been, with the milk of one cow, without change; that the warm milk, freshly drawn, is preferable to milk transported long distances by rail; and that the richness of cream and milk from town dairies is greater than that from the country.

As one of the staunch advocates for a healthy town-dairy system, it must not be supposed that I have readily been convinced of the fallacies involved in these arguments. I can state positively that too much reliance has been placed upon analysis. When I first studied this subject, the most absurd rumours of chalk and water, as substitutes for milk, were exceedingly prevalent. I found that water was the main deteriorating agent employed, and in order to bring up the colour of the milk a little annatto was used. At times a little warm water, and perhaps a few grains of nitre, were employed to remove that very prevalent defect of cow-shed milk—a turnipy flavour. I have known dairymen who regularly retailed the milk without any dilution, until the ravages by disease and increasing poverty broke down the honest man's intentions, and dilution was practised. You may rely in every trade on a percentage of honest, and a certain percentage of dishonest men. The town and country systems must alike indicate this; and the temptation to dilution, according to my experience, will be less, the less there is any absolute pressure put on the producer.

Every system will have its drawbacks, and that of the country milk supply is, that a very considerable proportion of it comes through the hands of middle-men, who buy from the farmer, and sell to the small retailer. Of course, there is an extra profit to be made in some way, and the chance of tracing the locality from which the milk is obtained, and, therefore, the healthiness of the cows, is materially lessened. These milk factors, not being directly responsible to the consumers, are more likely to purchase milk of a quality which the large dairy would reject, and it is to be feared that a large quantity of skimmed and inferior milk is thus brought to London, either for sale to the lower class of retailers or to be supplied to public institutions. The larger dairies, and particularly the dairy companies, as the Aylesbury Dairy Company, the Dairy Reform Company, and a few others, deal directly with the farmer, even if they are not themselves farmers, as is frequently the case. The enormous quantity of milk daily passing through their hands demands a system of regularity and order, which is so thoroughly carried out as to give their establishments the appearance of being under military discipline. What is done one day is done every day, at exactly the same time and in the same way. A visitor may see a van arriving with the afternoon's supply of milk; this is instantly unloaded, samples taken from each can, tested for temperature and specific gravity, the milk turned out of the railway cans, strained through a fine piece of cloth into the cans for town delivery, each district getting its allotted share. It is then loaded into small vans or carts, and is distributed in the course of the next two hours to many hundred houses. The Aylesbury Dairy Company have weekly veterinary inspections made at the various farms from which milk is received, and certificates of the health of the cows posted in the public office of the Company. They turn over their daily quantity so rapidly, in minutes so few, rather than hours, that it would not pay to tamper with the milk.

(a) Λευκὸν κύτος, white cell. The word κύτος, a hollow vessel or skin (from κύω, to contain), is not a very apt expression for a cell, but usage has now pretty well established it.

(b) A paper read before the Association of Medical Officers of Health, December 17, 1870.

It is interesting to inquire whether there is any substantial ground for believing that, in rearing infants by hand, it is best to have hot milk from a cow close at hand. When the Aylesbury Dairy Company first started, I watched with much interest the plans adopted to ensure that the country milk should not be deteriorated in transit. They adopted and insisted on the plan of cooling the milk immediately after it was drawn. In America, I found that this was regarded as an essential to the collection of milk in good condition for the cheese factories, and I have no hesitation in saying that hot milk not cooled so soon as drawn is a mistake. It is very remarkable how speedily and rapidly changes occur, and more rapidly in town than in country milk; and, were I a town dairyman, I should be as careful as a farmer who knew his business to cool the milk cans, place them in cold water, and adopt artificial means of refrigeration. This reduction of temperature of the fluid is only secondary in importance to cleanliness in the utensils used, and effectual scalding of milk cans and pails. Otherwise, decomposition sets in promptly, germs of mould grow, and the milk acquires fetid and irritating properties, calculated to induce severe intestinal derangements.

The subject of milk tests is one of the highest importance, and the public has reason to be grateful for the attention paid by Medical Officers of Health to this point. It is still, however, but little understood; and the present system of obtaining samples of milk for analysis is so very defective that a casual sample so obtained cannot be said to fairly represent the general quality of the milk sold. A retailer who cultivates a shop trade—selling, perhaps, eggs, butter, etc.—will, just as he is particular to have clean eggs and nicely-arranged butter, take care to have a tempting can of milk on his counter. In milk, when left undisturbed for any length of time, however short, the cream is always working its way upwards; and just in proportion to the time that has elapsed between the milk having been put into the vessel and the sample being purchased, so will the sample represent more or less truly the quality of the milk. Thus, particularly if the milk on the counter be in the first instance a somewhat selected lot, an analysis is obtained, showing an abnormal percentage of cream, and the returns, if published, may possibly do an irreparable injury to one tradesman by comparison, and unduly exalt another whose management has been more cunning, or who by good luck has had a sample obtained at a fortunate moment. The only fair way of estimating the quality of the milk sold at any particular dairy would be to take into consideration the class of business done, and to examine several samples on the premises or as supplied to families.

Chemical tests cannot be used in a household, but it is well to point out their merits and demerits as they have occurred to me.

The conclusions you may draw from my observations are, perhaps, somewhat different from those generally accepted hitherto in relation to the relative advantages of the town and country dairy systems for the supply of large towns. I unhesitatingly assert that it is best for the town supply to be small and supplementary, and not, as in the past, the main source. At the risk of almost tedious recapitulation, I beg to draw your attention to the fact that the abolition of the town cow-sheds implies the abolition of the most prolific centres and established stations of contagious plagues. Why did people think, in 1865, that rinderpest had actually developed spontaneously in the metropolis? Because in a few weeks the cows were killed by hundreds and thousands in the towns, whereas distance and dispersion materially retarded the spread of the malady in country districts. The same holds good with the lung plague and the foot and mouth disease.

The inauguration of the waterside markets system—one of my pet and earliest projects—will probably result in the complete exclusion of foreign diseases from this country if we persist in stamping out contagion, and prevent, by excluding cows from towns near such markets, the smuggling of cattle into cow-sheds, and the propagation of maladies by that common means. Do not suppose I am suggesting a remote contingency. During the period when rinderpest raged most fiercely, I used constantly to see cows, whose tails had been clipped in the market, standing in cow-sheds instead of being slaughtered. If dairymen will trifle with rinderpest when it is at their doors, in order to secure fresh and abundant milkers, how much more will they strive after some cheap and good Dutch stock, if it can be driven in the dead of night into a convenient secret back-slum! There must be none of this; and the more we aim at country supplies of milk, the more independent we shall be of a system which has involved the stock-owners of this country in ruin.

We should all aim at securing a sound, good-flavoured milk, such as an ordinary country farm can supply. The country farmers can use bean- and pea-meal, distillery wash, and other foods such as cow-feeders use; but the more we have a produce of good grazing-lands, with little artificial modification, the better for the babies.

If Medical men find it necessary to have cows close at hand, let a rational system be adopted for this purpose; town cow-sheds constructed on proper principles and placed under strict supervision. The health and life of infants demand this, and the wholesale distribution of milk from cattle affected with foot and mouth disease should be prohibited.

Never again should we desire to see the old town cow-sheds with their tuberculous inmates; they are sure to return if the sanitary authorities are not alive to the subject. With a complete exclusion of foreign diseases, the old system would again be possible; but the most effectual way I know of, to prevent the sale of diseased meat and milk, is to abolish the town dairy even as it now flourishes. I would encourage the growth of some suburban cow-houses, in choice localities, and under proper restrictions. Slaughter-houses, pigsties, and cow-sheds should all be as far from crowded centres as they conveniently can be; and, just as the Aberdonians have carried the day in London with their country-killed meat, so must the enterprising milk companies. We should have a weekly publication of infected centres, referring both to human and cattle diseases of a contagious nature. This would aid everyone in knowing what places to avoid, what means should be adopted for the health of the people and to ensure the soundness of the food they eat. With energy and discrimination we could prevent much mischief, frustrate the devices of knaves, and assuredly tend to prolong human life. It is singular how nearly allied are the methods for stamping out crime and disease. The two flourish side by side; and the prevention of disease can do more than penal codes in making honest tradesmen and respectable communities.

DAMP.—Dr. Whitmore, in his monthly report on the health of the parish of St. Marylebone during December, 1871, says that "Whilst recognising the fatal influence of a low temperature upon the young, the aged, and the feeble, I nevertheless find that the damp weather, even with a much higher temperature, is infinitely more destructive to life. I am happy in being able to report a considerable reduction in the number of sickness cases and deaths from scarlet fever; as compared with that of November, the deaths declined from thirty to twelve. We now possess—which then we did not—a valuable protecting agent against the spread of the disease, in the shape of a disinfecting apparatus for the purpose of purifying all infected clothes, bedding, etc. This apparatus has been almost in daily use since it was purchased, and I have every reason to be satisfied with it. Small-pox, it is to be feared, will continue to increase."

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

SMALL-POX IN THE LONDON HOSPITALS.

ST. GEORGE'S HOSPITAL.

About a month ago, or rather more, there occurred a case of small-pox in the person of a female patient under the charge of Dr. Barclay. She had been in the house seven weeks before the appearance of the disorder, so that it was impossible she could have brought contamination with her. As soon as the nature of the disease was discovered, she was removed to the Small-pox Hospital; but with her the contagion did not depart. It next showed itself in the case of a female in one of the Surgical wards, where she was being treated for a bad knee-joint. She was not sent out of the Hospital, but was placed in one of the separation wards, ordinarily used for noisy and troublesome cases. The third case also occurred in a female, who was in the same ward as the first attacked, but there was no evidence of direct contagion. She also was sent to a separate ward. From this time the disease spread apparently all over the house, even in the ward devoted to the diseases of women, insomuch that the authorities have been obliged to set aside two large convalescent wards at the top of the house for these cases. In these wards there are now about twenty patients, including the two who were attacked second and third, who are now completely convalescent. Some of the patients have been rather bad, but all seem to have had the disease in a modified form. Only one person belonging to the household of the Hospital has been attacked. This was a probationer nurse, who suffered very badly, and is now the worst in the Hospital. Two have died of or in the disease. Probably the latter is the true expression, for the one was a woman very ill of heart disease before she was attacked with small-pox, the other an elderly man suffering from paralysis.

To arrest the spread of the mischief, the Committee determined to stop all visitors except to patients urgently ill, three weeks ago, and that resolution has been steadfastly carried out. They also determined to vaccinate all belonging to the establishment. That has been done with the good results above mentioned; and now only urgent cases are received in the Hospital, after the patients have been duly warned of the risk they run, and consenting to be vaccinated.

One case has occurred in the Convalescent Hospital at Wimbledon, how we are not informed. At all events, it has been closed against new-comers during the last three weeks.

For the above facts we are indebted to the courtesy of Dr. Dickinson, jun., House-Physician to the Hospital.

ST. BARTHOLOMEW'S HOSPITAL.

After St. George's, St. Bartholomew's seems to have suffered most from small-pox. Some of the cases appear to have been taken into Hospital in the stage of pyrexia, before any well-marked symptoms of small-pox had showed themselves; but after being in for a time, the shotty nodules have showed themselves on the hands and face. In some of the cases it appeared in the Surgical wards, and in such a fashion as to leave no doubt in the minds of the authorities that the disease had been introduced by visitors; and orders were given to stop them. These orders appear now, however, to have been rescinded, visitors wandering about much as usual. Among the sufferers at the Hospital has been the matron, who has been somewhat seriously ill. There are now six or seven ill in Hospital, and some have been sent to the Small-pox Hospital. This outbreak will probably lead to the establishment of infectious wards in this Hospital. It is affirmed by some of the Medical officers that some of the beds devoted to venereal cases might be given up for this purpose.

WESTMINSTER HOSPITAL.

The disease would seem to be particularly rife in the Westminster district. Last Friday there were seven applications in the out-patient department, and there have been, on an average, two applications a day for the last three weeks.

There are at present four patients suffering from the small-pox in Westminster Hospital, and three have been admitted during the last week. Visitors are, it seems to us very improperly, still admitted to the wards.

GUY'S HOSPITAL.

At Guy's there are two cases of small-pox. One a girl, taken ill twelve days ago; a very well-marked case. The other patient was a male. In his case the small-pox was modified. They are both now convalescent. On Saturday last, a man from the Westminster-bridge-road presented himself, seeking admission; he was sent to the Small-pox Hospital.

LONDON HOSPITAL.

In the London Hospital there are a great number of cases; and there is a talk of erecting special buildings in the rear of the Hospital for their accommodation. Meantime, they are in the old school buildings.

Of the other Hospitals, nothing special is reported; except that at St. Thomas's it is said no cases have occurred in the Hospital or out-patient rooms. In most of the others—University College, Middlesex, Charing-cross, and St. Mary's—out-patients have appeared with well-marked small-pox eruptions; but, as far as we know, no cases have occurred in the wards.

KING'S COLLEGE HOSPITAL.

OPERATIONS.

(Under the care of Sir WILLIAM FERGUSSON and Mr. HENRY SMITH.)

On Saturday last (January 14), several operations of interest were witnessed at this Hospital. The first case brought into the theatre was a young man, who had been operated upon on a previous occasion, about two months since, for a large Erectile Tumour of the right arm, extending from the lower end of the ulnar side as high up as the lower third of the upper arm. It had formed a large oval and prominent tumour, composed, evidentally, mainly of enlarged veins, for there was not any pulsation. Mr. Henry Smith had, on the previous operation, introduced several needles underneath the vascular tissue, and applied the worsted threads at the upper part, where the tissue was even more vascular, prominent, and circumscribed. A subcutaneous ligature was tightly applied. The effect of these measures was to destroy most of the diseased tissue, but in the upper portion there appeared to be signs of increasing growth; therefore, to-day, Mr. Smith repeated the operation by introducing a subcutaneous thread, and passing two stout needles across and underneath the vascular tissue below, and then applying the twisted suture around them, thus entirely strangulating the upper portion of the diseased mass.

The next patient introduced was a young woman, on whom Sir W. Fergusson had previously operated for an extensive cleft in the soft palate, with excellent results. An Opening, however, remained in the Hard Palate, and this Sir William endeavoured to close by detaching the soft parts and uniting them over the opening.

An adult woman was next brought in, who presented a very sorry specimen of the art of Surgery, for she had a very bad Cleft in the Lip, which had been operated upon some time before, but with such a bad result that the deformity could not have well been greater. Sir William Fergusson repeated the operation in his accustomed manner, taking great pains, as he remarked at the time, to remove freely the edges of the cleft, he being long convinced that the indifferent results often seen after this operation were due to the Surgeon being too sparing in his incisions.

A young lad was next brought into the theatre suffering from Fibrous Anchylosis of both Hip-joints, the result of inflammation. When the boy was fully placed under the influence of chloroform, Sir William Fergusson very carefully broke up the adhesions in both joints.

The last two cases brought into the theatre were especially interesting and important, as they presented instances of a somewhat similar condition of disease—Stricture, with severe Perineal Fistula, and each requiring a cutting operation. In the first case, a patient of Sir William Fergusson's, a middle-aged man, an enormous amount of disease existed, the entire scrotum and perineum being riddled with sinuses and converted into a hard brawny mass of immense thickness. It had not been possible to pass any instrument into the bladder—in fact, Sir William could not get the catheter further than the free portion of the penis in the wards. When, however, the patient was placed under the influence of chloroform, and was placed in position, it was found that an instrument could, with great difficulty, be passed further down, and upon the point of this Sir William Fergusson made his incisions through enormously thickened tissues at great depth, and divided the urethra as freely as could be under the circumstances, and gradually urged the sound over towards the bladder; but there was great resistance to its onward progress at the back part of the urethra, and as a free opening had been made, and as it was impossible, as Sir William remarked, to say whether the sound had got out of the urethra or not, and as some fatal injury might be done by cutting freely at such a depth and without any accurate guide, he determined not to persevere in introducing a catheter, but be content with what he had already done.

The second case was a patient of Mr. Henry Smith. He was a middle-aged man, who had suffered, off and on, with bad Stricture for several years. There was extensive induration in the perineum and ischio-rectal region, and sinuses, through which a great portion of his urine escaped. When he first came under treatment, Mr. Smith could not introduce any catheter, but after perseverance he was enabled to introduce one. When he was placed under chloroform, and in position, Mr. Smith first introduced a No. 3 catheter, and then a No. 5 grooved staff, and made his incisions through the thickened tissues of the perineum upon the groove of the staff; the strictured portion of the canal, which was at the bulb, was divided freely, and the staff was withdrawn. A No. 9 silver catheter was then introduced into the bladder, and tied in.

In the course of some remarks which Mr. Smith made, he called attention to the important distinction which existed between these two cases. Careless observers, and even well-informed men, were sadly in the dark about these two operations, and often confounded them together; but, although the operation in each case was done for the same disease, and for the same purpose, the proceedings were, in reality, totally different in this one very important feature—viz., that in the one case the operation was performed where it was impossible for the Surgeon to have any guide by passing an instrument through the stricture, whilst in the other a grooved staff could be passed into the bladder, and the Surgeon could have no difficulty in dividing the stricture; in fact, this was the modern operation of perineal section, revived by Mr. Syme—a comparatively simple and easy proceeding; whilst the other was the old operation, or the *boutonnière* of the French—perhaps the most difficult of all the operations of Surgery. It was most important that this distinction should be drawn between the two cases.

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Medical Times and Gazette.

SATURDAY, JANUARY 21, 1871.

MILK DIET: SOUR MILK—MILK WITHOUT SUGAR—KOUMISS.

In our article last week we dealt with the subject of milk. We asserted that, for the sake of young infants, milk should be procurable from cows near at hand, and advocated the keeping a few cows in or near large towns for that purpose. We showed that to have good rich milk all the year round must be as much the work of human ingenuity as the having early vegetables, salads, or fruit. The invalid who is delighted by a few hothouse strawberries in April does not reject them because unnatural; nor need we quarrel with our fat beef and mutton and our milk in winter, because we could not get them without something like hothouse treatment. Cows naturally would calve in April or May, when there is fresh herbage for the young ones, and would be dry in winter; and if we want milk all the year round, we must feed the cows with food they never can get in a state of nature. Human mothers know the value of good beer whilst they nurse, and we need not begrudge grains, and cake, and distillery-wash to the cows.

Most English people will use *cream*, though sour, for custards and puddings, but they throw sour milk to the pigs. Now, even as regards young babies, we were taught by Dr. Ballot's experience as to the use of buttermilk that we ought to make sure we are right before we altogether reject milk because sour. Moreover, when milk has travelled some distance, it may undergo changes which disintegrate the curd and hinder the cream from rising. Such milk is very vexatious to the analyst, who desires to filter off the whey clearly, in order to test its gravity. During several years, when engaged in annually testing the quality of the milk sold by a large number of dealers in an important parish, we had noticed that the milk coming from certain dealers had this diffluent quality of curd, whereas most of the specimens yielded a curd hard and compact. The diffluent curd came from dealers who procured their milk from the country, and was never equal in cream or gravity to good town milk. On the theory that such milk had been subjected to changes which interfered with the first processes of digestion, we ten years ago looked upon such milk with suspicion. Now we are inclined to think that a shaken and disintegrated curd, on which a railway journey has acted like a churn and made it like buttermilk, might not be unwholesome for babies.

We may again, whilst treating of modified milk, call attention to the usefulness of rennet (of which we noticed a "sweet essence," prepared by Messrs. M'Master and Co., of Dublin), in beginning that work which the mucous membrane of the child's stomach is bound to finish. Dr. W. Marcet has, we believe, applied the same principle to meat. We may also, in order to embolden our readers in the use of soured milk, point to that old-fashioned dish, which enlivened the picnics of our grandmothers, yclept "syllabub under the cow," in which mountain wine or sweet Malaga, and lemon-juice and brandy, and sweet cakes, with possibly a little marmalade, were mixed in a huge china bowl, into which then a quiet cow was milked, so as to fill the bowl with a delicious, foaming, half curdled mass, congenial to the age at which love burns bright, and the stomach knows no troubles.

We may remind our readers, also, of the use of sour milk amongst the Orientals, from the earliest day to the present. The butter which the—shall we say heroine or murderess—Jael brought out in a "lordly dish" to assure her victim Sisera of a hospitable welcome was sour milk; and the same under the name *leben* is found in every Arab tent to this day.

Hitherto we have noticed preparations of milk to which, whether fresh or modified, sugar would be an admissible addition. But it is perfectly possible to treat milk in a *savoury* manner—that is to say, without sugar, but with salt, vegetables, and aromatics, which shall give it somewhat of a meaty flavour, and thus relieve the tedium and monotony usually attaching to milk diet. But we will reserve this branch of our "high argument" till another occasion, in order to bring before our readers the latest novelty in preparations of milk—the Tartar koumiss. This liquid has been introduced into England by Dr. Jagelski, described as an M.D. of Berlin, and late Physician to the Prussian Army, and its use is advocated in a pamphlet of remarkable ingenuity.(a) We well remember how absurd the idea of cod-liver oil seemed when it was brought into general use some five-and-twenty years ago; "What possible good," it was said, "can be got from stinking fish oil? Have not dietetic Physicians been proscribing and denouncing pork, goose, duck, salmon, and all 'oily' articles of food? and here we are asked to believe in train oil!" So we may say, "Have not dietetic Physicians raved about acidity and flatulence and lactic acid, and all that tribe? and here we are asked to believe that sour, fermenting milk is a remedy for the worst form of depraved digestion—phthisis!" We must live and learn, and rectify our theories by our practice.

(a) The pamphlet is sold and the koumiss manufactured by E. Chapman, 10, Duke-street, Portland-place, London, W.

Koumiss, be it known, is, in its native region, Tartar land, a kind of wine made by fermenting mare's milk, and agitating it during the process. The Kirghises, amongst whom koumiss is prepared in its highest excellence, are, according to travellers, very strong, of athletic constitutions, with great muscular development, and well-shaped thorax. They pass the greater part of their time in the open air, on horseback, and winter in the covered waggon, which is called *kibitschka*. They live on the flesh of horses and sheep, and their favourite drink is fermented milk—made from the mare's milk when procurable, but, in default of that, from other milk. Scrofula and consumption are unknown amongst them, which, considering their diet and the lives they lead, is not much to be wondered at. Here we see the material for a good Medical syllogism. The Tartars are never consumptive; the Tartars drink koumiss: let us, then, drink koumiss, and we shall never be consumptive. We can well understand that persons who visit Tartary to undergo the koumiss cure should derive benefit, if they share in the Tartar diet, air, and exercise; but, as we said before, we fully agree that the koumiss itself, whether it contribute much or little to the result, is an element deserving to be experimented on by Physicians.

Mare's milk is said to contain thrice the quantity of butter that human milk does, twice the sugar, and half the casein. It likewise contains very much less casein, and more butter and sugar, than that of the ass and cow. Poverty in casein, and wealth of the saccharine and butyraceous elements, are its characteristics. It is impossible to obtain mare's milk in this country, therefore cow's milk, so manipulated as to bring its composition to that of the equine family, is used instead. This is subjected to fermentation by a process not revealed, and the result is a mixture of alcohol, carbonic acid, lactic acid, and finely divided casein and butter, with the residue of the sugar and salts of the milk. When fresh, it is slightly acidulous, and is said to be somewhat aperient. When old, it is quite acidulous, and highly impregnated with carbonic acid, so that it issues from the bottle in a mass like whipped cream. It is sold in bottles like those used for the *gazeuses*, from which the liquid gushes out on depressing a handle. When old, it is said to be astringent, and good for chronic diarrhœa.

We have ourselves tasted it, and found it not unpleasant; not unlike a mixture of champagne with cream, which is ordered by some of our brethren, but not so nice. It combines a sour, a brisk, and a rich taste. Only experience will decide whether it is to take a place in the Physician's armoury, and on this we should be glad to hear what our brethren have to say.

COUNT BISMARCK ON THE GENEVA CONVENTION.

Count Bismarck's recent circular to the North German representatives abroad, in refutation of the charges brought by M. de Chandordy against the German mode of carrying on the war, and the protest of the Government of National Defence of France against the alleged direction of the Prussian shells upon military, civil, and even lying-in Hospitals, churches, and schools during the lately inaugurated bombardment of Paris, confirm the views which we have so frequently expressed as to the impracticable nature of the proposals of the Geneva Convention for securing the neutrality of persons and material employed in the relief of the wounded in war. Count Bismarck charges the French in the first instance with ignorance, on the part of their own wounded, and even of military Surgeons of high rank, as to the rules of the Geneva Convention, with which, however, latterly, they have made themselves so well acquainted, that they know how to derive the greatest advantages from it, without, however, exhibiting any commensurate improvement with respect to the fulfilment of the obligations imposed by the same. He accuses them up to the present time with having continued their attacks on flags of truce, dressing-stations, and ambulances; ill-treating and robbing Surgeons, delegates, Hospital servants and attendants; and, to crown all, with actually murdering the wounded. The latter most revolting charge he makes on the evidence of a Swiss Surgeon, Dr. Burkhard, dated Pinseaux, December 18, 1870, who states that, on November 30, he saw a French military Surgeon, of whom not only the French prisoners asserted, but who himself openly acknowledged, that he had killed many Prussian prisoners with his revolver. The accusation is too hideous for belief, and bears improbability on the face of it; but Count Bismarck does not hesitate to make use of it, although he is much too acute not to know how utterly valueless it is while uncorroborated by the strictest investigation at the time and on the scene of the alleged crime. Who was the French military Surgeon who thus openly boasted of having perpetrated a crime the mention of which makes the blood run cold? Who were the French prisoners who asserted that they had seen him commit the dastardly act? And why was not the miscreant arrested and tried and executed on the spot by the military authorities in whose charge the prisoners were? Even supposing all these questions to be satisfactorily answered, Count Bismarck is in no way justified in founding upon the act of an individual—possibly a monomaniac excited to frenzy by the sufferings of his country—a charge against the whole French nation. In doing so, he raises a false issue, the adoption of which by the German nation would detract from the high character which they have in many ways earned for themselves during the present lamentable war.

The hearsay evidence of the same Dr. Burkhard is quoted by Count Bismarck, to the effect that many Francs-tireurs when retreating pulled Geneva brassards from their pockets; but the well-known fact of the Prussian *krankenträgers* going into action wearing the same badge, armed and doing duty as combatants, with their respective companies, is studiously avoided.

The use of bullets either of directly explosive nature or divided into sixteen edged segments, and loosely joined again, so as to be equivalent to chopped lead, is another of the charges made against the French by Count Bismarck, who has sent one of the many specimens of this sort of projectile in his possession to the Foreign Office at Berlin, to be then submitted to the representatives of the foreign powers as a proof of infringement by the French of the amiable rules of the St. Petersburg Convention, which ordained that, although twenty men may be blown to atoms by a single shell of large dimensions, the use of an explosive rifle-bullet against an individual is inadmissible.

The mutual recriminations of Count Bismarck and M. de Chandordy are the natural result of the well-meant and philanthropic attempt on the part of the Geneva Convention to lay down rules for the guidance and restraint of men whose passions are let loose and excited by war, which is itself such a huge outrage against the moral nature and the common Christianity of civilised mankind, that so long as it exists it will involve to nations and to individuals every horror and form of suffering. Had the attempt to reduce the horrors of war to an unattainable minimum, by means of theoretical restrictions, never been made, the French and German nations would now have been spared the increase of bitterness and of the widening of the gap between them, by charges and counter-charges as to the infringement of rules, which demand from human nature such a degree of self-control as will never exist until the blessed time when wars shall cease.

CLINICAL INSTRUCTION IN INSANITY.

We lately noticed a paper by Dr. Sibbald upon "Clinical Instruction in Insanity," and the importance of the subject induces us to consider it somewhat more fully. There can be no question that the absence of all means of clinically studying mental disease is one of the gravest drawbacks of a London Medical education. Only within the last few years has instruction concerning it been afforded to the students of our metropolitan schools by systematic lectures, and even these are absent in some. But those who lecture know how vain a thing it is to describe insanity and insane patients to men who never see a single case. True, we have in the metropolis two large lunatic Hospitals, which would seem to exist specially for clinical instruction, and for the immediate reception of such urgent and acute cases as would serve admirably for the purposes of a *clinique*. But clinical teaching in them there is none, and there are so many difficulties and delays in the way of receiving patients, that one of them, at any rate, is half empty. Dr. Sibbald, however, draws our attention to the fact that at Berlin insane wards exist *in a general Hospital*. In the Royal Charité, insane patients are received and treated like the other sick :—

> "Within the grounds there is a detached block of building, the first and second floors of which are occupied by recent cases of insanity. There is little in the construction of the building distinguishing it from the other portions of the Hospital. With the exception that comparatively few of the patients are confined to bed, that a larger number of attendants and nurses is provided, and that more care is taken to obtain occupation for such as can be industrially employed, there is little to indicate any special peculiarity in its organisation. The use of mechanical restraint has been abolished, solitary seclusion is very little resorted to, and during many visits that I paid to the wards I always obtained evidence of humane and orderly management. The dress of the patients was that adopted in all sections of the Hospital. The Physicians stood in precisely the same relation to the insane patients as they did to the phthisical or fever patients. Clinical lectures were given during the summer session by Professor Griesinger three times a week, in one of the rooms of the lunatic section, the first portion of the lecture being given without the presence of any patients. The patients were then brought in singly, and their condition demonstrated while the Professor held a conversation with them. On every occasion in which I was present, such feeling as was exhibited by the patients seemed chiefly to be one of satisfaction with the attention paid to them."

Dr. Sibbald, as an asylum Physician and now a Deputy Commissioner in Lunacy for Scotland, would naturally criticise with a jealous eye the management of such wards, and his testimony in their favour is most valuable. When special Hospitals have been condemned, we have always heard lunatic Hospitals placed in a category of their own, and lunatics spoken of as patients who could not by any possibility be treated upon the premises of a general Hospital. Yet it has been and can be done, and we trust may be one day done in London as well as in Berlin. Asylums for the chronic insane there must be. The number to be treated in a general Hospital must necessarily be small, but a small number would suffice for clinical instruction. It is not to be expected that every one of our Hospitals should open such wards, but if schools were amalgamated, as we trust they some day will be, a sufficient number might certainly be instituted. Then, and not till then, will mental disease take its proper rank in our pathology. Insanity will no longer be a mysterious something upon which a lawyer is to be considered as good an authority as a doctor. Our students will be able to compare the unsoundness of mind depending on diseases now treated in general Hospitals with that which is called insanity, and at present relegated, as something quite different, to a lunatic asylum. Doubtless, the governors of our Hospitals would at first shrink in horror from the prospect of opening a lunatic asylum, and encountering Commissioners, Acts of Parliament, and other such bugbears ; but we are told that the thing exists, and we hope that some day it will exist here. The importance is so great that we would beg for it the serious consideration of the Profession, and through the Profession of the public, who are vitally concerned in the lack of instruction under which the Profession now labours.

STRINGENCY OF MEDICAL PARTNERSHIP CONTRACTS.

A case of considerable importance to the Profession, Langstaff *v.* Butterfield, came before Vice-Chancellor Sir J. Stuart, a few days since. Mr. Greene moved for an injunction to restrain the defendant from practising as a Doctor of Medicine, Surgeon, or apothecary, in or within twenty-five miles of the town of Southampton, without the plaintiff's consent. The plaintiff, who had practised successfully for many years at Southampton, took the defendant, who had previously practised in Wales, into partnership in 1866. The partnership-deed contained the usual clauses for the management of the business, and also contained a clause that each partner should punctually pay his debts, and provision was made for the determination of the partnership upon the bankruptcy or insolvency, as well as of the death, of either of the partners. One clause, the twenty-third, provided that upon the determination of the partnership by any means whatever, the defendant should not practise in Southampton or within twenty-five miles without the consent of the plaintiff, under a penalty of £2000 to be paid in liquidated damages ; but by a proviso, it was agreed that on the defendant's paying £1650, the moiety of the estimated value of the business at that time, to the plaintiff, he should be at liberty to practise. Shortly after the execution of this deed, the plaintiff discovered that defendant was involved, and two years later one of the creditors obtained a judgment, and threatened to issue execution against him. A new agreement was then entered into between them for the dissolution of the partnership, in which the clause restraining the defendant from practising in or near Southampton was embodied. The plaintiff employed the defendant from that time at a monthly salary, and he in that capacity continued to attend the public Dispensary to which he had been appointed Surgeon. In September he gave the defendant notice to terminate this engagement. The defendant applied to him for his consent to his continuing practice on his own account, which the plaintiff refused ; and, on his continuing to practise, the present bill was filed, under which an injunction was now moved for. It was contended, on the part of the defendant, that, accepting the plaintiff's statement of the facts, the case was one of great hardship. The defendant had left his practice in Wales to join the plaintiff, and after practising with him for two years, was, upon getting into difficulties, induced to enter into an agreement, under which the plaintiff obtained the right even to use the defendant's name. This agreement was unsupported by any consideration, and on the grounds of public policy, on which the Court set aside contracts in restraint of trade, could not be supported. The Vice-Chancellor, however, without calling for a reply, said he could see no hardship in the case. The hardship would be upon the plaintiff, if he were refused the injunction, to which he was clearly entitled. He would, however, suggest that, under the circumstances, the defendant holding a public appointment, some arrangement should be come to between the parties. This, however, was only a recommendation on his part, as there was no doubt of the plaintiff's legal rights under the agreement, and the order must be made as prayed.

The case is one of importance, as it conclusively settles one point, respecting which some question had arisen in former cases. Was it necessary, under such an agreement, before the plaintiff could obtain an injunction, for him to prove special damages, as a breach of the covenant? This has now been shown to the contrary, and will have a salutary effect upon the Profession. The defence was totally untenable, inasmuch as the defendant was not precluded from carrying on his Profession anywhere excepting in the locality clearly and distinctly specified.

THE WEEK.

TOPICS OF THE DAY.

The result of the meeting of the Sub-committee of the Royal Colleges of Physicians and Surgeons, and of the Apothecaries' Society, which was held at the College of Surgeons, on Friday last, augurs well for the success of the conjoint examination movement. We hear that great unanimity prevailed between the different elements of which the Committee is composed, and that no small progress was made in the formation of a scheme, which will in due time be submitted to the contracting Medical authorities and to the General Medical Council. The Sub-committee was employed at the late meeting principally in the discussion of the composition of the Examining Board, and the nomination and number of examiners in the different subjects. If this very important section of their business be got through in a just and conciliatory spirit—and we believe that this is the spirit which is actuating all parties—it is easy to foresee that no insurmountable difficulty is likely to arise in the remainder of the Sub-committee's deliberations. We do not profess to be informed as to the programme which will be ultimately adopted; but we should think it probable that the examinations in Materia Medica, Chemistry, and Botany will take place at Apothecaries' Hall, the examinations in Anatomy, Physiology, and Surgery at the Royal College of Surgeons, and the examinations in Medicine and Midwifery at the Royal College of Physicians, examiners nominated by each of the three Medical authorities being present at all examinations. Such a plan would have the obvious advantages of utilising the existing machinery and appliances for conducting examinations which the various Medical authorities possess. We believe that the question of the co-operation of the Universities has not yet been discussed by the Sub-committee. When it does come under consideration, we hope that it will be canvassed temperately and impartially. We have always maintained that the co-operation of the Universities is greatly to be desired, and if the Universities are willing loyally to take a part in the work of the general examination of Medical men, submitting their own Medical graduates to the common test, that co-operation should be invited and welcomed. But, inasmuch as the Medical Corporations include the very flower of the Medical Faculties of the Universities, we cannot see that the co-operation of the Universities ought to be obtained at the price of allowing them to be the first exceptions to that very rule of uniformity which ideally makes their co-operation valuable. All that we ask of the Universities, is to decree that they will not confer their final degrees in Medicine and Surgery on those who have not passed the conjoint Board. If they concede this, we hope they will be represented in that Board by examiners, or at least assessors nominated by their governing bodies. If they refuse the condition, we shall regret that the ideal one-portal system is not yet realised, but it will be clear that the blame, if blame there be, will be at the doors, not of the Medical-Corporations, but of the Universities themselves. The next meeting of the Sub-committee will take place on Monday, the 23rd inst.

We have heretofore noticed with entire approbation the proposal of the President of the Royal College of Surgeons, Sir William Fergusson, to form a collection of Surgical instruments and appliances in connexion with the Hunterian Museum. The circular letter by the President, which we publish to-day, shows that the proposal has taken a tangible shape, has been approved by the Council, and is in a hopeful way to become a *fait accompli*. We can add nothing to the grounds on which Sir William bases his proposal; in fact, the value of such a collection to all present and future students of the art of Surgery needs no exposition. But we would join with Sir William Fergusson in asking all gentlemen who possess or are forming such collections to give them, or, at least, bequeath them, or offer them at a reasonable price, to the College of Surgeons. Private collections are really but of little use, except to the possessor, and they are often scattered or forgotten after his death. The work of destruction, considering the durable nature of the instruments used in Surgery, has been surprisingly complete. Sets of Surgical instruments and appliances such as were used by Richard Wiseman are undoubtedly very rare, and even those of the time of Cheselden or Percival Pott are not common. We hope that the fortunate possessors of time-honoured *armamentaria* will respond readily to Sir William Fergusson's invitation, and that the result will be one worthy of the unrivalled museum of which it is to form a part.

The new President of the Pathological Society, Mr. Hilton, took his seat on Tuesday evening. Notwithstanding a very wet night, there was a large attendance of members of the Society. Mr. Hilton, in thanking the Society for the honour they had done him in selecting him as their President, said that pathology had made great progress of late years, and that although some time ago, working at the subject as he had done at his own Hospital, he had discontinued constant attendance at the meetings of the Society, he felt certain that he should gain much new and valuable information during his tenure of office. It seems probable, from the turn given to some of the discussions of the evening, that during Mr. Hilton's Presidency the practical bearing of pathology upon treatment will not be so rigorously excluded as under some of the former Presidents. For our own part, we rejoice that such is to be the case, as we believe it will give greater breadth and value to the Society's work. Under the late President, Dr. Quain, the Society raised itself from the status of a mere club for the exhibition of pathological specimens. The pathology discussed became, we think, wider and more philosophical. It will be still, however, an ascensive step if, whilst maintaining pathology and pathological anatomy as the real work of the Society, the new President is able by example and influence to direct the attention of the chief workers of the Society to the bearing which pathological facts have upon the life-business of the Profession. We cannot afford to forget that the only reason why the Medical Profession exists is that we may relieve human suffering, and cure or prevent disease. To lose sight of this, even for a few hours periodically, is, we think, a mistake. The result may very easily be a decadence from the high aim and scope of the practical Physician or Surgeon to those of the mere *dilettanti* philosopher.

Dr. Hermann Beigel, Physician to the skin department of the Charing-cross Hospital, has been decorated with the Order of the Iron Cross for personal bravery on the field of battle. Dr. Beigel is serving with General Manteuffel's army.

In a report to the Poor-law Board, on the present epidemic of small-pox, Dr. Bridges calls the attention of the Board to the time which might have been gained in meeting the epidemic had there been a registration of disease. Dr. Bridges writes:—

"Early in November, the Medical officers of districts and workhouses were requested to forward to me weekly returns of the number of small-pox cases under treatment. It was obvious that active measures for the isolation of the disease were necessary, and such returns would make it possible to estimate how far they should be carried. And here I may be, perhaps, permitted to point out the very great value which would have accrued in this instance from a systematic registration of contagious diseases, carried out by the parochial

Medical officers under the supervision of the Poor-law Administration. It is not too much to say that, at the least, three weeks would have been thus gained for preventive measures."

The deaths from small-pox last week were 135; those from scarlet fever 77. The proportion of deaths from small-pox was that of 22 annually to every 10,000 of the present estimated population. In the seven weeks ending Saturday last, the deaths averaged 81 per week. The Registrar-General writes:—

> "The extent to which small-pox prevails in different parts of the metropolis, so far as the mortality returns afford indication, can only be correctly ascertained by distributing the fatal cases occurring in the Small-pox Hospitals at Hampstead and Islington amongst the districts whence the cases were brought. Thus, last week there were 39 deaths returned from the Northern group of districts, of which 25 occurred in the two Small-pox Hospitals situated in those districts. Of the 25 fatal cases, 9 had been brought from the Eastern districts, while only 6 belonged to the Northern group itself. After making a correction of this nature for each of the five groups of districts, the mortality in each group last week from small-pox was in the annual ratio of 24 deaths to every 10,000 of the present estimated population in the West, 14 in the North, 20 in the Central, 45 in the East, and 10 in the South districts. The rapid development of the epidemic in the Western group is apparent from the fact that out of an aggregate of 83 fatal cases returned during the last fifteen weeks, 50 have occurred within the last three weeks. In the two sub-districts of St. John and St. Margaret, Westminster, out of 70 deaths registered last week from all causes, 21 resulted from small-pox; three children in one family died in the latter of these sub-districts, and notes appended by the registrar of St. John's to his return evidence a most deplorable neglect of vaccination among the population."

The London Sick Asylum Board are erecting additional Hospital buildings at Hampstead, to accommodate 200 more patients, and another building of the same size is to be erected elsewhere. The Boards of Guardians of Paddington, Bethnal-green, and other districts are being urged by the Poor-law Board to co-operate with the Sick Asylum Board by providing temporary Hospital accommodation within their own districts. There can be no doubt it is better to avoid the conveyance of small-pox cases to a distance through crowded thoroughfares, and if due precautions be taken to limit communication, it is desirable that an Hospital should be provided close at hand in each parochial division.

We hear that Mr. Jabez Hogg has been elected Surgeon to the Westminster Ophthalmic Hospital by a very large majority of votes.

SMALL-POX.

On Tuesday last the Vestry of Islington obtained a conviction under the 38th Section of the Sanitary Act, against a woman who took in mangling. It appears that some time ago, when small-pox was in the room she occupied, she was warned by Dr. Ballard, the Medical Officer of Health, but took no heed of the warning. On December 23, while another child was dying of small-pox in her rooms, she sent out, by her husband, certain articles of clothing which had been mangled by her and had been several hours in her rooms, without previously disinfecting them. On taking the things home, the husband, in reply to a question put to him, said that it was true there had been small-pox in the family, but there was no danger of infection now. A second summons, for a repetition of the offence a week later, had been taken out, but was withdrawn, in consequence of the absence of the witness to prove that the defendant actually mangled the articles. The defendant was fined 20s. and costs, and Mr. Cooke, who heard the case, desired that it should be made widely known that he highly approved of the step taken by the authorities, and that he considered the prosecution to be highly proper for the protection of the public against similar malpractices, especially at a time when small-pox was so alarmingly prevalent as the present.

It will be observed from Dr. Ballard's monthly report, that he has urged the Vestry of Islington to take advantage of their powers under the 37th Section of the same Act to provide temporary accommodation for such small-pox cases as cannot be admitted into the existing Hospitals. The Sanitary Committee, leaving the paupers to be provided for by the guardians, in accordance with Mr. Jebb's circular, have recommended the vestry to adopt Dr. Ballard's suggestion, but only so far as to provide accommodation for such as are willing to pay for it. Their notion appears to be, that the rates should not be chargeable with expenses incurred for such persons. It is curious to observe how difficult local authorities find it to distinguish between relief and sanitary aid. One would think that, with small-pox spreading on all sides, it would have been clear that the simple separation of the sick, even in well-to-do families, from the healthy, is a measure for which ratepayers would be glad to pay. But no; they can understand curing the sick, but not preventing the spread of disease.

SMALL-POX JOTTINGS.

Small-pox may well be called the queen of epidemics, for it is of all the most loathsome and fatal. The chief point in which it differs is that, by the mercy of Providence, we have a protection. Vaccination is a means of implanting a vicarious disease—a kind of small-pox modified, which gives all the exemption given by the original disease, with none of its danger. In other respects, it obeys the laws which govern epidemics. One of the chief of these is, that they rise and fall in waves in series of years, just like the frost, the rain, and the fertility of the earth. Sometimes an attempt is made to connect these rises and falls with secondary causes, but what is true of one is true of all; we do not ascribe the intermittent virulence of scarlet fever with any known external condition, neither can we that of small-pox. But small-pox, it is said, would not prevail to such a degree were it not for the neglect of vaccination. True, vaccination *is* neglected, but this cannot be all. Neglect of vaccination means that a certain number of persons continue able to take the disease, and to die of it, who, if well vaccinated, could not; but no neglect of vaccination could make the general character of an epidemic more virulent. There must be some intrinsic quality in the disease itself to explain this. Without doubt, unless one has been vaccinated three times already, it is better to be done again. The character of vaccination, and of small-pox of full severity, is *time:* small-pox and vaccination each requires three weeks; but small-pox, mitigated by previous small-pox or by vaccination, requires ten days. The repeated vaccination of adults is apt to produce a very sore arm, which is at its height on the fifth day. One point common to all epidemics nowadays is their tendency to occur twice to the same person. This was denied by our forefathers; so that at any rate it was rare. Now, cases of scarlatina affecting the same individual twice are quite common. Small-pox may have this unpleasant feature also, and hence may derive its liability to occur after vaccination. Besides vaccination, every household should protect itself by a thorough rummage out of all fusty old woollen articles, old carpets, curtains, and the contents of old wardrobes and drawers. Medical men in attendance should wash their hands often with carbolic soap, and keep their mouths shut. The hands are the most likely parts to come into contact with small-pox contamination, and the nose is a better organ of respiration than the mouth.

FALSE ASSUMPTION OF A TITLE.

Mr. Burgess, a dispenser, of Dean-street, Soho, was summoned last week to Marlborough-street, for having taken the title of Doctor, he not being registered under the Medical Act. He answered to the title of Dr. Burgess, and prescribed for the child of a working-man in a case which terminated fatally. He was fined £5 and costs.

THE CLINICAL SOCIETY.

THE annual meeting of this Society was signalised by the resignation of one distinguished President—Mr. Paget—and the election of another equally well known—Dr. Gull. In a few graceful words, Mr. Paget took leave of the Society and alluded to the merits of his successor. The treasurer's report was favourable, a balance of £206 in hand being reported. The most interesting portion of the evening's proceedings consisted in the renewed debate on the case of vaccino-syphilis, Mr. Brudenell Carter advancing the hypothesis that the ordinary signs of inherited syphilis might be induced in a healthy infant by vaccination from a syphilitic one. This position was strongly attacked by Dr. Cholmeley and others, who maintained that syphilis could only be communicated when a primary sore was produced. Mr. Thomas Smith pointed out that it could apparently be propagated by the seminal secretion of the individual suffering from constitutional syphilis, although it might be manifested by no eruption. On all hands it was admitted that the case was one of syphilis following vaccination, whether induced by it or not, although the general impression seemed to be that it was a case of true vaccine syphilis. The next meeting of the Society will be held at 53, Berners-street, on the 27th, when the new President, Dr. Gull, will, it is expected, address the members.

KNIGHTHOOD, LEGAL AND MEDICAL.

"OSBORNE, January 14.—The Queen was this day pleased to confer the honour of knighthood on James Bacon, Esq., a Vice-Chancellor; and on John Maclean, Esq., of Pallingswick Lodge, Hammersith, Deputy-Auditor of the War Office."

Lawyers and civil servants of the Crown, civic and municipal officials, the army and navy, artists, musicians, architects, engineers, have received the honour of knighthood, with no niggardly hand. Yet the Medical baronets and knights of England, Scotland, and Ireland could be counted on the fingers. It is confidently expected that when the Queen opens the new St. Thomas's Hospital, this spring, the treasurer and the architect—two well-paid officials—will be knighted; yet no such reward is spoken of for either of the Physicians or Surgeons who represent the Profession which has done so much responsible and gratuitous work for the charity. We trust that the advisers of the Queen will direct attention to such systematic neglect of our Profession, and that some fair share of national reward will be allotted to those who do so much for suffering mankind and for the honour of British science.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of the Association was held on Friday, the 13th inst., at 11, New Burlington-street—Dr. Burrows, F.R.S., presiding. The report showed that, during the past year, the sum of £1061 had been expended in the relief of 124 cases of distress—many of these representing large families. The charity has also afforded annuities, amounting in the aggregate to £605, to thirty-three persons. The Committee has, on several occasions during the year, found itself greatly straitened for want of means, and many deserving applicants have in consequence been but inadequately assisted. The appeal which has been issued, and sent to every known member of the Profession in Great Britain, does not appear, as yet, to have produced so good an effect as was hoped and expected; but the Committee feels assured that the *quietly working* British Medical Benevolent Fund only requires to be more fully known to be more liberally supported by those who are blessed with the *health* and *means* denied to so many others connected with our Profession.

The following officers and committee were elected:—*President:* G. Burrows, M.D., F.R.S. *Vice-Presidents:* Edgar Barker, Esq.; Sir H. Holland, Bart., F.R.S.; H. Bence Jones, M.D., F.R.S.; H. Sterry, Esq. *Trustees:* H. W. Acland, M.D., F.R.S.; G. Burrows, M.D., F.R.S.; Dr. G. C. Jonson; J. Paget, Esq., F.R.S.; E. H. Sieveking, M.D. *Other Members of Committee:* E. H. Ambler, Esq.; E. L. Birkett, M.D.; W. H. Broadbent, M.D.; H. Bullock, Esq.; J. Churchill, Esq.; N. H. Clifton, Esq.; W. T. Dalby, M.D.; G. T. Dale, Esq.; Campbell De Morgan, Esq., F.R.S.; J. F. France, Esq.; T. Jervis, M.D.; J. Liddle, Esq.; W. Martin, Esq.; J. Morgan, Esq.; J. T. Mould, Esq.; H. R. Owen, M.D.; J. C. Steele, M.D.; R. Stocker, Esq.; C. S. Webber, Esq.; E. Parker Young, Esq. *Treasurer:* C. J. Hare, M.D. *Hon. Secretaries:* Stamford Felce, M.R.C.P. (cases); R. Thorne Thorne, M.B. (finances). Votes of thanks were passed to Messrs. Churchill for the use of a room for the meetings, to the Treasurer and Hon. Secretaries, and to the editors of the Medical journals for their ready assistance in promoting the welfare of the charity.

DEATH FROM SUPPOSED SUBCUTANEOUS INJECTION OF MORPHIA.

THE newspapers record an inquest held on the body of Mr. Sutcliffe, late Physician's-Assistant at the Royal Infirmary, Manchester. He was found dead, and as it was generally reported that he was in the habit of using morphia by subcutaneous injection, a post-mortem examination was made, to discover if any cause for death could be ascertained. Dr. Buckley deposed that there was no morbid disease sufficient to cause death. The liver and kidneys were diseased, the other organs being in a healthy condition, but congested. There was also congestion of the membranes of the brain. Witness found no traces of morphia in the stomach. He understood that the deceased had been in the habit of taking subcutaneous doses of morphia, and a dose acting on a depressed system might be fatal. There was a solution of morphia and a morphia syringe found in the deceased's room. He did not think that the latter article had been used, though it was possible it might have been. From what witness knew of the deceased, he did not think that he would intentionally take an overdose of morphia. The jury returned a verdict of "Death from toxæmia, aggravated by a dose of morphia taken as medicine to provoke sleep."

MORTALITY OF THE WOUNDED IN PARIS.

THE following description of the state of the wounded in Paris is contained in a letter from a well-known member of our Profession, at present in that city. The letter is dated 5th inst.:

"As to the wounded here, the mortality has been fearful, principally by pyæmia and Hospital gangrene. Overcrowding, and insufficiency of air, of cleanliness, of food, and of strong wine conduce to this, and I am inclined to suspect that conservative Surgery has been carried too far. I suspect it does not do well when large numbers of wounded have to be attended, either in the same Hospital or in the same neighbourhood. When the wounded are comparatively few, attendants numerous, and lots of space available, matters are different. Then, as regards resections, etc., they leave two surfaces instead of one, increase risks of osteo-myelitis and other Hospital diseases, and render long continuance necessary of the patient being exposed to such risks. Such are briefly my first impressions, but the point needs to be carefully considered. I think, also, that if huts and tents could alone be used for the wounded in a besieged city they ought to be so. There are many things that would render this very difficult, but my views are strongly against converted buildings as Hospitals."

THE BESIEGED IN PARIS.

OUR readers will be glad to hear that Dr. J. R. Cormack, whose heroic determination to remain in Paris during the siege, with Mrs. Cormack and one of his sons and daughter, is known to our readers, has been heard of up to January 7. The account he gives of the disposition of the inhabitants makes us dread the scenes that may follow a capitulation. We say "inhabitants," because, in a letter of December 15, he says, "Here we are in Paris, without gas, meat, or milk, *and without Parisians*, for they all left when you fled. The French are not going to give in; I see no desire for peace now." The genuine Parisian has emigrated, or else is transformed into a desperate patriot. "Should Paris be entered by the Prussians," he says, "by capitulation or force there will be a general massacre of them. This will give rise to reprisals, and scenes more horrible than anything this horrible and infamous war has yet witnessed will be enacted in this city." Dr. Cormack doubtless well knows the spirit of the Parisians, but he need not think that the Prussians will let themselves be massacred very easily.

The following letter from Dr. Cormack has appeared in the *Scotsman.* We do not hesitate to give it a place in our pages as part of the Medical history of the war:—

"Paris, January 1, 1871.

"We are still alive: the intense cold, and the want of sufficient food and fuel, are telling terribly on health and life, and we cannot expect to escape the general suffering. I am fully occupied with my ambulance and other duties — in truth, never in my whole life was my time more entirely and, as I think, more usefully occupied. This keeps me from moping over present miseries, and unavoidable personal and family privations, to a wonderful extent. To many the siege has been a monotony of sorrow; to me and mine it has been one continuous bustle and excitement. I have been in all the battles; and the preparing for them, and the 'cases' which follow, exclude the possibility of serious reflection on the appalling situation of affairs. Yet, in wishing you many happy new years (as I now do right heartily), I feel constrained to tell you what I think is to be the end; and this desire leads me to ask myself whether I have any clear thoughts as to the most probable *dénouement* of the war. I confess I am quite unable to come to even a probable guess. I know nothing, or at least very little, of what is being said and done beyond this isolated city, so that I have no elements from which to form any conclusions. Were I to judge only by what I see and hear around me, I should say that a supreme effort will be made, whenever a thaw comes, to cut through the Prussian lines, so as to save the army of Paris and its splendid artillery, joining, if possible, one of the provincial armies, about which we know little. Should Paris be entered by the Prussians after a capitulation or by force, there will be a general massacre of them: this will occasion reprisals, and scenes more horrible by far than even this horrible and infamous war has yet witnessed will be enacted in this city, which, when you last visited it, was vainly, vauntingly talked of by its inhabitants as 'the capital of civilisation,' but which, in point of fact, was rather the head-quarters of atheism and social corruption. Be the *dénouement* what it may, Paris will, I think, arise with France regenerated. Sombre though Paris now is, the social atmosphere is purer—men are men, and women are women. All are brave and ready to suffer and die for 'la patrie.' Such being the state of matters, my sympathies are all with France. I go on with my neighbours hoping against hope, and encouraging all around me to do the same.

"For some days the forts on the east of Paris have been bombarded—at times with tremendous fury—but no great injury to them has been inflicted. The dead and wounded are horribly mangled by shot and shell, but they are not numerous as compared to battles we have had—even small battles. The nearest Prussian shells have been at Vincennes, which is five miles from 7, Rue d'Aguesseau. Batteries exist, however, it is stated, which could send shells into the Palais Royal.

"The public health looms ugly in the returns issued to-day; and I suspect the whole truth is not revealed. We are told that the week which ended on Friday, December 30, is the most gloomy in respect of mortality which we have yet had, the deaths having risen from 2728 of the previous week to 3280. To this enormous total, small-pox contributed 454, and typhoid fever 250. Purulent infection, following Surgical operations and gunshot fractures (as well as other gunshot wounds), has been fearfully fatal in the large Hospitals and ambulances; in the Grand Hotel, which is an ambulance with 500 beds, and celebrated Surgeons, nearly every operation is followed by death; the small ambulances, the detached wards—I mean such as my twenty beds in two wards of ten each—are more easily kept sweet. Yet, with all care, some cases are lost when the worst seems past. This morning, at seven o'clock, I lost a fine fellow (a Breton) from pyæmia. He had a dreadfully comminuted fracture of the thigh, and was saved from then impending death by hæmorrhage by me on the heights of Champigny on the bitter cold night of December 2. I took him from under the noses of the Prussians under very peculiar circumstances, and when I placed him on a mattress in my ambulance *volante*, I felt the pleasure of having saved a life. This man's death is therefore a great sorrow to me; but all around me sorrows prevail—less among my wounded, however, than might be expected.

"January 7, 1871.

"I was, till the day before yesterday, prevented by duties, and since then by illness, from finishing my letter. I am much better this evening, and hope to get out a little to-morrow. We are now being bombarded. Two shells fell last night near the Pantheon, and the viaduct of the Ceinture Railway was twice hit by shells from Meudon this afternoon. The bombardment of Paris will make resistance more inveterate and furious. If the Prussians come in, '*Væ victoribus!*' will be the cry. I have had several severe cases of frost-bitten feet and noses."

FROM ABROAD.—STRYCHNIA IN AMAUROSIS—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

PROFESSOR NAGEL, of Tübingen, has communicated an interesting paper, in the *Centralblatt* for December 24, on "Strychnia as a Remedial Agent in Amaurosis." After referring to the various trials which have been made of it and nux vomica in England and Germany during the last half century, he observes that the remedy had gained from these a very doubtful reputation, the instances of recovery being regarded for the most part as inexplicable matters of curiosity. His own experience, carried on for some years, has yielded much better results, having convinced him that strychnia is a most valuable remedy in amaurosis, and, applied in the right way at the right place, is productive of very favourable and sometimes of very surprising results. So peculiar is its influence on this disturbance of vision, that its more exact study may be expected to elucidate the general theory of strychnia poisoning, and it is thus invested with more than a mere ophthalmological interest.

Professor Nagel has already made a communication on the subject to the Wurtemberg Medical Society, but he is also desirous to bring it under the more general notice of the Profession. He gives a few selected examples. Thus, a boy, 3 years of age, the subject of measles, awoke out of prolonged and deep sopor, blind of both eyes. Only a trace of a sense of light and pupillary reaction remained, while to the ophthalmoscope all seemed normal, no signs of *neuritis optici* being present. The blindness had lasted several weeks, some visual power only having very slowly returned. Rapid and complete recovery was produced by strychnia—the consequence of each injection, consisting in a considerable increase in visual power, being perceptible at the end of half an hour. For effecting complete recovery, only four injections were required, one-ninth of a grain of strychnia being the whole quantity employed. In another case, of a lad, aged 15, two subcutaneous injections effectually cured a partial unilateral amaurosis, scarcely one-fourteenth of a grain being employed, the effect commencing in a few minutes, and reaching its maximum in less than an hour. In cases of slight amblyopia, with paresis of the retina arising from various causes, good effects are produced in from fifteen to thirty minutes. After commencing, or even tolerably far-advanced atrophic degeneration of the optic papilla, as shown by pale and superficial excavation, strychnia is often of avail—a fact of which no example has hitherto been recorded. It is obvious that in many of these cases, hitherto regarded as incurable, we must rest content with imperfect results, satisfied if able to prevent complete blindness. The earlier the strychnia is resorted to, the better will be the results. In some desperate cases, not only has the progress of the disease been arrested, but considerable improvement has been effected, this being sometimes only temporary, and at others durable. In a case in which the amaurosis manifested all the character of rapidly progressive malignity, the diseased process was brought to an almost sudden stand-still, a portion of visual power remaining stationary. For more than five years after the use of the strychnia, the patient has continued able to walk about, and can decipher print, in spite of a shining white papilla. In some cases of intense whitening of the papilla, a decided improvement in the appearance of this has been observed, in consequence of a partial reproduction of the capillary redness. It is of physiological interest to note that, in excessive amblyopia due to long disuse, and in which the outer half of the retina has undergone great decay, the strychnia exerts great effect. An eye which could only count the fingers at a few feet distance, was, fourteen days later, able to decipher fine (Jäger No. 3) print. In traumatic amaurosis its effect has several times proved striking. At the present time, Dr. Nagel has a remarkable case of this kind in his Clinic, in which some hypodermic injections produced, in a few days, useful visual power, although the optic nerve exhibited decided anæmia and pallidity. The present war is only too fertile in traumatic amaurosis. Grazing shots and contusions of all kinds may induce paralysis of the retina, either in a simple form or complicated with various lesions; and it is to be hoped that in these cases, which yield with such difficulty to other means, the curative effects of strychnia will be essayed.

From the experience he has had in the employment of this substance, Professor Nagel feels himself entitled to say something in the matter of prognosis. The most complete results are to be looked for in cases of so-called pure *anæsthesia retinæ*. Most cases of essential amaurosis, in which too great physical changes in the optic nerve have not occurred, are suitable for its employment; symptomatic cerebral and spinal amauroses are so only within narrow limits; while toxical and traumatic amblyopia and amaurosis are especially adapted for its use. In marked degeneration of the connective tissue of the optic nerve, the remedy should not be employed, as its character would only be compromised. Nothing is to be expected from it in *neuritis optici intraocularis* and its consequences; and cerebral irritation and tabes are contra-indications of its employment.

Hydrate of chloral will be found very useful in combating the sleeplessness so mischievous in amaurosis, as also in dissipating the slight ill-effects of the use of strychnia, while it does not interfere with its curative agency.

Continuing the perusal of Professor Billroth's letters, in order to select points that may be of interest to our readers, we next come upon the question of treating the badly wounded in private houses. All *à priori* reasoning, he observes, is in favour of this, as we are thus enabled to isolate them, and protect them from that terrible infection produced by the presence of other patients. His opinions on this point soon underwent a rapid change, and he now pronounces any such procedure as utterly impracticable. The little town of Weissenberg, with its 5000 inhabitants, when fear of bombardment had passed away, soon became crowded with wounded, and the citizens willingly received them into their houses, especially as it at first was supposed that this might save them from having soldiers quartered on them. However, it was found impossible to make such exceptions, and, moreover, the horrid din going on day and night in the streets encumbered with troops, ammunition, and provision waggons, utterly prevented all sleep or quietude. Other objections to this distribution of the wounded were, the temporary exhaustion of the supplies of food in the town, and the impossibility of so organising the volunteer nurses as to impart unity of action and supply sufficient numbers. Moreover, the supply of experienced Surgeons was far too small to allow of their activity being too diffused. A Surgeon of even untiring industry, and with efficient assistance, cannot, at the very most, treat carefully more than from fifty to sixty badly wounded patients in a day, even when he has them all on one spot. If they are in localities far apart from each other, forty or fifty are a great many to treat; while if all or most of them are in different houses, to which splints, apparatus, etc., must be transported, the number capable of being treated by one person becomes diminished to twenty-five or thirty. Such a distribution, therefore, implies an amount of Surgical and nursing *personnel* that it ceases to be procurable. Moreover, the cases are treated at great disadvantage upon the occurrence of secondary accidents, and in respect to space and ventilation. In proof of this, Professor Billroth cites several cases that terminated fatally which might have done well in a Hospital. The slightly wounded and convalescent may, however, be advantageously treated in private houses. Many of these objections are likewise applicable to small Hospitals in small towns. On another occasion, Professor Billroth hopes to point out what is true and what is erroneous in Simpson's views as to the superiority of small civil Hospitals, in regard to their comparative immunity from pyæmia; but, in the meantime, he would regard it as a calamity if his views were allowed to prevail with respect to military Surgery. The older Surgeons of small towns have, as a rule, too rare opportunities of treating Surgical cases to be enabled to pursue the correct diagnosis and treatment of bad gunshot wounds of the bones and joints—cases which often involve the greatest difficulties for the most experienced Surgeons. Absolute cleanliness, and a thorough carrying out of modern sanitary rules in the treatment of difficult Surgical cases, are only possible with a certain abundance—we may almost say, profusion—of material for the care of the sick, which is not attainable from the limited resources of small Hospitals in small towns. His visits to many small localities near battle-fields, in the north of Alsace and the Palatinate, have convinced Professor Billroth that it is an illusion to suppose that wounds there heal better, or that pyæmia is less frequent than in the great military Hospitals.

As he has had to touch upon this somewhat delicate point, Professor Billroth takes the opportunity of expressing his opinion concerning the Surgical capabilities of the Practitioners he was brought into contact with. He is of opinion that a knowledge of Surgery and its operative procedures has, of late years, made great progress, both among the civil and military Practitioners of Germany. In almost all the civil and military Lazareths which he has had occasion to inspect, he has seen apparatus of the most various descriptions admirably applied, and operations that have been well executed. The improvement witnessed is mainly attributable, he thinks, to the influence of Professor B. Langenbeck—not that there are not also other Surgeons eminent in their respective circles; but then these circles are so narrow as compared with that of Langenbeck, which has gradually stretched itself all over Europe and beyond it. Among the students of the last twenty-five years, Langenbeck has been the most popular of teachers, not only because of his remarkable scientific eminence, but still more in consequence of a charm which he personally exercises over them, just as strongly at the present day as he did thirty years since. He, however, could not prevent too many persons devoid of talent and of limited capacity entering upon the study of Medicine; and the evils springing from defective capacity cannot be repaired even by great industry and erudition.

> "In the hands of such colleagues, everything good becomes perverted. They apply the gypsum bandage, without sense or understanding, in the most dangerous manner, and cut down for bullets day after day without finding them; they are unable to form a diagnosis, and apply no apparatus, calling this conservative Surgery. Hæmorrhage is arrested time after time by the use of the sesquichloride, and they are much surprised to find the patient at last dying exhausted. Patients with gunshot wounds of the thigh or knee are left for weeks undisturbed, because they complain of the pain when moved, it not being observed that they are sinking fast from bedsores. These are things not to be put to rights by learning, but by the possession of a sound understanding, a talent for observation, and some power of thought. The teachers of Surgery are not to be blamed, for pupils of this kind, if they were set right in twenty cases, would on the twenty-first again overlook the essential, and attach all the importance to trivial points. Some of the most painful situations of my life have been due to consultations with colleagues of this description; for I have always laid it down as a principle, even in

such instances, not to shake the confidence of the patient in his attendant, believing this the worst service I could render to the suffering man who has no other Practitioner to resort to. The susceptibility of colleagues is, however, not always capable of being spared. Quite surprising to me, during this war, has been the feverish eagerness for operating which has seized Practitioners who, perhaps, during their practice have never handled a knife. I would not willingly undertake the treatment of typhus or pneumonia, yet I found Practitioners eagerly extracting bullets, and opening abscesses by the dozen. A colleague told me frankly that he dared not, on account of public opinion, abstain from treating the wounded, for it might be thought that he did so from indolence, or even from not knowing anything about Surgery, which would injure him much in his future practice."

(To be continued.)

SANITARY POLICE REPORTS.

WESTMINSTER POLICE-COURT.

The Small-pox.—A working-man came to the magistrate and asked what course had better be pursued to obtain a refuge for a poor young man afflicted with small-pox, which is at present very prevalent in this neighbourhood?

Applicant said he found the young man that morning in front of the Westminster Hospital, and ascertaining his diseased condition, and that he had no place to go to, he took him to the Westminster workhouse. They refused to admit him, and told him to go to the police-station. Applicant took the youth there, and was referred to the magistrate.

Mr. Arnold observed that he really did not know what to do.

Applicant said it was shocking to see a poor man in such a state wandering the streets. He had only been influenced in coming forward by motives of humanity. The young man had nowhere to go to, and although he had an in-patient ticket for the Westminster Hospital, they could not receive him for want of room.

Mr. Arnold immediately dispatched Davis, the warrant officer, with the poor young man to the workhouse.

The officer subsequently reported that he was taken in.

Mr. Henry Brookling, Sanitary Inspector of St. Margaret's, Westminster, applied to the magistrate for an order for the immediate removal and burial of a poor man lying dead of small-pox at No. 1, Henry's-place, Westminster. He said that he had that day received information that the man was lying dead in the house, which was inhabited by other persons. He found him lying dead in all his clothes, and his three young children were alive in the same room. He obtained a certificate of the cause of death, and also a certificate for the removal of the body. He took them, by direction of the relieving officer, to the master of the workhouse, who had the hearse and other appliances for removal at his command, but he refused to take any action in the matter, or to look at the certificates or a letter on the subject.

Mr. Arnold promptly made the required order.

THAMES.

How Small-pox is Spread in the Metropolis.—Rebecca Jacobs, a young woman, dwelling at No. 6, Boar's Head-court, Whitechapel, appeared before Mr. Paget to answer a summons taken out by Inspector Gee, of the K division of Metropolitan Police, and which charged her that, on December 17 last, being then suffering from the small-pox, she did unlawfully enter a public vehicle without notifying the same to the driver thereof.

The defendant, who was very ill, and has recently been under Medical treatment for small-pox, was accommodated with a seat.

On the day named, a cabdriver named Thomas Guyatt, badge No. 4142, was hired by a man in the Whitechapel-road, and directed to drive to Boar's Head-court, where the man and a woman brought out the defendant, who was well wrapped up, and carried her and placed her in a cab. The porter at the Whitechapel Union-house, where he was told to drive, discovered that the defendant was labouring under the small-pox, and by his direction she was conveyed in a cab to the small-pox ward in Pavilion-yard.

Mr. Paget said he did not think he could convict the defendant. She certainly ought to have given notice to the cab-driver that she was labouring under a contagious disease, but she did not hire the cab. He recommended the inspector to withdraw the present summons and take out another against the person who hired the cab, and who seemed to be the real offender.

Inspector Gee complied with the wishes of the magistrate, and the defendant was discharged.

This week, at Worship-street, a man and his wife were each fined 10s. and costs for having sent home to the house of a laundress, without having previously disinfected it, the linen that had been worn by a person suffering from small-pox.

At Clerkenwell, a lodging-house keeper was summoned for not having given notice to the police that a person was in his house suffering from the same disease. The hearing in this case was adjourned.

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,
Now prisoner of War at Versailles.

(Continued from page 52.)

Early next morning, the 16th, a peasant came to tell us of some wounded in the villages beyond Borny. They had heard of our expedition of the previous day, and now begged us to make the same attempt on their behalf, which to us, as "internationals," would probably be granted.

To be wounded and left with the enemy is perhaps the greatest misfortune which can fall to the lot of a soldier, and this, if possible, is more felt by the French than any other troops;, for, as a general rule, they know no language but their own, and but little of the manners and customs of other nations. A few waggons were immediately made ready and ordered to start in the given direction. In the first village, Montoy, we found nineteen of our wounded, one a captain. The joy of these poor fellows, when they heard that we had come to take them away, was beyond description. All were perfectly attended to, and in every way well treated, by the Prussians; but they preferred to go with us, in spite of the pain which they must naturally suffer from the transport; that even the necessaries of life should later be wanting there, was at that time unknown to any of us. In the second village, Noisseville, we were less fortunate. Of the twenty-one wounded there lying, not one could be moved. It seemed as though this collection had been made on purpose to depict the horrors of war and the frightful wounds of modern weapons. A goodly number of the cases were fractures of the femur; one I recollect well—a fracture of both femurs, produced by the same projectile, in a young lad, only 18 years old. It was a case for double amputation, but the Surgeon—more from pity than judgment, I think—wished to make the attempt of saving one of the limbs. The apparatus almost universally used for the treatment of such fractures by the Prussians, as far as I have been able to see during this war, is the plaster of Paris bandage; and this, I do think, they know how to apply with more dexterity and neatness than the French. Plaster of Paris being everywhere plentiful in France, the application of these apparatus has been wrought with less difficulty than perhaps any others which could have been adopted. Of the old Scultetus bandage, so very generally made use of all over France—indeed, the army Surgeons scarcely ever apply any other—I have not seen a single example.

At Lauvallières, the adjoining village, I found a soldier lying upon some straw under a tree. An under-assistant, the only person near, and apparently believing me to be some sort of a personage in his own army, explained that the man had only just been brought from the field, and therefore the apparent want of attention in his case. A ball had traversed the back of the neck from side to side, near the fifth or sixth cervical vertebra, doubtless wounding the spinal cord, for the upper and lower extremities were completely paralysed. All the poor unfortunate asked me to do for him was to place something over his face to keep away the flies. Our last village to go to was Colombey, about one mile distant from the château of the same name already mentioned. We there found a major and four privates, all quite willing and, excepting the major, in a condition to be moved. A ball had struck this officer near the posterior bounds of the axilla, and, passing in and upwards, was lodged in the groove formed by the lamella and the spinous process of the seventh cervical vertebra. The patient suffered, but preferred to be taken to Metz. The hyperæsthesia of the extremities, and all the body below the wound, was such that the least pressure produced excruciating pains. We managed to put the patient, without raising him from his mattress, into a waggon, well filled with straw. I saw this case two months later, almost completely cured.

The only place where the people had remained at home was this one—Colombey—and the contrast of things was quite marked. Here everything was upside down, of course, but nothing taken, nothing wantonly destroyed. Not so in houses left uninhabited; these suffered terribly. The French soldier understands pillaging perfectly, and does so whenever a good occasion offers; but the Germans are not inferior to them in this respect. Many a proprietor will find his home sadly changed; the destruction in some cases is carried to such a degree that nothing has been spared, even doors and window-frames have been torn away to serve as firewood. When the Northern American armies invaded the South, they left a black streak behind them; their Saxon brethren have taken the lesson. However, I must say, in justice to all, that wherever the inhabitants have remained at home they have little to complain of more than having been called upon to furnish food and shelter for the troops. In proof that the French do as much, persons have told me, who have had both French and Prussians quartered upon them, that they would sooner have the latter than their own countrymen. We had thus, in these two days, thanks to the Geneva Convention, saved six officers and ninety-four men the journey to Prussia, where have been sent all our transportable wounded in the enemy's hands.

(*To be continued.*)

REVIEWS.

Holmes's System of Surgery. Vol. IV., second edition. Longman and Co.

The various additions made to each volume of this well-known work, and the introduction of numerous woodcuts, have considerably increased the value of the second edition now being issued from the press; the number of volumes also in the series will be five instead of four. Consequently, the recently published—the fourth—volume, now before us, only partially corresponds to the fourth volume of the first edition. It commences with Mr. Athol A. Johnson's paper on Diseases of the Joints, and ends with Mr. Charles Hawkins's essay on Lithotrity, thus containing about half of the material of the third volume, and leaving the same proportion of the fourth volume of the earlier edition for publication in the forthcoming fifth volume.

Dr. J. Lockhart Clarke contributes a short paper on Locomotor Ataxy, and Mr. Arthur E. Durham, in his two papers on Diseases of the Nose and of the Larynx—the former being so far modified from that by Mr. Ure, in the preceding edition, that it may be considered original—gives a full description of the most recent methods of rhinoscopy and laryngoscopy, and other various instruments employed in the treatment of diseases of the upper air-passages. These, we believe, are the actually new materials of the present edition, but all the papers have evidently been carefully revised, and the well-established reputation of the several authors is a sufficient guarantee that the information is sound, and brought up to the most recent date. A very beautiful chromo-lithograph illustrates Mr. Poland's paper on Urinary Calculi.

NEW BOOKS, WITH SHORT CRITIQUES.

Introduction to the Study of Inorganic Chemistry. By William Allen Miller, M.D., etc., late Professor of Chemistry in King's College, London. Longmans.

⁂ This work, which is one of Longmans' "Text-books of Science," was completed by the late Professor Miller, and he was engaged in reading the proof-sheets when he was seized by his fatal illness. By Professor Miller's request, the task of carrying the book through the press has been performed by Mr. C. Tomlinson. To us it seems one of the most pleasant, easy, and attractive introductions to a confessedly difficult science that we have seen. Every step is illustrated by experiments to be performed by the student himself, for which full directions, aided by excellent wood engravings, are given. It seems exactly the book for the teacher of chemistry in public schools and mechanics' institutes to use as a text-book. We can also recommend it to the Medical student as a book introductory to the larger manuals. We are certain that much of the repugnance which many of our Medical students feel to the study of chemistry would give way to a directly opposite feeling if they commenced the study with the aid of such a book as the one we are noticing and a little cheap chemical apparatus. The way to study chemistry is to learn facts by experiment first, and then to master the theories by which the facts are explained and the symbols by which they are represented.

What is Malaria? and why is it most intense in Hot Climates? An Inquiry into the Nature and Cause of the so-called Marsh Poison. By C. F. Oldham, M.R.C.P.E., M.R.C.S.E. London: Lewis. 1871. Pp. 186.

⁂ This is a book combining the results of scholarship and of practical experience, and well worth reading, not only by those whose duties bring them into contact with malarious disease, but by all who desire to test the soundness of generally received Medical doctrines. The writer, upon purely independent experience and reasoning, argues that "malaria" has no existence, and ascribes its alleged effects to chill. But we must lay before our readers a fuller account of Dr. Oldham's work.

1. *Half-Yearly Abstract of the Medical Sciences.* J. and A. Churchill.
2. *Braithwaite's Retrospect of Medicine.* Simpkin and Marshall.

⁂ It has been said that comparisons are odious; so they may be, but, like odious people, they may sometimes be useful. We cannot compliment the editor of the "Abstract," except for his industry with the scissors. We think his work wants life, suggestion, method. It contains a good deal of information, it is true, but it lacks the manner—it wants more supervision. The "Retrospect" sustains its well-earned reputation, not only for the carefulness of the selection made by the editors, but for a healthy and invigorating tone, and for the admirable "synopsis" of its contents.

East and West. By the Countess Spencer. Longman.

⁂ An eloquent account of what may be seen and described by a generous, large-hearted woman in the wretched East of London. Mission women can effect wonders, when under proper superintendence, and when adequately supported by means.

The Naval Medical Service: its Present State and Prospects; with Suggestions for its Improvement. By F. J. Brown, M.D.

⁂ An able and practical view of the entire subject, by a man who thoroughly understands it. We recommend the attentive perusal of the veteran reformer's *brochure* to our readers.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, January 17.

(*From a Correspondent.*)

The Female Medical Student.

On the vexed question of the admission of female Medical students to the ordinary Medical classes, two more battles on an entirely new battle-field have now been fought. Already this session the General Council of the University, the managers of the Royal Infirmary, and the Royal College of Surgeons have pronounced against mixed classes, and now the general public, who, as contributors to the funds of the Royal Infirmary, have this single opportunity of speaking on the matter, have, at their annual meeting held on January 2 and yesterday, twice condemned the proposed innovation.

On January 2 an attempt was made to turn out of the Board of Management several of its most efficient members, simply because they were opposed to the admission of female students to the wards of the Infirmary, and to fill their places with others favourable to that measure.

It may seem—as it certainly was felt by many, at the time, to be—absurd that, at a period when the duties of the new Board in connexion with the creation of a new Infirmary will be unusually onerous and responsible, such a question as the admission of six or seven females into the wards should have influenced any number of the contributors in making their selection. Such, however, was the case, and the attempt made by those who allowed such considerations to weigh with them very nearly succeeded. Indeed, whatever grounds of complaint the female Medical students may have, it must be admitted by them that their affairs have monopolised a large amount of the time of public meetings this year. I shall not enter into the details of the first meeting of the contributors, which on both sides abounded in weak argument, and certainly exhibited the future female Doctor in a most unlovely aspect. You have already given a specimen of the speech of Miss Jex Blake, and, if rumour is true, it is likely to lead to its natural result—an action for libel.

Upon this disgraceful scene we will let the curtain drop.

The adjourned meeting of the contributors took place yesterday, in the Queen-street Hall, which from an early hour was densely crowded. A large number of students gathered in the back gallery, and took a lively and noisy interest in the proceedings. It was generally understood that the friends of the ladies, having failed to get their representatives into the management, were to attempt to coerce the newly-elected managers into being their friends.

Professor Charteris moved—"That, in the opinion of the Court of Contributors, it is highly desirable that the managers of the Royal Infirmary should make immediate arrangements for the admission of all registered students of Medicine to a qualifying course of instruction in that institution." He questioned the right of the managers to exclude any registered students of Medicine, and pointed out the hardship of refusing to allow those seven women, who had already attended eight out of the fifteen classes requisite for a Medical degree, to complete their studies. He appealed to the meeting to allow them, at least, to reap the reward of their long struggle, even although they enacted that no female student of Medicine should for the future receive instruction in the wards of the Royal Infirmary. He admitted that there might be cases in which it was inexpedient to perform operations before a mixed class, and that these cases should be dealt with as they occurred. His own experience as a clergyman led him to believe that amongst the class of patients sent to the Infirmary there was a strong desire to have female Medical attendants. He concluded by stating that he held in his hand a petition from 956 women belonging to Edinburgh who desired to express their great interest in the issues involved, and their earnest hope that full facilities for Hospital study would be afforded by the managers to all women who desired to enter the Medical Profession.

Sir James Coxe seconded the motion. He doubted the legality of the power which had been exercised in the exclusion of the ladies from the wards of the Infirmary. "This you will at once see," he said, "if we suppose the managers were to refuse admission to coloured students, on the ground, for example, that their presence was distasteful to the white students, or that white patients objected to be made the subject of instruction to niggers." He asked if, under such circumstances, a coloured student were to demand as a right admission to the wards of the Infirmary, would the managers be justified in excluding him? and, if not, on what legal ground would they be justified in excluding a female registered student? He admitted that there is no doubt the practice would be an innovation, and it might be a dangerous innovation if carried to the extreme of mixed classes. But this was not what was wished. However, a little further on in his speech he proceeded to examine the supposed danger. There are, he said, in England and on the Continent, young, good-looking, and well-educated nurses present in the Hospitals without any immorality having resulted. But, even admitting that good grounds may be advanced against the association of male and female students by the bedside, he thought that eighty beds might be spared for female instruction. If there was really no demand for female Doctors, we should, he said, soon have no female students knocking at our gates. But if such a demand really existed, he thought it ill became the managers of the Royal Infirmary to place an insurmountable obstacle in their way.

Miss Nichol proceeded to show that there was such a demand. Indeed, she was commissioned by the large (?) number of 1326 women residing in Edinburgh and other parts of the United Kingdom, 201 of whom are doners or subscribers to the Infirmary, to ask the following question:—If the students studying at present in the Infirmary cannot contemplate with equanimity the presence of ladies as fellow-students, how is it possible that they can possess either the scientific spirit or the personal purity of mind which alone would justify their presence in the female wards during the most delicate operations on, and examinations of, female patients?

If the speeches in favour of the ladies were characterised by shadowy sentimentalism, indefiniteness, and poverty of argument, when we come to those on the other side we find clearness, vigour, and abundance of sound argument.

Professor Muirhead moved as an amendment—"That the Court is of opinion that the question of admitting students, whether male or female, to clinical instruction in the wards of the Infirmary, ought to be left entirely to the decision of the managers." He had, since his first interview with Miss Blake, been consistently of opinion that the idea of introducing women to general practice was a mistake. While intrinsically its propriety might well be called in question, they have, he thought, neither the nerve nor the physical strength requisite for the exigencies of so arduous a Profession. He admitted that they might practice with advantage among women and children, and would like to see Hospitals of that kind opened to them, and special instruction afforded to them for that purpose. He looked upon Dr. Charteris's statement as one-sided; and questioned the ability of a gentleman who had become a Member of the Corporation on December 31 to be in a position to propose, two days afterwards, an instruction to the managers on a matter which they had taken more than a month deliberately to consider. He proceeded to show that the question was more one of expediency than of principle. He denied that the ladies, as matriculated students, are entitled to admission to the Royal Infirmary; and stated that this was the first question considered and settled in the negative by the managers of the Infirmary before giving their decision against the ladies. "I admit," he said, "they are matriculated students, although it is equally the fact that they do not attend a single lecture within the walls of the University. But that matriculation of theirs confers on them no right to be admitted to the wards of the Infirmary, which is altogether an independent institution. True, they are in the register of the General Medical Council, but that register is not a statutory record like the record of Medical Practitioners, but one that has been instituted by the Council itself without any legislative authority. Although serving many important and useful purposes, yet it does not, and does not pretend, to control or interfere with the administration of Hospitals throughout this kingdom. In point of fact, no matriculation or registration of these ladies gives them any right whatever to be admitted to our wards. The charter of the Infirmary imposes upon us no obligation of admitting them. There is no law, either common law or statutory law, that gives them the right to demand admission. If they are admitted to the wards of the Infirmary, it is as a privilege conceded to them by the Corporation, and the Corporation that concedes the privilege is equally entitled to withhold it." He then pointed out the benefits which the Infirmary reaped from the attendance of the male Medical students. To this were to be attributed the gratuitous services of the most learned members of the Profession, the preparation of their successors, and an income of £1300 per annum from students' fees—a sum equal to one-half that given by all the contributors in Edinburgh. For such reasons it was expedient to admit the male Medical student, although the managers were in no way bound to do so. Professor Muirhead next reviewed the history of the application of the ladies for admission to the Infirmary, and their refusal by the managers. At first, they wished to have the run of all the wards; after this could not be obtained, they expressed their willingness to confine themselves to the wards and classes of those teachers who were prepared to receive them; and, lastly, they were ready to agree that they should attend even those teachers at separate hours. These were the proposals which the managers have had to consider. But their application had now taken a new shape. Dr. Charteris now proposed that they should have the exclusive right to the wards to which they wish to be admitted. The proposal to give the ladies clinical instruction at separate hours the managers had no difficulty in setting aside. As guardians of the interests of the patients, whose feelings and whose prospects of cure are not to be disregarded, we could not for a moment think of sanctioning a proceeding which would have the effect of submitting them to a twice-a-day examination or inspection, with all its excitement and attendant trials. It is bad enough for the patients to submit to such examinations once a day, and it would be infinitely worse to ask them to submit twice. There remained, therefore, the alternative of mixed classes. Against those they had to consider the feelings of the male patients, the objections of the Medical officers, who told them that it was impossible for them in mixed classes, and before such an audience, to speak with that freedom and unreservedness with which it was desirable they should speak, or to perform such operations which yet for the patient were absolutely necessary. He then went on to pay the following tribute to the Medical Profession, whose self-denying efforts have been so grossly ignored by the opposite party in this question:—"In listening to the objections urged by our Medical officers, it never occurred to me, remembering the large-heartedness and philanthropy of a Profession of whom the Alisons, the Symes, and the Simpsons were the representatives of the past, and of whom the Christisons, the Spences, and the Listers are the representatives of the present—(loud applause)—that those objections, as we have been told by some mean spirits who gauge the feelings of others by their own paltry standards—(renewed applause)—were but a cloak to cover a sordid fear lest the incomes of their Medical brethren might be diminished by female Practitioners." Lastly, the managers had to consider the feelings of delicacy of the Medical students, who, as he had said, contributed so largely to the funds of the institution. He thought they should consider the possible future of this movement. "We have," he said, "been told, no doubt, of Paris, Zurich, and Vienna as places where the experiment has been made without detriment—though some deny that; but we know also of a country where the experiment has been made on a much larger scale, and tried for a much longer time—I mean the United States of America—('hear, hear')—where a Medical school, beginning with large promise, has at last become so degraded that any woman who respects herself and position shrinks from the contamination. (Loud cheers.) I say shrinks from the contamination—(cheers)—and renounces, or prefers to renounce, the benefit of years of study with those women rather than don the academic robe of one of its graduates." (A Voice: "Send them there.")

Miss Blake: "Give me the name of that college."

Professor Muirhead: "I speak on the authority of Miss Blake." (Uproar.)

Miss Blake: "Name the college." (Cries of "Name, name," "Go on," and uproar.)

Professor Muirhead: "I speak on the authority of Miss Blake, who told me that she had studied Medicine for two years in that country; and, in answer to my question why she did not pursue her studies and graduate there, instead of coming here, she told me the character of the female students in America had so deteriorated that she could not consent to become a student there." Finally they had the interests of the Medical School of this city to consider. The majority of the managers had objected to admitting the ladies to the wards of those teachers who were willing to receive them, because they thought that a general question like the present should not depend upon the caprice of the individual. It was even a graver objection that what the ladies desire to have—qualifying instruction—could not possibly be had in the wards of those three individuals, for the reason that one of them is a University Professor, prohibited by the University authorities from receiving mixed classes, and the wards of the other two gentlemen do not contain those eighty beds which it was requisite the ladies should have. The effect of the motion of Professor Charteris, and of the suggestions made in a circular put into the hands of the contributors that day, was practically to exclude from a fourth part of the Hospital 300 or 400 Medical students who were attending at that moment, and whose fees had been taken on the understanding that they were to have admission to every ward in the house. "It was not just," he said, "that for seven ladies, the interests of 300 or 400 students should be sacrificed." He concluded by saying that in so large a question, with such multifarious and complex interests, the wise thing to do would be to leave the matter to the deliberate consideration of the managers for decision.

Dr. Gillespie, President of the Royal College of Surgeons, in seconding the amendment, confirmed most of the statements made by Professor Muirhead. He further asked, granted the ladies were allowed to enter certain wards, how they were to enter the operating theatre? They must either go with the students, or the patients will require to have the same operation performed upon them twice. Similar objections held true with regard to the pathological theatre. Dr. Gillespie maintained that if there were any real demand for female Doctors, more than seven female students would now be preparing themselves. The small number was the insurmountable difficulty. If a body of, say, 100 came forward, separate teaching might be provided for them.

Mr. David Maclaren proposed an intermediate amendment—"That, in the opinion of the Court of Contributors, while it is inexpedient that there should be mixed Medical classes in the Royal Infirmary, it is highly desirable that the managers should take into their most favourable consideration the desirability of making immediate arrangements for the admission of registered lady-students of Medicine to a qualifying course of Medicine in that institution, and that they should report the result of their inquiries, and the reasons for it, to the contributors." This he supported chiefly by an extract from a letter of the Rev. Dr. Guthrie, who, amongst other things, says with regard to mixed classes, that he had felt the female pulse of society in all its grades, and found it to beat thus:—"They abhor the idea of mixed classes, and are not in love with that of female Medical students; but, at the same time, they think that arrangements should be made to allow women to become Doctors who wish, and are found qualified to be so." The course proposed by Mr. McLaren met with little favour, and was the signal for an increased uproar in the galleries, which continued to interrupt the further progress of the meeting, at which several other speakers made desultory remarks.

Miss Jex Blake gave an absolute and unqualified denial to the statement made by Professor Muirhead, saying that she had never made the statement that he asserted, and never could have made it.

Professor Muirhead said: "I am sure that there is not one individual in this meeting but will give me credit for having stated correctly what, according to my recollection, took place two years ago between Miss Blake and myself. If I have misconceived, or if my memory has failed me, I beg to apologise, and to assure her that it was purely unintentional."

In order to obtain the quiet necessary for taking the vote, the gallery had to be cleared of its occupants by the police. The vote was then taken with the following result:—For Mr. Maclaren's amendment, 217; for Prof. Muirhead's amendment, 226. Prof. Muirhead's amendment was next put against Dr. Charteris's motion, when it was found that 211 voted for the amendment, and 193 for the motion. The amendment of Prof. Muirhead was thus carried by a majority of 18.

EDINBURGH, January 17.

(From an Occasional Correspondent.)

CURSES, both loud and deep, may be said to express the feelings of many citizens of Edinburgh just now as to the Medical education of women. The seven Englishwomen have been the *teterrimæ causæ* of a series of quarrels, which have at last swept in the general public. Yesterday (16th inst.) Queen-street Hall was crowded to settle the question whether these "female Medicals" should be admitted to the Infirmary or not. Many fashionable-looking ladies were present, and not a few dowdies. A numerous body of students occupied a central gallery, from whence they rained volleys of peas, and enlivened the meeting with snatches of songs, jocose exclamations, and uproarious applause or disapprobation, according as the fight raged below. Four of the female Medicals had qualified to take part in the meeting by becoming contributors to the funds of the Infirmary, and were allowed a seat amongst the big-wigs. Miss Jex Blake sat cheek-by-jowl with Professor Bennett, her last and sole friend, it is said, in the Medical Faculty. The meeting was an adjournment of that held a fortnight before, at which this lady damaged her cause so much by abusing the opponents of the movement, showing little reverence for professors, although a matriculated student. The usual contradictory arguments were advanced at the meeting, with the usual results. Some of these were noteworthy, considering the speakers. The reverend Professors of Moral Philosophy (Calderwood) and of Biblical Criticism (Charteris, a Dean of the Chapel Royal, or Court Chaplain) have strongly supported the extreme party all along. The latter, therefore, while advocating a clap-trap proposal for separate teaching, was honest enough to advocate the mixture of men and women. The only conceivable excuse for this grave offence against clerical propriety—for such it is certainly held to be—is that the two are utterly ignorant of what is done in the dissecting-room and operating theatre. The plea of ignorance can be available no longer, so that for the future they must take the full responsibility of their conduct. In their hearing, a letter was read from the Rev. Dr. Guthrie, to the effect that he *had* attended lectures on anatomy both here and in Paris, and had walked the Hospitals of La Pitié and La Charité; and, as a result, he "strongly and utterly recoiled" from the plan of mixed classes. The two Professors in question are recent acquisitions to the University—if acquisitions they may be considered, for of that there has been a doubt, *ab initio* at least, as to the Professor of Moral Philosophy; so that the idea of having an opposition chair has been mooted, Dr. Hutchinson Stirling to be the incumbent. One of the law Professors—Mr. Muirhead, a member of the bar here, and a good speaker—took up the opposition, and was seconded by Dr. Gillespie, President of the Edinburgh College of Surgeons. It appears that the fees paid last year by students for permission to attend the

Hospital practice amounted to £1306, all of which went to the Hospital funds, while the total annual subscriptions from the public were no more than £2815. Mr. McLaren, M.P. for Edinburgh, whose wife is president or secretary of a Woman's Rights Association here, declared that the whole fees of the students and half of the public subscriptions were expended on behalf of the students! Incredible and ambiguous assertions of this kind are so commonly substituted for argument by the other side, that Mr. McLaren's "fact" was not received with full conviction of its reality. Mr. Muirhead said, on the authority of Miss Jex Blake herself, that a female Medical school somewhere in the United States, which began with much promise, had at last become so degraded that the woman who respected herself and her position shrunk from the contamination—meaning thereby Miss J. B. The latter (of course) contradicted Mr. Muirhead; but it would be interesting to know what College she spoke of. Was it that referred to in your able leader on "Sexualism in Edinburgh," the ladies of which had their portraits published in an illustrated New York paper as they appeared when dissecting? The fact explains a curious proposition which, it is alleged, Miss Jex Blake made to Dr. Handyside, when he admitted the female Medicals into his dissecting-room—viz., that no other females be admitted without their approval. The upshot of the two meetings has been a refusal of the use of the Infirmary to the seven "female Medicals," at the first meeting, by (on scrutiny) 88 to 75, and by the meeting yesterday of (without scrutiny) 211 to 193.

The battle has extended to the ladies generally. Brisk canvassing has been going on for signatures to opposing memorials. The Rev. Dr. Phin, a member of the University Court, spoke of a memorial signed by 1200 ladies of Edinburgh against, and a Miss Nichol said she was commissioned to address the meeting for the "Medicals" by 900 ladies of Edinburgh and elsewhere. It is a significant fact that Miss Nichol and the Professor of Moral Philosophy are coadjutors here in a crusade against the Contagious Diseases Act.

Amidst all this, thoughtful men seriously ask—How about the Hospital funds, and the prosperity of the Medical school? Is this "experiment" to be carried on at their expense? It is earnestly hoped that the incompatible seven will depart to a more favourable sphere. Certainly, they have made Edinburgh too hot to hold them, whatever may be their merits or their claims; but the notoriety is too delightful an excitement to be easily given up.

GENERAL CORRESPONDENCE.

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OUT-PATIENT HOSPITAL REFORM.

LETTER FROM SIR WILLIAM FERGUSSON, BART.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the *Lancet* for October 15 last there is an interesting letter from Dr. Meadows, referring to the work of the Committee on Out-patient Hospital Reform. The labour devoted to such work, and the incidental expenses, are greater than many may suppose. Labour can be given gratuitously, and it has been liberally bestowed in this instance, but pecuniary expenses must be met by funds.

The meeting over which I had the honour to preside when the Committee was appointed was large, and I am sure that it is only needful to make it known through the medium of the Medical journals that about thirty pounds are required to liquidate the needful outlay in regard to printing and otherwise, when an immediate response will be the result.

Dr. Meadows informs me that five shillings from everyone present on that occasion would amply make up what is required, and I venture to hope that he and the other gentlemen of the Committee will be speedily relieved from all pecuniary responsibility.

Donations should be sent to the Treasurer, Dr. Meadows, 27, George-street, Hanover-square. I am, &c.,

George-street, Hanover-square. WM. FERGUSSON.

PROFESSOR BILLROTH: DISEASE OF THE PUBLIC CONSCIENCE IN GERMANY.

LETTER FROM DR. F. A. HARTSEN.

[To the Editor of the Medical Times and Gazette.]

SIR,—The *Medical Times and Gazette* of January 14 contains an extract from a letter of Professor Billroth. I should be glad to make a few remarks on this letter, as it is characteristic of the spirit actually raging in Germany.

Professor Billroth, after having told us how tender a heart he has, says:—"In face of the destiny of our great race, all tender sensibility for well-loved personalities must retreat to the background . . . for no man is indispensable," etc.

This is genuine Germanism. We have lately heard strange things from our studious and musical neighbours. The Prussians—for all Germans are Prussians now—are entirely absorbed by considerations of "race." Science, domestic life, right, morality, religion, everything, for the Germans—there are, of course, some honourable exceptions—must yield to the supremacy of their race. In no other people does the instinct of race take a shape so intolerant and so narrow-minded. Never have I heard any Frenchman or an Englishman say that he *must* have Belgium and Italy and Spain and Holland. But from Germans assertions of such a kind are to be heard every day. Germans believe that they are made of superior stuff, and regard all other people with contempt. They consider the whole world as their legitimate property; they think themselves masters of the world by divine right. Now, I do not mind Germany governing the world, provided this can be brought about by conviction. But a people pretending that they *must* have this or that is an evil foregoing.

Professor Billroth *cum suis* disregard all individual right as soon as there is question of the interest of the race. But we may ask—"Of what use is the race itself if the individuals which compose it are mere slaves of the race? And if nobody is indispensable, why should we trouble ourselves about a race of people who are individually not indispensable?" To our mind, there are some individual rights which may never be lost sight of in favour of the race, and the race can only prosper under condition that the rights of the individual are absolutely respected.

We are sorry to see Germany intoxicated with a philosophy of *perinde ac cadaver!* Of course, if French or Russians ventured to proclaim such doctrines on behalf of their own race, the Germans would call them very immoral. In face of such things, we are almost tempted to curse the great philosophers who have "delivered" us from "the yoke" of Christian doctrines. I am, &c., F. A. HARTSEN.

VACCINIA IN NEGROES.

LETTER FROM DR. R. H. BAKEWELL.

[To the Editor of the Medical Times and Gazette.]

SIR,—A paragraph has been going the round of the press, asserting that the vaccine disease requires a longer time for its perfect development in negroes than in white people. This is certainly not the case. I have vaccinated hundreds of negro children, and never found any other variations from the normal time than are found in other races. The vaccination ordinances of this colony require attendance for inspection after vaccination on the eighth day.

I am, &c.,
R. H. BAKEWELL, M.D.,
Medical Officer of Health, and Vaccinator-General
of the Colony of Trinidad.
Trinidad, December 23, 1870.

THE PROPOSED MUSEUM OF SURGICAL INSTRUMENTS AND APPARATUS IN THE ROYAL COLLEGE OF SURGEONS.

WE have received, for publication, the following circular letter:—

"Royal College of Surgeons of England,
"Lincoln's-inn-fields, London, W.C.

"Dear Sir,—It has often been remarked that there is no large collection of Surgical instruments and apparatus in any museum or institution in Britain, such as might be referred to as indicative of the mechanical appliances of Surgery, Midwifery, and dentistry in past or present times.

"Occasionally individual teachers have made considerable accumulations, but these have generally been scattered again after death. Neither student nor Practitioner has ever had it in his power to refer to any source of information excepting pictures in ancient or modern books, and these do not produce the effect on the eye or mind that would result from an examination of the palpable objects.

"Knowledge of the past in Surgery is of essential value to the present and future, and such a collection, in association with our ample bibliography, would go far to facilitate the efforts of those who desire to enlarge the practical details of our Profession.

"It has long been my anxious desire to see such a collection, but the task of its formation has appeared to me beyond the pecuniary resources, either of individuals or even first-class teaching establishments.

"I have seen many small collections rise and disappear in my time. There has been no interest on the part of successors to keep them together, or even to present them where they might be respected and carefully preserved.

"With these impressions, I have ventured, in my official capacity, to bring the subject before the Council of the Royal College of Surgeons of England, and I have the satisfaction of announcing that the Council is prepared to sanction any reasonable expense to bring about the realisation of such a collection.

"There is no institution in this country where such a scheme could be so readily or thoroughly carried out; none where such a collection would be in a national sense, so usefully placed; and its association with the Hunterian Museum would be a graceful compliment to the memory of the founder of British scientific Surgery.

"As President of the College and a fellow-labourer, I venture to appeal to you on behalf of this scheme, and to request that you will kindly present such instruments, devices, and appliances as you may be able to spare, or acquire from others who incline to cherish this intended national collection.

"Any thing in the above category will be most thankfully received at head-quarters in Lincoln's-inn-fields, and nothing will be more acceptable than such mechanical memorials as will associate the names of bygone and present Fellows and Members of this College with the history of British Surgery.

"I am, &c. William Fergusson, President."

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 10, 1871.

Dr. Burrows, F.R.S., President, in the chair.

A paper, by Dr. C. Theodore Williams, was read

ON THE DURATION OF PHTHISIS PULMONALIS, AND ON CERTAIN CONDITIONS WHICH INFLUENCE IT.

The author commences by stating that he uses the term "phthisis" in a broad sense, to signify consuming pulmonary disease, attended by a well-known group of symptoms; and includes under it, besides tubercle, all states of the lung which tend to excavation and caseation. The object of the present paper is to give some account of 1000 cases of phthisis selected from the private practice of Dr. Williams and the author, and to deduce the amount of influence which the conditions of age, sex, family, predisposition, and origin exercised on the duration of the malady. The patients belonged chiefly to the upper and middle classes. The cases have been taken from the records of those who first consulted Dr. Williams between 1842 and 1864, a period of twenty-two years; the ground of selection being, that each case has been at least one year under observation. Sex: The author, after explaining how the cases were recorded and exhibiting certain tables, states that 625 of the 1000 were males and 375 females. Age: Taking the sexes collectively, 41 per cent. were attacked between 20 and 30, 25 per cent. between 30 and 40, 19½ per cent. under 20, and 13¾ above 40. Considerable difference was found to exist between the two sexes as to the time of attack. Between 20 and 30, the most common period of attack for both sexes, about 7 per cent. more females were attacked than males; and, again, between 10 and 20, 11¾ per cent. more. On the other hand, after 30, the reverse was the case. Between 30 and 40, the males exceeded the females by 11½ per cent.; and above 40, by 6 per cent. The average age when attacked was—for the males, 29½ years; for the females, 26 years. Family predisposition: This term is substituted for "hereditary predisposition," in order to include brothers and sisters and first cousins in addition to those of the preceding generation; the principle being to include as instances of disease in a family all near relations derivable from a common stock. Family predisposition was traced in 48 per cent. of the patients; in 43 per cent. of the males, and 57 per cent. of the females. In the particulars which are given, it is noted that nearly half of the cases had only brothers and sisters affected. Origin and first symptoms: In 315 cases, phthisis originated in, or followed closely after, the following diseases—viz., pleurisy and pleuro-pneumonia (143), bronchitis (118), asthma, scrofulous abscesses, fistula, whooping-cough, croup, scarlatina, measles, continued fevers, peritonitis, malformations of the chest, and injuries: 26½ per cent. of the whole number of cases were traced to inflammatory attacks (pleurisy, pleuro-pneumonia, and bronchitis); and of these patients, 14·2 per cent. were free from any suspicion of family predisposition. The origin of phthisis from inflammatory attacks is then dwelt on, and the symptoms indicating the conversion of pleuro-pneumonia and of bronchitis into phthisis sketched, and the more general recognition by Medical men of their common occurrence among both upper and lower classes is strongly urged. Hæmoptysis was present in 57 per cent. of the patients. State of lungs: In describing the condition of the lungs, Dr. Williams explains why he adopts the classification of stages, and what extent of disease each stage is intended to include. In none of the cases is the evidence of physical signs alone accepted; in all it is amply confirmed by clinical symptoms. Two-thirds of the patients were in the first stage at first visit, 18 per cent. in the second, and 14½ per cent. in the third; fourteen cases presenting the signs of other diseases, on which those of consumption shortly supervened. One hundred and ninety-eight patients are ascertained to have died; the mortality of those who came in the third stage being about double that of those who came in the first. The average duration of life among the 198 who died was seven years and eight months and three-quarters; 21 of whom lived from fifteen to twenty-eight years after first attack. Among the 802 living patients, the average is at present eight years and two months and a quarter; 246 have lived more than ten years, 65 more than twenty, 2 more than thirty, and 1 more than forty years. An account of the present state of these patients is then given, and it is shown that 72 per cent. have regained their health sufficiently to follow their occupations; 28 per cent. are still invalids. Dr. Williams then discusses the views of Louis, Bayle, Laennec, Andral, Fuller, Pollock, and other authorities as to the duration of phthisis, and attributes the long duration of the present cases to—(1) the early detection of the disease; (2) the perseverance with which the patients carried out the various healing measures recommended to them, whether medicinal, hygienic, or climatic. The influences of age and sex on duration are next considered; and on these points the author's statistics show that—(1) the later the time of attack, the longer was the duration, this being more marked among the males than among the females; (2) that females are, on the average, attacked four years earlier than males; and (3) that among them the duration of the disease is one year and a half shorter, and the average age reached is five years and a half less than among males. The conclusions as to the effect of family predisposition on duration are (1) that it does not directly limit the duration of the disease; (2) that it precipitates the onset of the disease, thus shortening the duration of life; (3) that it affects females more than males. The influence of the inflammatory origin on the duration of phthisis is next considered, and the author concludes that cases arising from pleurisy or pleuro-pneumonia enjoy a longer duration than the average, such extension amounting to at least a year and a half or two years.

Dr. Powell thought it was well to have chosen the widest meaning for the word phthisis, as it would have been difficult to separate the cases into groups. Nevertheless, it would have been well to separate a certain number; thus, it would be well to know the proportion of pneumonic phthisis. He thought recoveries were often of this class. The knowledge that people might live so long with cheesy matter in the lungs, and with no accession of miliary tubercle, was valuable. It contradicted the views of Waldenburg and others, and showed there must be something more than a caseous mass—specificity, heredity, or something to induce miliary disease. Family predisposition was traced in nearly one-half of the cases recorded, but in many instances those affected were brothers or sisters, which would rather show common exposure or influence.

Dr. Marcet thought it difficult to say when bronchitis passed into phthisis; the physical signs were much alike, especially in capillary bronchitis. The numbers of those who got well were remarkable; perhaps it was due to the elimination of acute cases. He thought if their digestion was kept up, patients generally did well.

Dr. C. J. B. Williams said: As almost all the cases which have been the subjects of analysis in this paper occurred in my practice, and were observed and noted by myself, I may be expected to give any required explanation of the facts for which I am answerable. But, even before the Society, I must express my obligation to my son for the immense trouble which he has taken in arranging and analysing the particulars of the cases, and obtaining the exact results of numerical calculation. As they existed in my note-books, they formed an enormous mass—almost overwhelming by its quantity. All this experience had, indeed, led me to general inferences, which are correct; but through the tabulations and calculations which my son has made, I have gained ideas more precise, and of greater extent, than those which I had before from my own impressions. For example, with regard to the duration of life in phthisis, I knew that the average of my cases far exceeded the term of two years, assigned as the usual average by Laennec and Louis; and, on general impression, I had fixed it at five years. But, by actual counting, it is found to reach to nearly eight years in the 198 cases that have ended in death, and to above eight years in the 802 still living, and with prospect of further increase. The influence of age and sex on the duration of life is also in conformity with previous impressions—the disease being more rapid in the young and in females, and slower in those older and in males. The effects of family tendency came out by calculation somewhat differently from what was expected. It accelerates the onset of the attack, but does not shorten its duration; it seems, therefore, to render the body more prone to the disease, but not to render the disease more intense. The term "family" predisposition has been preferred to hereditary, in order to include the very common case of several brothers or sisters in succession being affected, even where the disease has not occurred in either parent or progenitor. Dr. Powell has suggested (as did also the author, in the paper) that this might arise from members of the same family being exposed to similar external causes; but I have known several instances in which, after one or two of a family have died, the others have been purposely removed from home, and all circumstances changed, and yet the disease has shown itself, proving that the cause is constitutional and intrinsic. Some similar influence is required, also, to make acute inflammation terminate in phthisis. The tables show that $26\frac{1}{2}$ per cent. of the cases originated in inflammation; and this is quite in accordance with my general experience. It has now become the fashion to recognise inflammation as a common cause of consumption, and this, forsooth, because this notion has been strongly advocated by some German Physicians; but I do not see why we are to be led by the Germans in this matter. For the last forty years I have consistently argued for the inflammatory origin of many forms of phthisis. I first derived this notion from my eminent and revered teacher, Professor Alison, of Edinburgh; and it so happened that some of the cases which he published in corroboration of his views were my patients, under his supervision at the New Town Dispensary. But this was, also, the common opinion before the time of Laennec, and was maintained by Broussais, Andral, and Cruveilhier, in opposition to Laennec. But inflammation alone does not suffice to produce phthisical disease of the lung. Acute inflammation may attack the lung in any intensity, and yet pass away without leaving any trace or tendency to consumption. It is where it is rendered persistent or chronic by repeated attacks or neglect, or where there is a state of constitution called scrofulous, or deteriorated by unhealthy influences which degrade nutrition, that the products of inflammation tend to caseation and excavation, and end in consumption. What this consumptive or tuberculous constitution is, there is not time, nor is this the occasion, to discuss; and I would only say that I believe it to be intimately connected with the lymphatic system and the abundant production of leucocytes or pale corpuscles—those wonderful agents and representatives of the plastic process. Dr. Marcet remarked that it would be difficult to distinguish when bronchitis passes into phthisis; but I have found distinctive signs in the supervention of patches of dulness on percussion, together with tubular sounds and coarser crepitus, generally near the summit or root of the lung; and there are, also, persistently increased temperature and emaciation. The forms of bronchitis most apt to pass into phthisis are those attended with plastic or purulent expectoration, indicating a deep-seated inflammation. I must not omit to notice the ground of selection of these cases—that they had been under my observation for at least one year, and that, although such selection obviously supplies more reliable and satisfactory results with regard to the history of the disease and its treatment, it excludes the more acute cases which terminate fatally within that period. The proportion of such cases is, however, very small, not amounting to 5 per cent. The selected cases, therefore, represent chronic phthisis, and those of the acute disease which have been arrested and rendered chronic by treatment. In conclusion, I would express my conviction, derived from a very large experience, that much may be done to save and prolong life in consumptive disease, mainly by subduing and warding off inflammation and irritation, and by sustaining the vital powers by every kind of means, medicinal and hygienic; but, to be successful, this treatment must be unremittingly persevered in, not for weeks or months only, but for years, and sometimes even for the whole lifetime.

Dr. Andrew Clark referred to the gratifying spectacle of father and son at work on the same problems. Their work was a real and valuable contribution to the history of phthisis, but only of chronic phthisical disease. Even then there was one defect—there was no reference to the habits of the patient. From a scientific point of view, there were different kinds of phthisis, but this division had not been recognised or followed. He thought phthisis arising from pleuritic disease was prolonged; not so if it arose from inflammatory deposits, especially if pneumonic.

Dr. Theodore Williams, in reply, thanked the Fellows of the Society for the kind reception they had given to his paper and the accompanying tables, which, from their statistical nature, he was afraid would have proved wearisome. He would suggest that, if the paper were honoured with a place in the *Transactions*, it might be rendered more lucid by extracts from the tables, which were in themselves too lengthy for publication. In reply to Dr. Powell as to the number of cases of tuberculosis included in the 1000 cases, he stated that it was very difficult, and often impossible, to determine when tuberculosis supervened in a case of caseous phthisis. He differed from Dr. Marcet as to the difficulty of diagnosing when a case of bronchitis had become one of phthisis, but agreed with him that, in consumptive cases, improvement in general health, as a rule, far preceded improvement in physical signs. With reference to the varieties of phthisis adverted to by Dr. Andrew Clark, Dr. Theodore Williams explained that he was opposed to drawing a hard-and-fast line between them, as he considered that they merged imperceptibly into one another, and he had preferred, until more facts had been accumulated, to class the cases according to their origin, whether local, as from bronchitis, or pleuro-pneumonic or constitutional, as in ordinary phthisis. In expressing his gratification at the able criticisms of Dr. Clark and his appreciation of the amount of labour involved in the paper, the author said it was only due to Dr. C. J. B. Williams to state that the cases were most carefully kept, and that the work of arranging for statistics had thus been rendered comparatively easy. Dr. Theodore Williams hoped to continue his researches, and in time to elucidate other points of interest with reference to the duration of phthisis.

OBITUARY.

SIR JOHN FIFE, M.A., F.R.C.S.,

Died on Monday morning last, of apoplexy. He was a Surgeon of good abilities, and extensive practice in Newcastle and the neighbourhood. He was knighted on July 1, 1840, for the active part he took, during the Chartist riots, in the suppression of a public meeting, and in the preservation of order, "as a mark of approbation of the manner in which he had sustained the office of chief magistrate under very critical circumstances." Sir John was a decided Liberal in politics, and took part in most national and local questions. In the struggle for the Reform Bill in 1831, he proposed, and assisted in forming, the Northern Political Union; following the example of the Birmingham Society, it formally announced its intention to resist the payment of taxes until the Reform Bill had passed. Sir John contributed little to the literature of the Profession. He lectured for some years on military Surgery at the Newcastle College of Medicine, in connexion with Durham University. He was Consulting-Surgeon to the Eye Infirmary, and to the General Infirmary.

The *Newcastle Journal* says—"The worthy gentleman had for many months past been afflicted with a most troublesome disease, which constantly menaced his life. In the spring of last year the complaint became so troublesome that Sir John, himself a distinguished operator, consented to undergo a Surgical operation, which was performed by Sir William Fergusson, assisted by Mr. Joseph Fife and Dr Murray. The operation was successful, though the patient suffered severely, and his life was long in the greatest jeopardy. Under the care and attention of his family and friends, and aided by an excellent constitution, the gallant knight rallied, and again became so far himself as to be able to move about and enjoy comparatively good health. A few weeks ago he was in Newcastle, and visited the Art Gallery, News-room, and other places where his presence was wont to be so familiar. Till within a week past he continued well and strong; but on Sunday he had an attack of paralysis, and sank into a state of coma, from which he was relieved on Monday morning, when he sank peacefully to rest at his residence in Reedsmouth, in the midst of his family, in the 76th year of his age."

THOMAS MAYO, M.D., F.R.S.,

At the advanced age of 81, died last week at Corsham. He was the son of Dr. John Mayo, of Tunbridge Wells, and descended from an ancient Wiltshire family, of Irish extraction, of which the Mayords—one of whom discovered the use of the air in breathing—are branches. Mr. Herbert Mayo, the physiologist, was his brother. He had retired from practice for many years. He was for some time Physician to the Marylebone Infirmary, and had occupied the post of President of the Royal College of Physicians. He was not so generally known amongst the members of the Profession as might have been expected from the high position he held. Dr. Mayo was, strictly speaking, one of the old "University" Physicians. He prided himself on his learning, and not without cause. As a Practitioner, he was somewhat undecided, and has not associated his name with any great improvements in treatment, but his "Clinical Facts" are suggestive. It is true he contributed several monographs on psychological subjects, including "Elements of the Pathology of the Mind," "Clinical Facts and Reflections," "Outlines of Medical Proof Revised," and "On Medical Evidence and Testimony in Cases of Lunacy, with Essays on Soundness of Mind." These works, with the exception of the "Facts," are more metaphysical and philosophical than practical; more speculative, perhaps, than either. They are written in a somewhat discursive style, laboured occasionally, and not always very clear. But they are worthy of study, and, though not very popular, have had their admirers, and these of a high order of critics.

Dr. Mayo was of a peculiarly retiring disposition, and was affected with a kind of nervous agitation, particularly when speaking to numbers, that made it painful to hear him. He seemed as if he could not express himself without shutting his eyes, and making severe efforts to concentrate his thoughts so as to express himself clearly. At one time he spoke not unfrequently at the Medico-Chirurgical Society, but, as we have said, he was not happy as a speaker. He was the only speaker there, on a memorable occasion, who recognised the true character of mesmeric phenomena.

In person, he was below the middle stature, rather spare in figure, and walked somewhat hastily, with an occasional nervous jerk of his head. His features were somewhat large, expressive of some power, but too heavy and melancholic. Even when speaking, they did not rise to a really animated appearance. We never saw him smile. He had not a large practice, and did not seem to court it. He was sometimes called as a witness in cases of lunacy, but his evidence occasionally must have puzzled the lawyers. He was, however, an amiable, upright, and benevolent man, everywhere esteemed, the most by those who knew him best.

WILLIAM T. JONES, L.R.C.P. Ed., L.S.A.

It is with deep regret we announce the early death of Dr. W. T. Jones, of Kentish-town, which took place at his residence on the evening of the 5th. The deceased gentleman had been suffering from ill-health for some time past, and this had greatly prevented him from attending to his Professional duties; and the nature of his malady—jaundice—caused an irritability that was only understood by his immediate attendants, or by those intimate friends who witnessed the acute pain he at times suffered from. He died in the prime of life, being in his 43rd year. Dr. Jones possessed great Professional talent, and his death will be much felt in the immediate neighbourhood of Kentish Town, where his kind treatment had made him appreciated by a large circle of the better classes, as well as endeared him to a host of poorer patients. The Doctor was a gentleman of varied talents, and in early life took great interest in amateur theatricals, being one of that party who gave representations at Miss Kelly's little theatre under the title of "The Histrionics," many members of which club have since distinguished themselves in theatricals, literature, or the arts. He was Physician to the Dramatic, Equestrian, and Musical Sick Fund Association. He was author of "Dramatic Poetry: its History and Actors Ethnically Considered," and other works. Dr. Jones belonged to the Masonic craft, and was a member of the Supreme Council of the 33rd Degree, as likewise several other orders. The funeral, which was of a very private character, took place on Wednesday last at Finchley Cemetery, and was attended by his widow and only son (aged 3 years), and a few old friends.—*Sunday Times.*

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 17th inst., and, when eligible, will be admitted to the Pass Examination :—

Alford, Charles E., of University College.
Aspinall, Henry M., of the Manchester School.
Bateman, Arthur W., of University College.
Birch, Robert, of King's College.
Bowkett, William D., of the London Hospital.
Critchett, George A., of the Middlesex Hospital.
Hallam, Walter, of the Sheffield School.
Hughes, Thomas J., of the Dublin School.
Mitcheson, Joseph H., of the London Hospital.
Munro, David, of Kingston, Canada.
Murray, William, of the Dublin School.
Nash, William G., of Guy's Hospital.
Newby, Charles H., of St. Thomas's Hospital.
Payne, Henry P., of King's College.
Pigeon, Henry, of the Bristol School.
Pires, Joseph O., of Bombay.
Sparrow, Wm. C., of the Dublin School.
Sparrow, Robert L., of the Dublin School.
Sprod, John, of the Bristol School.
Thompson, Henry, of St. Bartholomew's Hospital.
Thurland, Francis E., of St. Bartholomew's Hospital.

The following candidates passed on the 18th inst., viz. :—

Beamish, J. Maybury, of the Cork School.
Bunny, Joseph B., of Guy's Hospital.
Clague, John, of Guy's Hospital.
Collier, Nicholas C., of King's College.
Collins, H. Beale, of King's College.
Fox, Charles A., of the London Hospital.
Farmer, Cottenham, of St. Bartholomew's Hospital.
Griffiths, William E., of the Middlesex Hospital.
Hall, F. Algernon, of St. Bartholomew's Hospital,
Hannay, R. Strickland, of the Dublin School.
Hemming, John L., of St. George's Hospital.
Holmes, Robert A. K., of the Dublin School.
Jepson, Edward, of St. Bartholomew's Hospital.
Jones, Charles G., of St. Bartholomew's Hospital.
Kingscombe, Alfred P., of Guy's Hospital.
Kessen, Andrew E., of Guy's Hospital.
Le Mottée, George H., of King's College.
Ling, J. Mitford, of the Middlesex Hospital.
Lloyd, Edward J., of St. Bartholomew's Hospital.
Monro, Russell H., of St. Bartholomew's Hospital.
Morgan, E. Rice, of King's College.
Owgan, Francis A., of St. Bartholomew's Hospital.
Powell, James, of King's College.
Vowell, C. Martin, of King's College.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, January 12, 1871 :—

Casa, Stafford Thomas, 20, St. George's-road, S.W.
Hollinshead, Francis, Selby Oak, near Birmingham.

APPOINTMENT.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Tomes, C. S., B.A., M.R.C.S., &c.—Lecturer on Dental Anatomy and Physiology at the London School of Dental Surgery, Soho-square, *vice* Mr. Ibbetson, F.R.C.S., resigned.

MILITARY APPOINTMENTS.

Medical Department.—Thomas Abraham Jerningham Cocksedge, from 52nd Foot, to be Staff Assistant-Surgeon, *vice* John Colahan, M.D., appointed to 52nd Foot.

1st Middlesex Engineer Volunteers.—Assistant-Surgeon Baines, M.D., to be Surgeon.

52nd Foot.—Staff Assistant-Surgeon John Colahan, M.D., to be Assistant-Surgeon, *vice* Thomas Abraham Jerningham Cocksedge, appointed to the Staff.

BIRTHS.

Bodle.—On January 11, at Ealing Dean, the wife of George E. Bodle, Surgeon, of a daughter.

Elin.—On January 18, at Hertford, Herts, the wife of George Elin, M.D., of a son.

Kidd.—At Armagh, on January 18, the wife of A. Napier Kidd, M.D., F.R.C.S., of a son.

Miller.—On January 14, at 463, St. Vincent-street, Glasgow, the wife of Hugh Miller, M.D., F.F.P.S. Glas., of a daughter.

Palmer.—On January 7, at Rockferry, the wife of J. Linton Palmer, F.R.C.S., etc., of a son.

Picard.—On January 11, at 24, Abbey-road, N.W., the wife of P. Kirkpatrick Picard, M.D , of a son.

Playfair.—On January 12, at 5, Curzon-street, Mayfair, the wife of Dr. W. S. Playfair, of a daughter.

Porteous.—On January 15, at The Lawn, East Moulsey, Surrey, the wife of H. W. Porteous, Inspector-General of Hospitals, Madras Army (retired), of a son.

Smith.—On January 13, at Cossen's Farm, Cobham, Surrey, the wife of Rowland Smith, M.R.C.S.E., etc., of a daughter.

Thompson.—On January 15, at Avenue House, Leamington, the wife of Dr. James Thompson, of a daughter.

MARRIAGES.

Armstrong—Elphinstone.—On January 12, at Immanuel Church, Streatham-common, Henry, third son of John Armstrong, M.D. and J.P., of Gravesend, to Janet, eldest daughter of George Elphinstone, Esq., of Oakfield House, Streatham-common, S.W.

Haire—Tennent.—On January 12, at the parish church, Kingston, Portsea, John H. Haire, Surgeon R.N. (retired), Gosport, to Isabella, widow of the late Robert Tennent, Esq., of Well-park, Glasgow.

Hewer—Jeffery—On January 10, at St. Giles's Church, Northampton, Edward Hewer, M.R.C.S., to Sarah E. Jeffery, eldest daughter of John Jeffery, Esq., Solicitor, Northampton.

King—MacTaggart.—On January 12, at Aberdeen, Henry Kirwan King, M.B., of Welwyn, Herts, to Sarah Nelly, third daughter of the late Donald MacTaggart, Esq., of North Lodge,

Middlemist—Reid.—On January 14, at St Mark's, Hamilton-terrace, Robert Percy Middlemist, M.R.C.S., of 10, Bedford-place, Russell-square, to Alice, youngest daughter of the late James Reid, M.D., of Brook-street, Grosvenor-square.

Orwin—Stewart.—On January 10, at Cavendish Chapel, Ramsgate, Frederick James, second son of James Orwin, M.D., of Notting-hill, London, to Elizabeth, second daughter of the late Robert Campbell Stewart, Esq.

Pontifex—Hitchcock.—On January 17, at Bishops Lavington, the Rev. Alfred Pontifex, M.A., Rector of Yate, Gloucestershire, to Julia Madeline Knight, youngest daughter of C. Hitchcock, M.D., of Fiddington, Market Lavington, Wilts.

Swinson—Greatrex.—On January 12, at St. Michael's Church, Rushall, Staffordshire, by the Rev. F. Græme Littlecot, assisted by the Rev. T. L. Chavasse, Thomas Spilsbury Swinson, M.R.C.S., of Mickleton, Gloucestershire, to Emily Caroline, eldest daughter of James F. Greatrex, of Walsall. No cards.

Verbaere—Chantrell.—On January 9, at St. Mary's Church, Dover, Auguste Charles Verbaere, M.D., of Bruges, Belgium, to Juliana Georgiana, third daughter of the late William D. Chantrell, Esq.

Williams—Bull.—On January 3, at the parish church, Llanfyllin, by the Rev. W. Williams, father of the bridegroom, assisted by the Rev. G. Cuthbert, Eyton Owen Williams, M.D., of The Hall, Llanfyllin, to Mary Sophia, second daughter of W. J. Bull, Solicitor, of Oswestry.

DEATHS.

Belcombe, Louisa Meynell Travis, fifth, youngest, and last surviving daughter of the late William Belcombe, M.D., of York, at 66, Finchley New-road, Hampstead, the residence of T. Faulconer, Esq., on Jan. 11.

Cleverly, Alfred William, eldest son of the late Samuel Cleverly, M.D., at Peckham, on January 12, aged 60.

Darby, John Thomas, M.R.C.S., L.S.A., at the Royal Infirmary, Manchester, suddenly, on January 14, in his 26th year.

Fife, Sir John, Kt., F.R.C.S., at Reedsmouth House, Northumberland, on January 15, after a few hours' illness, in his 76th year.

Fitzpatrick, Mary Anne Ulrica, the beloved wife of John Fitzpatrick, M.D., Surgeon-Major Madras Army (retired), on January 13, aged 44, deeply and deservedly regretted.

Graves, the Rev. Richard Drought, late Rector of Hanford, Staffordshire, eldest son of the late Robert Graves, M.D., F.R.S., of Merrion-square, Dublin, and Cloghan Castle, King's County, at Milan, after a tedious illness, borne with great Christian fortitude and resignation, on January 5.

Hammerton, John H., Esq., formerly of St. George's Hospital, at his residence, Henley-on-Thames, on the morning of January 10, in the 69th year of his age.

Leese, Robert Vaux, son of the late Lewis Leese, M.D., at Central-hill, Upper Norwood, Surrey, on December 25, 1870, aged 59.

Mayo, Thomas, M.D., F.R.S., formerly President of the Royal College of Physicians, at Corsham, on January 13, aged 81.

Parker, Frank, third son of the late Henry Parker, M.D., of Overton, Flintshire, at The Watergate, Chester, on January 17, aged 41.

Rutherford, Edward, M.D. Edin., M.R.C.S., seventh son of the late T. Rutherford, Esq., of Fairnington, N.B., at Cordova, Argentine Confederation, South America, on November 13, 1870, aged 31, universally regretted.

Shorting, Sarah, only daughter of the late H. Shorting, M.D., formerly of Eye, Suffolk, and sister of the late Rev. Charles Shorting, Rector of Stonham Aspal, Suffolk, at 33, Henley-road, Ipswich, on January 6.

Sparke, Georgina Girdler, daughter of George Whitefield Sparke, Surgeon, at Mansfield, Notts, on January 16, aged one month.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Cheltenham General Hospital and Dispensary.—Surgeon. Applications and testimonials to D. Hartley, Esq., Secretary, on or before January 21.

East London Hospital for Children and Dispensary for Women, Ratcliff-cross, E.—Surgeon. Applications and testimonials to the Secretary at the Hospital on or before January 23. Election the following day at 3 o'clock, p.m.

Hospital for Diseases of the Chest, Victoria-park.—Assistant-Physician. Applications and testimonials to the Treasurer, Hy. Tucker, Esq., at the Offices, 24, Finsbury-circus, on or before January 26.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Kent and Canterbury Hospital.—Assistant House-Surgeon and Dispenser (one office). Candidates must be legally qualified to practise under the Medical Act of 1858, and be registered. Applications and testimonials to Mr. T. Southee, Secretary, on or before January 26. Election on the 27th.

Newcastle Dispensary.—Two Visiting Assistant Medical Officers; must be duly qualified and registered. Applications and testimonials to Mr. H. E. Armstrong, at the Dispensary, on or before January 26. The duties will commence on February 24.

Royal Cornwall Infirmary.—House-Surgeon, Secretary, and Dispenser. Candidates must be L.S.A. Applications and testimonials to R. Tweedy, Esq., Truro, on or before February 1.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

Skirlaugh Union.—Medical Officer. Candidates must have both Medical and Surgical qualifications and be registered. Applications and testimonials to Mr. T. A. McCoy, Clerk to the Guardians, Beverley, Yorkshire, on or before January 26. Election the following day.

West Derby Union.—Assistant Medical Officer to the Workhouse for the sick poor. Candidates must be qualified in accordance with the requirements of the Poor-law Board. Applications and testimonials to Mr. W. Cleaver, Union Clerk, 14, Clayton-square, Liverpool, on or before January 24.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bishop Stortford Union.—The Bishop Stortford District is vacant; area 3241; population 5180; salary £100 per annum.

Thane Union.—Mr. C. F. Knight has resigned the Brill District; area 6759; population 1991; salary £47 per annum.

APPOINTMENTS.

Auckland Union.—Alexander Mackay, B.M. and M.C. Univ. Glasg., to the Crook District.

Brixworth Union.—James C. Pritchard, L.R.C.P. Edin., L.M., M.R.C.S. Eng., L.S.A., to the Second District.

Forest-gate School District.—Charles Glen Bott, M.R.C.S.E., L.S.A., to the *Goliath* Training Ship.

Manchester Township.—Wm. A. Patchett, M.R.C.S. Eng., L.S.A., as Junior Assistant Medical Officer at the Workhouse Hospital in New Bridge-street.

Pembroke Union.—Howard D. Reynolds, L.R.C.P. Edin., M.R.C.S. Eng., to the Fourth District.

Stourbridge Union.—John Thomson, L.R.C.P. Edin., L.R.C.S. Edin., to the Workhouse.

Wakefield Union.—Wm. S. Wade, L.R.C.P. Edin., L.F.P. and S., and L.M. Glasg., L.S.A. Lond., to the Chevet, Sandal Magna, and Walton Districts.

Collegiate Examinations.—At the Primary or Anatomical and Physiological Examination for the diploma of Membership of the Royal College of Surgeons, which was brought to a close on the 18th inst., 78 candidates were examined. It is stated that on the first day 19 out of 40 candidates were rejected, and on the second day 14, making a total of 33 who were referred to their studies for the usual period of three months. The pass examination will commence this day (Friday), and continue until that day week inclusive.

Collegiate Proceedings.—The report of the proceedings of the last meeting of the Council of the Royal College of Surgeons, just exhibited in the hall, contains but little information not already published in the *Medical Times and Gazette*. The recommendation from the Court of Examiners, that the preliminary examinations should be continued, and that the subjects should be the same as last year, was adopted. The President and Vice-Presidents were authorised to expend such a sum as they deemed expedient from the funds of the College, with a view to the effective celebration of the Hunterian Festival on the 14th proximo, when the Oration will be delivered by Sir William Fergusson, Bart.

Law and Physic in Married Life.—In a late action for breach of promise of marriage against a member of our Profession, Mr. Huddlestone, in his argument for mitigation of damages, dwelt very strongly on the fact that the defendant was only a Surgeon. The learned counsel depicted the happy state of a lawyer's wife, and compared with it that of the wife of a Surgeon, who, on his return home in the evening, had no pleasing anecdote to tell, but must probably be fumigated before he appeared in the drawing-room, and who must be subject to the appeals of that dreadful bell which was always ringing in the night.

Professor Huxley.—Professor Huxley has, it is stated, accepted the office of Professor of the Birmingham and Midland Institute, held in 1869 by Mr. Charles Dickens.

Lord George Hamilton, M.P. (for Middlesex), will preside at the biennial dinner of the Great Northern Hospital, in the spring.

"Christmas Tree" at the Great Northern Hospital.—Over 100 indoor and out-patients were presented with gifts of clothing, tea, sugar, toys, fruit, and needful articles at their usual "tree" treat last Thursday.

The late Mr. Wm. Thurnall.—At the last quarterly meeting of the Governors of the General Infirmary, Bedford, the following resolution was passed, and ordered to be entered on the minutes, and a copy transmitted to the widow and relatives of the deceased:—"The Governors at this, their quarterly meeting, express their deep regret at the serious loss sustained by the institution, and the town and neighbourhood of Bedford, in the demise of their late eminent Consulting-Surgeon, Mr. Thurnall, whose services for many years successively in the several capacities of House-Surgeon, Surgeon, and Consulting-Surgeon to the Infirmary were of inestimable value. The Governors deeply sympathise with the widow and relatives on the melancholy event."

Officers and Council of Clinical Society of London, Elected January 13, 1871.—*President :* *William W. Gull, M.D., F.R.S. *Vice-Presidents :* Thomas King Chambers, M.D.; Thomas Bevill Peacock, M.D.; *G. Owen Rees, M.D., F.R.S.; *W. Burdon-Sanderson, M.D., F.R.S.; John E. Erichsen, Esq.; Prescott Gardner Hewett, Esq.; Henry Lee, Esq.; *Campbell De Morgan, Esq., F.R.S. *Treasurer :* E. Headlam Greenhow, M.D., F.R.S. *Council :* Andrew Whyte Barclay, M.D.; *William H. Broadbent, M.D.; *William Cholomeley, M.D.; John Langdon H. Down, M.D.; *C. Handfield Jones, M.D., F.R.S.; *Alfred Meadows, M.D.; Frederick W. Pavy, M.D. F.R.S.; *Sydney Ringer, M.D.; Hermann Weber, M.D.; *Samuel Wilks, M.D., F.R.S.; *George W. Callender, Esq.; John Croft, Esq.; George G. Gascoyen, Esq.; Christopher Heath, Esq.; Berkeley Hill, Esq.; Carsten Holthouse, Esq.; William B. Kesteven, Esq.; Charles F. Maunder, Esq.; *Septimus W. Sibley, Esq.; Thomas Smith, Esq. *Honorary Secretaries :* Thomas Buzzard, M.D.; *George Lawson, Esq. (The gentlemen whose names are marked with an asterisk (*) did not hold the same office during the preceding year.)

The Small-pox in London.—The following circular, by direction of the managers of the Metropolitan Asylum District, has been addressed to the several Boards of Guardians in the Metropolis, detailing the steps taken for meeting the present outbreak of small-pox:—"The outbreak of small-pox in the metropolis having, unfortunately, within the past few weeks, increased to such an extent as to render the accommodation provided in the temporary Hospital at Hampstead inadequate to meet the wants of the metropolis, the managers have had under their most anxious consideration the question of making such additional provision as will enable them successfully to grapple with the epidemic, and they have thought it would be a satisfaction to the Boards of Guardians in the metropolis to be informed of the steps the managers are taking for this purpose. As you are already aware, the temporary Hospital at Hampstead, erected last year for cases of relapsing fever, was opened within twelve days of the present outbreak for the reception of 120 cases, and although this number has since been increased to 200 by the removal and re-erection of another temporary building which belonged to the managers, both buildings are now completely filled, and a large number of cases has daily to be refused admission. Under these circumstances, the managers have at once put in hand the erection on the land at Hampstead of other temporary buildings, capable of holding 200 beds, which it is hoped will be ready for occupation within a month; and should the progress of the epidemic render such a course necessary, the managers will be prepared to provide accommodation for a further 150 beds at Hampstead. In addition to this temporary accommodation, there is every reason to believe that the permanent Hospitals at Homerton and Stockwell will be ready to receive patients in about three weeks from this date, giving thereby room for about 120 patients at each establishment; and it has also been arranged to use the Fever Hospital either at Homerton or Stockwell temporarily for small-pox cases should it be requisite, and thereby provide for another 200 cases. While the guardians will thus perceive that every exertion is being used, the managers would at the same time very earnestly urge the Boards of Guardians of every parish or union wherein this disease has made its appearance to make some immediate provision for their own cases, pending completion of the arrangements above set forth.

Sanitary Condition of St. Mary's, Islington.—The main feature of the month has been the continued prevalence of scarlet fever, and the alarming increase of small-pox. The latter has attained the full proportions of an epidemic, demanding the adoption of the most energetic measures for its suppression. In the month of November I registered only thirty-six cases. In the five weeks of December, the public practice of the parish alone included 104 cases, and probably among all classes of our population not fewer than 250 cases happened. I hear of it on all sides, in the houses of the well-to-do as well as those of the poor, and it is taxing the strength and resources of the Sanitary Department of the Vestry to the utmost; for we have to deal with an epidemic of scarlet fever at the same time. It speaks well for the vaccination of the parish, that comparatively very few young children are included in my list of cases; the large majority of patients being persons between 12 and 25 years of age. As I have over and over again pointed out, we might defy small-pox as an epidemic, if, in addition to the universal vaccination of infants, we could secure the re-vaccination of all young persons on their arriving at 15 or 16 years of age. But the vaccination arrangements are not in the hands of the Vestry; the Board of Guardians have full power of dealing with this protective measure, and a memorandum has been issued to them by the Privy Council, urging them to put all their powers into exercise, and to make special provisions adapted to the present emergency. The work of my department lies in another direction, and is determined by the sections of the Sanitary Act relating to infectious diseases, Under these sections we visit every house where we learn that small-pox has entered, and give printed directions for the prevention of contagion; we supply disinfectants for use during the illness, and when the disease is over, direct and, so far as we can, superintend such disinfections as we have it in our power to order. The great difficulty in dealing with the epidemic at the present time is, that of providing for the proper isolation of the sick. The Hospitals at Highgate and Hampstead are overflowing, so that numerous cases have to be treated at home in the rooms occupied by other members of the same family, and where every facility exists for the diffusion of the disease. The present want is Hospital accommodation, and this the Vestry, as the nuisance authority, is empowered by the 37th section of the Sanitary Act to provide. I beg to suggest that they should lose no time in availing themselves of this power. Of course, it will involve some expense for furniture and a small staff; but there are now in the possession of the parish unoccupied buildings, a part of which might be appropriated to the purpose with great advantage to the public. Another difficulty I meet with, lies in the absence of any place to which a family can be temporarily removed while the necessary disinfections are being carried out. I should be glad if a furnished room or two could be placed at our disposal in the same buildings, as a place of temporary refuge under such circumstances.—*Dr. Ballard's Report for December.*

A Spirited Resignation.—There seems to be still greater difficulty in getting municipal bodies to act in a sanitary direction on the other side of the Atlantic than with ourselves. Boston is a city notoriously in want of sanitary improvements, and, some time since, Drs. Derby, White, and Ingalls were appointed as consulting Physicians to the city. Believing their appointment was to be a reality, they set to work recommending what measures should be taken to abate the most prominent nuisances, and improve the public health. No notice having been taken of this and other similar communications, they have just resigned their posts; for, no attempt at amending the abuses they pointed out having been made, "a continuance in office," they say, "under such circumstances would seem to be wanting in respect to the Profession to which they belong. Regretting their inability to take part in a much-needed reform, they beg leave to retire from any participation in, or responsibility for, a state of affairs which they have no power to amend."—*Boston Journal*, December 8.

Adulteration of Lard.—In a late trial at Liverpool, in which the plaintiff sought to recover the price of some lard which the defendant had returned as unfit for food, evidence for the defence was given by an analytical chemist that some of the bladders he had analysed contained a mixture of lard, mutton fat, rape oil, and water, the latter in the proportion of 19 per cent. The Court ordered the plaintiff to take back the lard without payment.—*Food Journal.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Imray, Dominica, West Indies.—Your request has been attended to.

Dr. Edgerton, Middletown, U.S.A.—Your letter, with enclosure, has arrived safely.

R. M. will perceive by reference to our columns of to-day that we have not forgotten the subject to which he alludes.

Lex.—The contract must be proved, or there is no remedy at law.

H. W.—It would be impossible under the circumstances to give a testimonial which would be of the least service.

Tibi.—Either way is correct.

Prescriber.—Though not in the Pharmacopœia, it is extensively used.

Nervous.—There is no danger. Consult some respectable Surgeon, not an advertiser.

Beta is liable to be fined.

A Young Chemist.—Such prescriptions are disgraceful to the writers.

Charing-cross.—Mr. Bellamy was elected Assistant-Surgeon to the Hospital some months ago. The present vacancies are occasioned by the enlargement of the Hospital, and the consequent additions to the staff thereby necessitated.

THE ACCOUNTS OF THE WORKHOUSE INFIRMARIES' ASSOCIATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—My attention has been called to a query of a correspondent of your journal as to the application of the funds collected by the Workhouse Infirmaries' Association. As you have referred this inquirer to Mr. Hart and to myself for information on this matter, allow me to say that I am not, nor ever was, concerned in the management of the funds of the Association. This was done by W. Ashurst, Esq., the Treasurer, who has preserved accurate accounts of all income and expenditure, and has, at this moment, I believe, a small balance of money in his hands. No doubt he will answer any questions that may be put to him by any former subscriber.

I am, &c., FRANCIS E. ANSTIE.

Wimpole-street, January 16.

A Querist.—*Woodhull and Claflin's Weekly* is the name of a real newspaper published at New York, and devoted to the enforcement of "woman's rights." The chief "right" claimed is that of "free love," which, in this country, is commonly called fornication. A glorious future for humanity is preached: when women shall rule, religion be abolished, and no man know his own father. To bring this about, mankind, we are taught, must occupy themselves more seriously than they have hitherto done with the propagation of their species.

"The time must come when a full knowledge of all that pertains to conception, fœtal life, birth and growth to full manhood and womanhood, will be an important part of every child's education."—December 31, 1870.

To show that we do not misrepresent the character of this shameless print, nor exaggerate the infamous attempts of the "woman's rights movement," let us give the following excerpt from the number for Jan. 7, on love, marriage, and the nurture of children :—

"So, also, of the feelings and affections involved in the meaning of the word 'love,' which is supposed to constitute the basis of the marital relations (so called). They likewise are involuntary. To attempt to *regulate* in any way, by customs or by law, the character or duration of this union of the sexes is simply to engender prostitution, inflict upon society tha most loathsome diseases, encourage child murder, and perpetuate, through successive generations, infernal discord.

"'But what shall *society* do in view of the consequences of according perfect freedom in respect to scientific and religious belief, or the love relation?' demands the half-frightened conservative. *Do?* Why, nothing, except to secure to the child and the matured man and woman the means of *perpetuating* that freedom by providing, *first*, that no religion shall be taught by law, and none at all in any way to a child below the age of fourteen years (even by a parent, if it is possible to prevent such instruction), while securing to all alike the benefits of the fullest secular education that science can afford; *secondly*, that the progeny of the sexual relation shall, in all cases, be deemed the children or the wards of the State, and educated (and supported, if either parent be unable or unwilling to provide for their support), at the expense of the State.

We have found one joke worth quoting in its disgusting pages—

"It has been said that a large life insurance policy don't exactly make a corpse smile at his widow, but helps amazingly to get another fellow to do it for him."

The phenomenon in our eyes is this: Here are women who have evidently received an education—not deep, it is true, nor exact, but smart and superficial—and we suppose they have a sort of "society" of similar persons to mix with. How such persons can ever, in a civilised country, have gone down to such depths of degradation and shamelessness, is a puzzle to us Britishers.

A Rejected Candidate.—There will be another examination in June next; the subjects the same as on the last occasion.

A Militia Surgeon.—The celebrated Sydenham left Magdalen Hall, Oxford, in early life to serve in the Parliamentary Army.

Thomas Guy.—It was said of the celebrated Dr. Mead, by the old lexicographer, Johnson, that "He basked in the broad sunshine of life more than almost any other man."

Testimonial.—We should have been most glad to mention the presentation to Dr. ——, whom we know thoroughly to deserve it. But what are we to say when a parody on "God Save the Queen" such as the following is permitted to be sung? It casts an air of burlesque over the whole proceedings :—

"Rise, sing our Doctor's praise;
Christian are all his ways;
  Sound we his fame.
The sick find him a friend;
Old age he will defend,
And infancy attend;
  Praise we his name.

"Ready at duty's call,
Kindly to each and all
  Attention gives.
Feeling in word and deed,
Tending our every need,
Life's joys for him we plead,
Long may he live!"

MITZBRAND (GERMAN) OR PUSTULES MALIGNES (FRENCH).

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your number of January 7, Dr. Edward Ballard, Medical Officer of Health for Islington, contributed "Notes of a Case of Pemphigus" (read before the Association of Medical Officers of Health, December 17, 1870), where the disease was contracted by inoculation from an eruption upon the teats of a cow. The person affected was a man employed to tend some cows which, a long time before, had foot and mouth disease; and subsequently, a vesicular eruption of oval blebs attacked their teats and udders, but lasted only a few days, and did not affect their general health. The man in question was about this time slightly bitten on the dorsum of the right hand by a horse, to which he was administering a physic ball. The skin was broken, and blood flowed. The man, the same day, proceeded to milk the diseased cows, without having protected his wounded hand by any covering. About a week after, the bitten spot exhibited blebs upon it and the skin around it. They also appear to have cropped up on different parts of his body in the course of another week. Suffice it to say, that the man became very ill, but I will not weaken the description given by Dr. Ballard of the symptoms and character of the complaint by paraphrasing his graphic account. My only object in recalling attention to the case is in order to compare it with a "Très-Singulière Maladie," a good account of which is to be found in the "Hist. de l'Académie des Sciences, 1766," i., 97, by Morand. "From the cases he describes, if the blood or raw flesh be applied to a wound or scratch, or even sometimes to the unbroken skin, a dangerous and often fatal inflammation is excited, which at times differs little from diffuse cellular inflammation, and at other times consists of a general eruption of gangrenous boils, the *pustules malignes* of the French."—"Christison on Poisons," 3rd Edit., p. 579, under the head of "Animal Matter rendered Poisonous by Diseased Action." The poison which seems to be "contained in the blood, and perhaps in some of the secretions of overdriven cattle, arises under circumstances in which the body seems to deviate very little from its natural condition."—*Ibid.* The disease is "denominated in Germany *Mitzbrand*, and is analogous to the *pustules malignes* of the French. The disease has not received a vulgar name in the English language, being fortunately rare in Britain. It is a constitutional and epidemic malady, which sometimes prevails among cattle to an alarming extent on the Continent, and is characterised by the eruption of large gangrenous carbuncles on various parts of the body."—*Ibid.*, 581. An account of it may be found in Rust's *Magazine*, xxiv., 490; xxv., 105, 108; Kopp's *Jahrbuch*, v., 67, and vi., 95; also in *Rèvue Médicale*, 1827, ii., 488.

Whether this and the disease mentioned by Dr. Ballard be one and the same—the one modified in form and mitigated in virulence, either through the effect of climate, atmospheric influence, or any other scientific cause—it may be interesting to inquire. It is sufficient for me to add that the disease, in its original intensity, appears to be frequently fatal both to man and beast. According to the foregoing authorities, this disease may be communicated to man by eating the flesh, as well as by handling the skin, entrails, blood, or other parts; and in the case of the human subject, the affection thus produced is sometimes ordinary inflammation of the alimentary canal, but more commonly a disorder similar to the *pustules malignes*, but most frequently an eruption of one or more large carbuncles resembling those of the original disease of the cattle. I am, &c. W.

L.R.C.P. Lond.—The late Dr. Thomas Mayo, formerly President of your College, whose death was announced in the *Times* of Monday last, was a brother of Herbert Mayo, formerly of King's College, and Professor of Anatomy in the Royal College of Surgeons in 1828.

Dr. D. A. A., Fowey, Cornwall.—Mr. William Wadd was a member of the Council of the College in 1824. He was a most amusing author. His death was caused by jumping out of a gig, the horse of which had taken fright. He was an Irishman—"Quidquid agunt *Medici*, nostri est farrago libelli."

Hunterian Scholar.—The term has been coined by the gentleman. The correct title was "Student in Human and Comparative Anatomy in the Museum of the Royal College of Surgeons." The first gentleman who obtained the appointment was the late Professor William Crozier, of H.M. Indian Army; the last was the late Mr. T. H. Stewart. The office is now abolished.

COMMUNICATIONS have been received from—

Dr. Meadows; Mr. Rowland Smith; Mr. Jebb; Mr. J. F. Greatrex; Dr. Anstie; Mr. S. K. Welch; Dr. Hugh Miller; Dr. G. Elder; Dr. Williams; Dr. R. H. Bakewell; Mr. H. B. Condy; Dr. Gray; Dr. J. Whitmore; Dr. Moxon; Dr. Ogle; Dr. Charles J. B. Williams; Mr. J. Chatto; Dr. Playfair; Dr. F. A. Hartsen; Mr. T. M. Stone; Dr. J. Burdon-Sanderson; Dr. Felce; Dr. Barnes; Dr. Thorowgood; Dr. G. Lawson; Prof. Laycock; Sir W. Fergusson.

BOOKS RECEIVED—

Christopher Heath, F.R.C.S., on the Treatment of Intra-Thoracic Aneurism by the Distal Ligature—Dr. Ballard on a Localised Outbreak of Typhoid Fever in Islington during the Months of July and August, 1870, traced to the Use of Impure Milk—St. George Mivart, F.R.S., on the Genesis of Species—Colonial Questions Pressing for Immediate Solution, by R. A. Macfie, M.P.—Brodhurst on the Deformities of the Human Body—Practical Lithotomy and Lithotrity, by Sir Henry Thompson, second edition—What is Malaria? By Dr. C. P. Oldham—Report of the Carlisle Dispensary, 1869—The Alleged Increase of Lunacy: a Farther Note. By Dr. C. Lockhart Robertson—Fourth Annual Report of the Driffield Cottage Hospital—Report on the General Aspects of Epidemic Cholera in the Bengal Presidency in 1869.

NEWSPAPERS RECEIVED—

Nature—Manchester Daily Examiner and Times—Brixton Herald—Pharmaceutical Journal—The Harrow Gazette—Chemist and Druggist—The Westminster and Pimlico Chronicle—Medical Press and Circular—The Philadelphia Medical Times.

APPOINTMENTS FOR THE WEEK.

January 21. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Association of Medical Officers of Health, 7½ p.m. Dr. Robert Barnes, "How far is the present Prevalence of Small-pox to be Attributed to the Plan recently introduced of Limiting the Number of Public Vaccinators?" Dr. T. Spencer Cobbold, "On Entozoa in relation to the Public Health, especially as regards Sewage Irrigation" (illustrated by Drawings and Specimens).

Royal Institution, 3 p.m. Rev. W. H. Channing, "Laws of Life Revealed in History."

23. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. F. J. Gant, F.R.C.S.—Lettsomian Lectures: "Excisional Surgery of the Joints; The Conditions appropriate for Excision; The Operations; After-Treatment and Results" (illustrated by a series of original specimens, drawings, and apparatus). Lecture II. The Hip and Ankle.

24. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Rev. Dr. Steere, "On the Languages and Tribes of East Africa." Dr. Eysehmacher, "On African Weapons and Implements." Communicated by Sir J. Lubbock, Bart., M.P., "A Zulu Law Case."

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. French, "On the Cause of the Post-mortem Muscular Contractions in Cholera." Dr. Robert Lee, "Cases of Hysteria, with Sneezing." Dr. Meryon, "Suggestions in support of a System of Rational Therapeutics."

25. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 8 p.m. Meeting.

26. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

27. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Dr. Silver, "On the Use of Veratrum Viride in Rheumatism." Mr. Teevan, "On Four Cases of Operation for unusually large Calculi." Dr. Handfield Jones, "Two Cases of Chorea, with Urinary Analyses;" and "On Puncture in Anasarca." Dr. Broadbent, "On Paralysis of the Soft Palate resembling Diphtheritic Paralysis."

Royal Institution, 9 p.m. Dr. Odling, "On Recent Improvements in the Production of Chlorine."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 14, 1870.

BIRTHS.

Births of Boys, 1204; Girls, 1153; Total, 2357.
Average of 10 corresponding weeks, 1860-69, 2078·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	937	959	1896
Average of the ten years 1860-69 . . .	843·0	859·4	1702·4
Average corrected to increased population .	...	...	1872
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	24	8	13	1	7	...	5	1	3
North ...	618210	39	6	23	...	6	5	7	1	1
Central ...	383321	10	1	6	2	5	1	...	2	2
East	571158	46	9	10	2	11	1	...	4	3
South	773175	16	3	25	4	9	3	5	3	8
Total	2803989	135	27	77	9	38	10	17	11	17

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·658 in.
Mean temperature	33·0°
Highest point of thermometer	44·8°
Lowest point of thermometer	18·3°
Mean dew-point temperature	29·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·08 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 14, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Jan. 14.	Deaths Registered during the week ending Jan. 14.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2357	1896	44·8	18·3	33·0	0·53	0·08	0·20
Portsmouth ...	125464	13·2	77	44	45·1	20·8	34·6	1·45	0·73	1·85
Norwich	81787	10·9	68	59	42·0	23·0	31·0	- 0·56	0·00	0·00
Bristol	173364	37·0	117	118	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	51	40	41·0	12·1	30·5	- 0·83	0·73	1·85
Birmingham ...	378574	48·3	255	256	43·5	21·9	32·2	0·11	0·60	1·52
Leicester	101367	31·7	78	61	44·0	18·7	31·2	- 0·45	0·11	0·28
Nottingham ...	90480	45·3	52	48	40·0	18·4	30·4	- 0·89	0·33	0·84
Liverpool	526225	103·0	355	441	49·0	27·8	36·5	2·50	0·40	1·02
Manchester ...	379140	84·5	229	214	...	...	...	...	...	...
Salford	123851	23·9	119	76	44·4	18·8	30·6	- 0·78	0·42	1·07
Bradford	148030	22·5	103	80	43·8	25·5	31·8	- 0·11	0·21	0·53
Leeds	266108	12·3	191	153	43·0	27·0	33·6	0·90	0·26	0·66
Sheffield	255247	11·2	171	150	44·0	27·0	34·3	1·28	0·11	0·28
Hull	135195	38·0	87	63	41·0	18·0	29·2	- 1.56	0·06	0·15
Sunderland ...	103037	31·2	43	47	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	60	59	47·0	26·0	33·5	0·84	0·20	0·51
Edinburgh	179944	40·6	149	85	47·7	29·0	36·5	2·50	0·20	0·51
Glasgow	477627	94·3	355	327	46·4	24·5	39·6	4·22	0·68	1·73
Dublin (City, etc.†)	322321	33·1	133	196	51·0	26·0	38·5	3·61	...	...
Total of 20 Towns in United Kingd'm	7336941	34·4	5050	4413	51 0	12·1	33·4	0·78	0·32	0·81
Paris—Week ending Jan. 14	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Jan. 14 ...	622087	68	...	318	...	...	14·7	- 9·62	...	...
Berlin—Week ending Jan. 14 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·656 in. The highest barometrical reading was 30·06 in. on Friday, and the lowest was 29·21 in. on Monday.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

By Appointment.

DR. ANGOVE'S ACCIDENT CASE.

Extract from LANCET, May 21st, 1870.

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ORIGINAL LECTURES.

LECTURES ON
THE CLINICAL OBSERVATION OF DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture II.

The law of direction of physiological activity or of the *vis nervosa*, applied to the investigation of diseases of the brain and nervous system, is really an application to clinical research of the well-known laws of reflex action. But very few are aware that the direction of physiological activity indicates also the direction of structural degeneration. For this reason, and because of its great practical importance, I must call your special attention to this general fact. As the late Dr. Waller demonstrated it to be the law of degeneration of both the motor and sensory spinal nerves, and showed its value as a means of both anatomical and pathological research, I have named it the Wallerian law. I am, however, responsible for extending its application from the spinal cord and nerves to the brain and nerves of special sense. I may say now that, on the report of Claude Bernard, Dr. Waller was awarded the prize of 2000 francs, given by the Academy of Sciences, for experimental physiology in 1856. You will find the extended views of the question in my psychological text-book.(a) The facts are simple. If the two roots of the second cervical pair of nerves of an animal be divided (and this can be done in the dog and cat without exposing the cord), and it is allowed to survive a few days, certain results will follow. The posterior root between the ganglion and the cord will be found to have undergone degeneration, and also its continuation upwards in the cord; whereas, the anterior root and that part of the posterior root still in connexion with the ganglion will be unaffected. It is thus shown that the ganglion influences the nutrition of the sensory or afferent nerves, and the anterior columns that of the motor nerves; in other words, degeneration goes on in the direction of physiological activity. Serres observed the same condition in a case of disease of the Gasserian ganglion; he traced degeneration along the decussating fibrils to the opposite hemisphere. So that disease of a sensory nerve which implicates the sensory or intervertebral ganglia will extend centripetally or adcentrically as far as its ultimate connexions, and not unfrequently, therefore, reaches as high as the hemispheres, the organ of perception and thought. It is in this way we can understand how insanity results from apparently very remote and unlikely causes. If the degeneration begins exclusively in one set of sensory or motor nerve fibrils, it may be, and often is, limited to that set all the way up or down. We thus understand how it is that in disease one set of fibrils is picked out, as it were, from the rest.

Another point of importance was shown by Waller—namely, that the intervertebral ganglion influences the nutrition of the distal sensory fibrils; for when a mixed spinal nerve is divided on its distal side, both motor and sensory fibrils undergo degeneration. Hence the conclusion that excessive activity or exhausting use of the sensory nerve and ganglia will affect the nutrition of the sensory fibrils. This seems to be the order of causation in certain kinds of locomotor ataxy.

The problem to solve being, then, the order of symptoms, we have to inquire in any case where in the nervous system the functional or structural changes began, and then follow the line of physiological activity. This is already done with much success in cerebral hemiplegias; but the sensory and trophical neuroses have had little attention paid them in this way. There are two such lines in all neuroses—namely, the direct and the decussating—whether the line of activity be centripetal and adcentric (sensory, afferent) or centrifugal and excentric (motor, afferent). In either kind, single nerves and nerve-centres may be affected, or many nerves and centres. Affections of the sensory nerves in the latter case influence central parts by what has been termed radiation of sensation—the phrase meaning diffusion, anatomically, of the degeneration among the centres—so that several functions are disordered. I will give you illustrations of these views.

An injury to a sensory or afferent nerve may be followed by varying centric disorder and disease. In traumatic tetanus the spinal trophic system of the flexor and extensor muscles of the lower jaw, limbs, and trunk is so affected that tonic convulsions follow upon a slight touch or even change of temperature; or, the injury may cause a neuralgia and no tetanus, but spasms and epileptic convulsions; or, there may be no neuralgia, only illusive sensations, as an aura, numbness, and yet centric encephalic disorders result; or, there may be no change perceptible by the patient, and yet there may be various vesaniæ, such as the so-called "masked" epilepsy, mania, melancholia. I give you as an illustration an instructive railway case. On March 24, 1866, a house-agent and tax-collector, aged 60, weighing 22 stones, was holding on a railway carriage, when the guard crushed the end of his finger by shutting the door, so that a portion was squeezed off. He suffered much from pain and loss of blood, and reached home faint and exhausted. The finger healed, but in the course of a month after the injury he had a slight tetanic symptom, and in a few days after that a sort of fit. He now complained, also, of numbness and strange sensations in his hand and arm, twitchings of the face, and a sense of weariness and loss of strength, so that, although previously in robust health, he was unable to undergo even slight exertion without a feeling of fatigue. He resumed his office-work for six months, but got slowly worse, becoming highly nervous and dreadfully depressed. He had next numbness of the body and faintness; then by degrees his powers of speech, of motion, and vision failed; and at last he died, September 13, 1867, nearly eighteen months after the accident. This is one of the many kinds of injuries to the nervous system railway accidents cause. What was the probable pathological anatomy? First, degeneration of the afferent fibrils of the injured finger; then of the intervertebral ganglion; then radiation thence, either upon other ganglia, including the Gasserian, or else upon the sensory structures of the cord; next, as a sequel degeneration, either of the vessels, or lymphatics, or connective tissue, or of all, so that the functions of both the sensory and motor sides of the cerebro-spinal centres were abolished. The progressive disease, the age, and the great weight of the sufferer lead to the inference that the degenerations were diathetic.

The element of time is a very important point in the diagnosis and prognosis of this class of cases; the progressive degeneration may extend over several years. In July, 1868, I saw a captain in the Royal Navy, who, fifteen years before, when a midshipman, fell about eight feet as he was descending Table Mountain, Cape of Good Hope. He received a scalp wound, which bled freely, and he thought he must have been made unconscious. The Surgeon of his ship examined, but found no fracture, and dressed the wound, which healed well. I found an extensive scar on the scalp over the curve of the left parietal region, and the surface slightly depressed. This had led some to propose trephining. Twelve years subsequently to the injury, he married, and shortly after had habitual headaches, with mental depression, increasing until he became profoundly melancholic. Rest from active duty restored him to comparative health of both body and mind, but his manner continued to be peculiar. He, however, resumed charge of a ship, and so got involved in anxious and harassing night-duties off the Irish coast, watching the Fenians. This exhausting work induced a series of neuroses of the encephalon, which were progressively intensified into structural disease, until (when I saw him) he was weak of mind, incapable of movement, passed urine and fæces involuntarily, and had great difficulty of articulation, as well as an incapacity to express his ideas by appropriate words, although he easily smiled and laughed. Early in November of the following year he had successive fits of convulsions, became unconscious, and so died, sixteen years after the injury to the scalp. Long as this period may appear, I knew a major, whose insanity was attributed, and I believe rightly, to a scalp wound (sabre-cut) received at the battle of Waterloo, thirty years previously.

The relation of these exciting and predisposing causes to time—and long time—is one of the most important points in the observation of diseases of the nervous system. It meets you everywhere. Thus, the tendency to leprosy (which is a trophesy) will lie dormant in Europeans who have been resident amongst a leprous population, and be manifested several years after their return to Europe, when exciting conditions arise. If the constitutional tendencies be diathetic, and not acquired, as in the syphilitic and leprous, the climacteric period strongly predisposes. Any shock to the nervous system, sometimes comparatively slight in character, often serves to waken the dormant tendency into activity. Marriage, which was thus operative in the case of the naval officer, is specially influential when entered upon in old age, or at the climacteric period, which practically are the periods when constitutional tendencies to degenerations show themselves. Various diseases of organs which have direct sympathies with the brain and cord are thus apt to be exciting causes.

(a) "Mind and Brain," vol. ii., p. 493.

The decussating anatomy of the nervous system must be noted to observe well these various causes. In the optic nerves and their commissure we have an illustration of both the direct and decussating anatomy of all the sensory nerves of the trunk and limbs. But afferent nerves, which do not naturally subserve to sensation, will influence the opposite side of the central axis. Thus, there is a connexion between wasting of one ovary, or one testis, and wasting of the opposite half of the cerebellum. I think I have seen cases of a like relation between disease of one kidney and the opposite half of the cerebellum. An affection of one knee, or one foot, will affect the kidney or the ovary on the opposite side. Nay, it would appear that the milk in the two mammæ is secreted differently from this unilateral action of the nervous system. It is well known that infants will refuse the milk of one breast and take that of the other. The decussating influence of the injured ciliary nerves of one eye in inducing inflammation of the other is another instructive example of these trophical sympathies.

In connexion with these inquiries into the line of physiological activity, there are rules for examining the patient as to his subjective symptoms. A patient complains of inability to move a limb or limbs; is the feeling delusive or is it true? First, note the state of nutrition of the muscles; their size; their tendency to fibrillary tremors; their contractility under galvanism; their reflex sensibility. In wasting palsy, in sclerotic hypertrophy, and in fatty degeneration, the nutrition of the muscles is involved. In all kinds of centric palsies in which the patient can make an effort to move, there is defect of function somewhere in the line of volitional activity between the seat of will, which is unaffected, and the muscles to be moved; and this may be either on one or on both sides of the cerebro-spinal axis. But where is the seat of will? Like questions arise when we have to deal with the æsthesies and vesaniæ, as to the seat of pain and of feelings and emotions, and even in local inflammations. In sensory phenomena, we ask, Where do they originate? A patient complains of a feeling of heat or of coldness in one leg; the cause may be increased or lowered temperature of the part, and the feeling be real; but it may be due to changes somewhere either in the line of physiological activity or in the "sensorium commune." If seated in the nerve, the change is in fibrils on the same side as the feeling; but if in the cord, it may be either on the same or on the opposite side, according as a direct or decussating fibril is affected. This seems to be a difficult question to determine; but we may come near the truth by ascertaining the comparative temperature of the two legs. If the leg said to be hotter is actually the colder, then the sensation is delusive, and the cause of it is on the opposite side. This is so common in spinal lesions, that you should never take the patient's statement to be a correct expression of the seat of his feelings; the thermometer must decide.

The due observation of all subjective symptoms is difficult, on account of other sources of fallacy. Many hallucinations and delusions of the insane, when, like those of illusive hotness, not contrary to probability, can only be tested by inquiry into the facts. On the other hand, the physical tests of sensibility, to be accurate, require a more intimate knowledge of the sensory nervous system than we possess. The sensory fibrils, ganglia, and columns are evidently complex in structure. 1. There are those sensory nerves in the muscles, whereby we know how, and to what extent, they contract, and the impressions on which constitute one of the class of "guiding sensations." These also seem to subserve to the sense of weight and estimate of energy. 2. The nerves of common sensibility, whereby we become sensible of pain, under certain conditions. These seem to differ accordingly as they begin in the skin or in muscles, or in other sensory structures, as the retina. 3. That there are either nerves or nerve-centres appropriate respectively to temperature and to touch proper, seems certain from clinical observations. Cases are on record in which sensibility to pain and to changes of temperature was abolished, while the senses of weight and touch remained. 4. It is probable, from like observations, that the thermal nerves of the skin and of the muscular system differ. For example, we have a man with locomotor ataxy, who complains that he cannot get to sleep because his buttocks are so cold, and that he is obliged to put his hands upon them to warm them. On careful cross-examination, it turns out, however, that it is not the skin over the nates that feels or is cold, but the flesh below. Claude Bernard has shown experimentally that there are two kinds of nerves in muscles, of which one kind, connected with the sympathetic ganglia, regulates temperature and the activity of the circulation; the other, derived from the anterior columns, regulating the contractions. 5. It is probable, also, that there are chemical nerves to be distinguished from the thermal. Claude Bernard has shown that the secretion of saliva depends upon motor nerves distinct from the thermal, and it seems probable that the retina and, perhaps, nerves of the skin are differently affected by the chemical and calorific rays of light. That plants are so influenced is one of the best established facts in vegetable physiology, for light affects both their colour and size, as well as the direction of growth.

The means available to sensory physical diagnosis with these precautions, besides the thermometer, are—special apparatus for measuring vision, as used by ophthalmic Physicians; and the like for hearing. Persons are often not deaf when they hear badly, but, like short-sighted persons, have a defective co-ordination of the muscular part of the apparatus of hearing. Taste and smell are tested by odorous and sapid things; the latter chiefly vinegar, salt, sugar, and aloes, or other bitters. It is to be remembered that the irritability of the nasal branch of the fifth is tested by mechanical or gaseous irritants, and not that of the olfactory nerves when these are applied to the nostrils.

The æsthesiometer is valuable as a test for common sensibility and for touch, and should be used not merely to discover absolute anæsthesia, but degrees of diminished sensibility. Observations I have had made show that this occurs in psoriasis, in syphilitic skin diseases, and in other cutaneous affections in which it is not suspected, besides the well-known anæsthetic leprosy, and indicates a trophical nervous debility. But the skin should also be tested by pricking and pinchings, by touch of things hot and cold, and by chemical irritants. The rate of transmission of sensory and volitional impulses is also capable of measurement in a ready way, as well as by the means first adopted by Helmholtz. In general paresis and similar diseases I have been able to roughly estimate the slowness of volitional perception and thought by my watch. Persons differ much in this respect when out of health; they then become highly "irritable" and susceptible. There is a line of enlarged vessels seen sometimes in irritable persons, following the course of the margin of the ribs, chiefly on the left side, which I name præcordial vascularity. So far as my experience goes, it is seen exclusively in men, and, in 90 per cent. of those who have it, is coincident with an explosive temper. A similar condition of the small vessels of the upper eyelids is seen in women similarly constituted.

The dynamometer is used to ascertain the strength of muscles and the sense of weight. The hand of the Physician is a natural dynamometer. A sharp tap as distinguished from touch of the skin, and a galvanic current, may serve to determine the contractility and irritability of muscles. In convulsions and spasmodic affections, the diagnosis as to malingering may be determined in two ways. Simulated spasmodic contraction of limbs disappears under chloroform; simulated epilepsy and convulsive diseases are not usually accompanied by a rise in temperature.

A large amount of fallacy in observation results from our ignorance of the anatomical relations of that unity of consciousness which metaphysicians term the *Ego*. Every modification of this state coincides with some vital encephalic change, of the nature and seat of which we know little. This we know, however, that the function of that part is to unite the two halves of the body; and, following out the rule I have already laid down, we know, too, that to this end there are certain lines of sensory physiological activity which commence from both sides, and are doubly decussating; such, for example, are those beginning at the glans penis or the cervix uteri, irritation of which causes general convulsions. On the other hand, there are lines of volitional activity which end in both sides; such, for example, as those to the muscles engaged in speech and in balancing the body when walking—acts, in short, which must be bilateral to be done at all. A man may write well with one hand, but he cannot speak if half his muscles of speech from the larynx upwards be utterly palsied. Unity of action, therefore, is required; and this unity includes unity of both sensory excitation and motor action, because, if only one half be excited, then the unity of action is destroyed. Now, this is precisely what takes place in certain ataxic and volitional kinds of palsy. In a typical case of locomotor ataxy the patient cannot walk steadily, because exact guidance of the legs is impaired: he comes down with a stamp on his heels, and feels as if he were treading upon something soft. Place him on his back, however, and he then can flex and extend his legs in any way he pleases, with unimpaired vigour. This fact shows that the co-ordination of the lumbar and other muscles necessary to the act of walking is impaired, the essential element of which is the maintenance of the equilibrium of the body in opposition to the attraction of gravity, which the child has to learn at the cost of many a fall before it can walk safely. We are wholly unconscious of this operation of the force of gravity, because we constantly resist it automatically under the influence of external impressions. These are interrupted in locomotor ataxy by a special disease of the sensory nerves, cord, and ganglia, and the patient thus becomes wholly dependent for the requisite guiding sensations upon the sense of vision, by which many automatic movements are regulated, through the corpora quadrigemina. Hence it is that if he be made to stand with his feet parallel, and to shut his eyes, he shortly loses his equilibrium, and would fall as if he were a statue unless held up. Now, when I treat of this kind of palsy I shall show you that the causes of it operate adcentrically on the afferent nerves and centres, which serve to maintain the co-ordination of the muscles of the loins and limbs, so as to constitute a whole.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ENTOZOA IN RELATION TO PUBLIC HEALTH AND THE SEWAGE QUESTION.(a)

By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S.

Correspondent of the Academy of Sciences of Philadelphia.

Mr. Chairman and Gentlemen,—On taking part in the discussions at this Association following Dr. Letheby's valuable papers, communicated during the last and previous sessions, one could not help observing how divergent were the opinions entertained on the subject of parasitism, more particularly in relation to the sewage irrigation question.

That the causes of such diametrically opposed conclusions as were then put forth should remain unexplained seemed to some of us highly objectionable; and, therefore, in the hope of clearing up a few of the difficulties then expressed, and in response to the officers of the Association, who did me the honour to suggest a communication, I have drawn up the following brief remarks:—

Since the Secretaries of this Association delivered their report for the year 1869-70, an extended "Digest of Facts relating to the Treatment and Utilisation of Sewage" has been prepared and published, under Prof. W. H. Corfield's name, for the Committee of the "British Association for the Advancement of Science." This work is of great value; and if thus, at the outset, I allude to Dr. Corfield's labours, it is not with the view of criticising the general accuracy of the volume, but rather, with the intention of taking exception to certain remarks made in the final chapter, wherein the writer deals with the "influence of sewage-farming on the public health." In this place particular allusion is made to the discussion which followed Dr. Letheby's paper, read on May 21, 1870; the author likewise referring to the *brochure* written by myself in 1864.

Professor Corfield demands, and is entitled to demand, facts in support of the general conclusions which Dr. Letheby and myself have arrived at respecting the probable spread of entozootic disease by sewage irrigation; and because the data which I have at various times advanced in this connexion do not happen to be of the very palpable kind that any ordinary observer may detect, he, somewhat imprudently, perhaps, gives prominence to the statements of Mr. Holland, who, on the occasion of the discussion alluded to, expressed his belief "that the danger of spreading disease by the irrigation system was purely imaginary."

In order to estimate rightly the importance of this sort of criticism, it is necessary to consider the question from Mr. Holland's point of view. For example, he finds that there is no evidence of entozoal disease at Carlisle because, on "asking whether the sheep had the rot," he received a negative reply. Now, if Mr. Holland had possessed any acquaintance with helminthology, he would have known that "rot" cannot be propagated by the sewage distribution of towns, for the simple reason that the inhabitants of our cities are not infested with the entozoon, whose eggs indirectly give rise to that particular malady. Only in some seventeen or eighteen cases has the sheep-fluke been found in the human body; nevertheless, other species and genera of the same family of entozoa are fatally endemic to their "bearers," amongst mankind, in certain countries.

In the next place we are referred to Edinburgh, where, it is said, the cows, though fed with grass from the Craigentinny meadows for sixty or seventy years past, afford "no evidence of the prevalence of disease among them." That seems conclusive; but in reply to this style of reasoning from negative data, let me tell Dr. Corfield, Mr. Holland, and others whose opinions have been so prominently put forward in this decision, that there is not, in my judgment, a single butcher or flesher in the United Kingdom who has ever either seen or, indeed, acknowledged the existence of measles in the cow, calf, or ox. I have asked butchers and other persons thus concerned whether they have ever witnessed parasites of this description in beef or veal, and they have not only protested that they never saw such things, but they had never previously heard that such entozoa existed in cattle, to say nothing of the existence of similar larval parasites which I have recently shown to occur in the muscles of the sheep. It may, therefore, astonish some persons when I add the expression of my deliberate conviction that at this present moment hundreds, not to say thousands, of the cattle now living in this country are thoroughly well measled, and therefore, also, more or less diseased in the ordinary, but, as I think, unfortunate acceptation of that term. In the face of such recorded experiences as these, I naturally ask—"How it is that any gentlemen, like Mr. Holland, can have the immodesty to ajudge themselves competent to deal with the sewage question, in so far as it is concerned with the probable spread of parasitic disorders?"

I am scarcely yet persuaded, indeed, that no disease has followed in consequence of the utilisation of sewage at Edinburgh, as alleged; for I find that Mr. James Alexander Manning, in his reply to Baron Liebig's letter to Lord Robert Montagu, makes the following statement:—"A large dairyman, of Edinburgh, reduced to the humble position of a carter, lost ninety-two cows in three years, from feeding them on the grass produced from the sewage-irrigated meadows of Portobello; another cowkeeper lost his whole stock in one year; and I was informed," he adds, "that the largest cowkeeper in Scotland, who feeds his cows on the grass obtained from sewage-irrigated meadows, never keeps a cow for more than three months; for the moment his keen perception and long practical experience detect any tendency to incipient symptoms of pleuro-pneumonia, he sells the cows to his neighbours, and purchases others." I quote these few recorded facts (if they are facts), however, not so much with the intention of supporting the particular views taken by Mr. Manning, as for the purpose of expressing my doubts concerning the reality of pleuro-pneumonia as being the true cause of the asserted mortality. The vagueness with which that term is employed by cattle-dealers and others is well known. On the other hand, a correspondent of mine, Dr. T. S. Ralph, in Australia, has gone so far as to assert the essentially parasitic nature of all pleuro-pneumonia—from evidence, nevertheless, which, though truly entozootic, is of a character altogether distinct from that which I suspect to have obtained in not a few of the above-mentioned diseased animals. Surely Mr. Manning could not have committed himself to such statements as the above, if there were no grounds for believing their truth!

But I have further to observe in connexion with this measle malady "or cestode tuberculosis," that, until lately, the only specimens of beef-measle ever seen, or, at least, recognised in England, were those which were removed from cattle subjected to "feeding experiments" by myself at the Royal Veterinary College. Neither Professors Simonds and Pritchard, nor any other persons who assisted me in the investigations there conducted, had ever seen anything of the sort previously. The "measles" were artificially reared in the animals by the introduction of the eggs of tapeworms, selected and obtained by myself and friends from the human body; so that it may be said, without hesitation, that these experimental animals, instead of becoming diseased from parasitic germs by means of sewage-grown grass in an indirect or roundabout manner, were infected by certain of the ordinary organic constituents of sewage, or fæcal discharge, itself, in the most direct manner possible! Of course, in such cases we produce a more virulent form of the measle malady than can ever obtain under the ordinary circumstances by which the disorder is propagated; and, therefore, it is also desirable to remind Mr. Holland and those who support his notions that the presence of measles in cattle does not necessarily give rise to any conspicuous symptoms of suffering. It is true that the calf we experimented on nearly succumbed to the disorder, whilst the health of the older animals was only slightly affected; but in these cases the numbers of six-hooked embryos actually traversing their bodies were collectively enormous—that is to say, many thousands. It needs but little reflection, therefore, to perceive that cattle fed upon sewage-grown fodder can never infest themselves to such an extent as to cause conspicuous suffering on their part. Yet, at the same time, it is perfectly clear that the likelihood of their becoming "intermediary bearers" of the larvæ of human tapeworms, is a thousand-fold increased by the fact of their being fed on grass reared under the conditions referred to.

(a) Read before the Metropolitan Association of Officers of Health, January 21, 1871.

I may here remark, in regard to the invasion of parasites generally, that the question of suffering frequently, though not invariably, depends, firstly, upon the number introduced, secondly, upon the age of the "bearer," and thirdly, upon his sensitivity. Even in the case where a single entozoon takes up its residence in the brain or other important organ, the constitutional power of the host for resisting irritation may alone determine the degree of suffering or of fatality involved. My investigations with trichinæ give similar results to those afforded by the measle experiments. It is astonishing what an amount of infection old animals will bear from this source. Thus, a sow in which I reared some fifteen or sixteen millions of trichinæ, never displayed any symptoms of pain, nor did the animal lose its appetite for a single day. When slaughtered, the flesh appeared so healthy to the naked eye, that bystanders refused to believe that the animal was diseased. One assistant, even after microscopic evidence, desiring to remove portions, as a perquisite, for home consumption. In point of fact, he succeeded in carrying off the heart; and I understood that he ate part of it. As I have said, young animals do not bear infection so well as old ones; and thus, in the case of the three pigs infected by Dr. Thudichum, two became ill, whilst the third died. These "hosts," respectively, were "less than three months old." Rats and rabbits appear to resist the action of the flesh-worm migrations very successfully, and the same may be said of cats and dogs. In the case of one full-grown cat, however, I had great difficulty in restoring the animal, the acuteness of trichiniasis depending upon an extreme degree of infection.

The style in which some unscientific opponents write is scarcely creditable to them. Thus, Mr. C. F. Gower, in criticising Dr. Letheby's paper (as it appeared in the *Ipswich Journal* of August 27, 1870), accuses Dr. Letheby of talking "a little at random about measly meat," and asks if the parasitic ova might not be "discoverable adhering to the blades" of grass, in cases where irrigation has been employed. Mr. Gower evidently thinks that the ova of entozoa measuring less than the $\frac{1}{650}''$ in diameter ought (if our views be true) to be picked up by those who visit "sewage-irrigated grounds" with as little difficulty as the country folks experience when they hunt up plovers' eggs at the proper season. In short, Mr. Gower's long and vigorous letter in the *Ipswich Journal* betrays a want of knowledge of the rudiments of entozoological science.

I may in the next place observe that it is not very surprising that the general public should disregard any warnings uttered respecting the probable increase of parasitic disorders from sewage irrigation, since, as obtains in the case of many other evils, no one thinks of demanding an investigation until a readily recognised calamity occurs. It will be said, in reply, that the absence of any palpable evil is a proof that there is no need of inquiry. This is the very point I am disputing. Take the case of trichina. Is it not perfectly clear that, but for Dr. Zenker's discovery that fleshworms "were capable of giving rise to a violent disease in the human body," we might have remained ignorant of the disorder, as such, to the present day. It is extremely improbable that the entozoal character of recent epidemics would have been recognised, but for that discovery. Not a doubt exists in my mind that virulent and even endemic forms of the same trichinal disorder occurred from time to time during former years; and yet no one so much as hinted at their parasitic origin. Persons have even recalled past outbreaks, which were at the time attributable to some other disease; and at least one individual allowed himself to be harpooned in the interests of science. The extraction in this way of calcified trichina capsules proved that he had suffered from trichiniasis some ten years previously. It may further be safely urged that but for these trichina revelations neither the Lords of Her Majesty's Council nor their energetic Medical Officer would ever have thought of demanding a "Report on the Parasitic Diseases of Quadrupeds used as Food." If that Report, written in 1864 and published in 1865, cannot be said to meet all the requirements of the case before us, it constitutes, nevertheless, a most valuable contribution to our knowledge of the trichina disease; and almost as much may be said of Dr. Thudichum's shorter paper "On the Diseases of Meat as affecting the Health of the People," subsequently communicated to the Society of Arts.

In connexion with these veal- and beef-measle experiments, I may further observe that, although I have already (partly with the co-operation of Professors Simonds and Pritchard, of the Royal Veterinary College) made their general results public through the *Proceedings* of the Royal and Linnæan Societies, I have hitherto had no sufficient opportunity of explaining their importance in relation to the sewage question. This I know propose to do; again remarking, by the way, that the disorder thus superinduced is only one of the many parasitic diseases liable to be increased by extensive irrigation schemes. Here let it be borne in mind that the particular larvæ under consideration can only be propagated in the flesh of the ox, cow, and calf; at least, I am not aware that this cysticercal form has ever been detected in any other animal "host," and it certainly has not been recorded as occurring in the human body. This last-mentioned negative fact is the more remarkable, since the armed measle of the pig enjoys a comparatively wide distribution, whilst the adult representatives of both species exclusively infest the human bearer. It is by no means improbable, however, that this limitation may be eventually found to be untenable. Be that as it may, I have repeatedly shown that the beef tapeworm (*Tænia mediocanellata*) is more common with ourselves than the species derived from pork; nevertheless, this is not the view most generally held. Here I do not care to reiterate the data on which I first formed and taught that conclusion some years back, as I only once more allude to the fact in reference to the practical consequences of its due recognition. These are manifold. Thus, those persons whose religious convictions prevent their partaking of swine's flesh never suffer from *Tænia solium;* whilst, again, the thorough-going vegetarian may successfully boast that he will never play the part of "host" to any members of the tapeworm family. He is, however, in my judgment, the more likely to be infested by oxyurides and ascarides, especially if, at the same time, he is bound hand-and-foot to the principles of teetotalism. It has also to be noted that neither of these exclusive habits as regards diet and drink will ward off the possible contingency of invasion from the cysticercus of the pork tapeworm, which, by the way, when taking up its residence in the brain, gives rise to epileptiform seizures. Fortunately, death is not common from this source.

But it will be said by Mr. Holland and his supporters that these mere Professional facts have nothing whatever to do with the question in which they are more immediately concerned. It is hopeless, perhaps, to attempt to induce them to think otherwise. In vain we assert that a single person affected with tapeworm discharges thousands of eggs daily, and that the majority of the germs thus distributed pass into the sewage of our towns. In vain we explain that the further dispersion of these germs over our fields and market gardens ensures a more than ordinary facility of access into the bodies of cattle and other intermediary bearers. All such arguments, as well as others equally cogent, go for nothing. What these gentlemen desire in order to produce conviction I have already hinted at. To be still more precise, they say, in effect—"When, in the neighbourhood of our towns, and on our sewage farms, we see the sheep rotting from flukes and staggering from gid, and the oxen, cows, and other domesticated animals dying off by scores, as if attacked by a new plague, then your warnings shall receive consideration; but in the absence of trichiniasis and other virulent forms of entozoal disorder, we shall continue to maintain that 'the spreading of disease by the irrigation system is purely imaginary.'"

This kind of reply, as I have already urged in the Introduction to my small work on "Human Tapeworms," now out of print, is quite satisfactory to the persons making it, so long as they themselves remain free from internal parasites; but when they are attacked the case is far otherwise. In the many instances of real suffering which have come under my Professional care—and some of which, it may be said, could never have occurred but for the fact of germ-dispersion, taking place in one or other of the ways already explained—I can testify that such assurances as the above afford very little comfort to those who are called upon to entertain these peculiar guests. If, indeed, it could be safely alleged that parasitic disorders have not increased in consequence of sewage distribution, I do not hesitate to say that such a state of things would not disprove the injuriousness of wholesale irrigation, but would show, rather, that the untiring exertions of our sanitary officers have more than counterbalanced the excess of evil arising from this source; and in connexion with these special interests the members of this Association may justly lay claim to have played a most conspicuous part. But, as I have previously said—or, at least, inferred—we are not yet in a position to afford absolute proof, either one way or another. The methods hitherto employed have not, and could not have, enabled us to obtain satisfactory evidence as to the increase or decrease of parasitism, as the case may be. Comparatively few people recognise the importance of precise information on this subject; and I believe I am the only Professional teacher who has ventured to give special courses of lectures on helminthology at a Medical College.

Again, if anyone seeks for information in the Registrar-General's report as to how many cases of death from parasites occur annually, what will he find recorded? Nothing. The whole subject is in confusion, and will continue to remain so for a long time to come. Some years back, when investigating the question as to the mortality from parasites, I failed to find, save in the isolated cases reported in the Medical journals, any public record of deaths from entozoal disease. Thus, death from parasites in the brain, liver, lungs, heart, and other organs would be registered under epilepsy, diseases of the liver, and so forth, to say nothing of the multitude of instances where the true nature of the disorder has unquestionably been overlooked. Long ago I took occasion to express my belief that annually several hundred persons died in this country from parasitic diseases, and I have since seen no reason to change that opinion. Far otherwise; and therefore, taking example from the spirit which animates the whole body of the Profession, I spared no pains to enlighten the public on this matter, in so far as such efforts might tend to lessen the prevalence of certain well-known maladies.

Once more reverting to a principal point at issue, many will say with Dr. Corfield that we ought not to condemn the irrigation system, since no entozoal evils of any kind have arisen in localities where there has been a "long-continued application of fresh excrement and sewage." My reply is, that it is not the utilisation of sewage itself that I object to, but to certain wholesale methods of distributing it over the land in a fresh state. As to the assertion that no harm follows irrigation, no matter to what extent it be carried out, I have already shown the fallacy of drawing such conclusions on entozoological grounds, without so much as touching upon the overwhelming evidence that sewage exhalations and contaminations are apt to give rise to dysentery, cholera, and fever. Speaking as a helminthologist, I contend that no closet-made reports, however valuable from a literary point of view, can be of any real practical service unless based upon an extensive acquaintance with the various forms of entozoa, and also upon evidence as to their prevalence, not only in the human subject, but also in the more important of our domesticated animals. Even an examination of dead animals not ordinarily used as food has indirectly thrown considerable light upon questions of general interest in this connexion.

In the next place, I may remark that not only are many forms of helminthiasis amongst mankind and animals ascribed to particular parasites which are in no way concerned with their production, but a still larger number of diseases have been described as helminthic where neither entozoon nor parasite of any sort existed. My experiences on this head, both Professional and otherwise, have been very remarkable, and not unfrequently of a painfully interesting character. If it be asked, therefore, what good result could follow further research in the direction I have indicated, I can confidently appeal to the knowledge of entozootics already acquired from helminthological investigation; and I am in a position to say that the mere registration of the relative abundance of different species of entozoa in separate "hosts" and localities might alone afford a fair and useful criterion as to the extent to which particular entozootics normally or abnormally abounded. I have indeed already attempted something in this direction, but the labour and expense involved in inquiries of this description have prevented my carrying out the researches to the necessary extent. Thus, between the years 1857-60 inclusive, I was enabled, through the kindness of the authorities of the Zoological Society, to examine the bodies of no less than 122 vertebrates which had died at the menagerie, Regent's-park. Of these animal "hosts," I found thirty-eight harbouring, collectively, fifty-one different species of entozoa, amongst which was the remarkable *Bilharzia hæmatobia*, up to that time only known to infest the human body. The interest and importance of this fact will be inferred from what appears in the sequel. Again, at a subsequent period, and with a still more obviously practical end in view, I carefully examined the 620 preparations of entozoa and entozoal disease which, by patient searching for many weeks, I found dispersed throughout nine of the pathological museums of the metropolis. The results of this separate investigation were most instructive, part of them being embodied in a brief paper published in the *Lancet* for May 13, 1865. Much of the information which I have thus acquired will never be utilised in any way. In this relation, therefore, I may be excused for remarking upon the good results likely to follow the delivery of short special courses of lectures on helminthology as part of the ordinary Medical curriculum. The subject is eminently practical; and at the Middlesex Hospital, I have found students who, though they thought it a nuisance to attend lectures on botany, have not failed to manifest great interest in my discourses on parasites in relation to the diseases of mankind and animals.

I see by the *Times* of December 12, 1870, that the Medical officer of the Privy Council has commented very severely on the power of water companies in general, and of the Vauxhall Company in particular. That criticism, of course, bears reference to the spread of diseases—such as fever, cholera, diarrhœa, and dysentery—in consequence of the ascertained presence of sewage impurities in drinking-water. From the strong language employed, one would almost be led to think that the responsible officers of these companies were divested of the commonest feelings of humanity. Of course, such cannot be the case. In all probability these gentlemen are by no means satisfied as to the "proofs" of their power for evil; or, in other words, they do not see the connexion between infected water and the numerous deaths alleged to result from its use. I am not surprised at this; but, seriously, if these offenders were really animated by a desire to do their neighbours still greater injury, I think I could put them up to a plan by which, with the aid of entozoa, they might decimate the population of the East-end of London, without any probability of their being "brought to book" for it. And I may add that, perhaps, even Mr. Simon himself may not be fully aware to what extent entozootics may be propagated by sewage irrigation, or, for that matter, without it, whether intentionally or otherwise, by means of water.

Let, therefore, the promoters of irrigation and the members of water companies alike pause before they sanction methods by which new organic impurities are likely to be introduced into the "meat and drink" of our teeming population. If, as Professor Tyndall demonstrated at the Royal Institution only yesterday, mere "pellucidity is no proof of the absence of soluble impurities" in water, it may also be said that clearness of water offers no proof of the absence of insoluble impurities, in the condition of germs of entozoa. One hundred tapeworm eggs in a glass of water would neither render the draught turbid nor reveal the presence of the germs to the naked eye. Bearing these facts in mind, it is some relief to see by the report of the Metropolitan Board of Works, published in to-day's *Times* (January 21, 1871), that the Essex Reclamation Company's proposition to utilise the daily supply of 270,000 tons of London sewage by the irrigation system is not likely to be carried out. At all events, the Board will neither advance money, nor afford the Company support of any kind.

In regard to the possible introduction of the little blood-fluke (now commonly known under the generic title *Bilharzia*, which I first gave to it), a few words of explanation will naturally be looked for. Whilst many have ventured to criticise unsparingly the warnings contained in my *brochure* already alluded to, others, like Dr. Letheby, have not failed to give more consideration to my statements. Any careful reader of the pamphlet, however, will perceive that I never asserted that the *Bilharzia* disease was sure to be propagated amongst us; but I did state that, in view of a much larger amount of egg-dispersion by means of sewage irrigation, it was by no means improbable that this African malady might become naturalised in this country. By the data then in my possession, I was perfectly justified in taking up this position; but, since the time referred to, and only very recently, I have had ample opportunity of personally studying the disease as it occurred, and still exists to a less marked extent, in a little girl who has come from Natal, South Africa, to be placed under my Professional care. The details of this case I reserve for publication elsewhere; but the Association will readily gather its importance in relation to the irrigation question when I state my belief that, for months past, this patient has daily given off with the urine at least 10,000 eggs of *Bilharzia hæmatobia*. When first placed under my care, the consequent hæmaturia was both frequent and excessive; but, not to dwell on Medical details, the only other point I care to insist upon just now relates to the degree of larval development hitherto noticed by observers abroad, and by Dr. John Harley in this country. I am happy to say that I have been able to watch the embryonal stage of growth to a somewhat further degree of development than has hitherto been witnessed by any other observer; yet much remains to be accomplished before our knowledge of the entire genetic relations of this remarkable parasite will enable us to clear up some of the important practical questions raised by myself in this connexion. I may add that, although I have vainly sought by experiment to rear the higher larval stages of this entozoon in the bodies of various kinds of intermediary hosts, I have, nevertheless, succeeded in rearing and watching the habits of the larva in the condition of an actively-swimming, cone-shaped, ciliated, infusorial animalcule, furnished with a highly developed water-vascular system. Finally, let me add that, contrary to all expectation—and as affording a result somewhat unfavourable, perhaps, to the views I have hitherto advocated—the larvæ of this entozoon develope more rapidly in pure water than in fluids which contain impurities of any kind; so that, in short, we may say that the young of *Bilharzia* cannot arrive at their ultimate destination, in the bodies of mankind and monkeys, until the urine or sewage in which they occur shall have been more or less considerably diluted with fresh or salt water, in either of which media, my recent experiments, thus far, prove that they are capable of developing themselves with extraordinary rapidity.

In concluding, I may observe that since the preceding remarks were penned I have received a new and interesting illustration of the fact that entozootics amongst animals are constantly overlooked, even where the parasites occur in considerable numbers. I refer to the prevalence of *Stephanurus dentatus* in the swine of the United States, the particulars of which curious discovery I have already communicated to the last week's number of the *British Medical Journal* (January 14). Finally, also, let me add that I have not by any means attempted or desired, on the present occasion, to treat the subject before us exhaustively. I shall, however, have accomplished all that was proposed if, in the judgment of the Association, I have succeeded in demonstrating the high probability, not to say the certainty, of a large increase of parasitism amongst mankind and animals, as arising from the distribution of fresh sewage by the method of irrigation on an extended scale.

A CASE OF BRONCHOCELE (GOÎTRE), SUCCESSFULLY TREATED BY ELECTROLYSIS AND SUBCUTANEOUS INJECTIONS OF IODINE.(a)

By ADOLPHE WAHLTUCH, M.D., L.R.C.P. Lond.,

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MISS E. C., from Bury, aged 27, consulted me in May, 1869. For the last four years she had suffered from bronchocele, and had been continually using iodine internally and externally without experiencing relief. On examination I found the thyroid gland enlarged, the right and middle lobe being larger than the left lobe. The size of the tumour was that of an egg. I at first ordered bromine internally and externally, and as there appeared to be no change, I commenced, on July 14, 1869, the electrolytic treatment, beginning with eight Daniell's elements and the insertion of one needle, and gradually increasing to sixteen Daniell's elements and the insertion of four needles, at first twice a week, then once a week till January 5, 1870—in all twenty-eight times.

The mode of operation was the following:—I inserted the needle, connected with the negative pole of Althaus's permanent battery, into the tumour, and closed the circuit by placing a moistened sponge connected with the positive pole to the skin of the neck. I allowed the current to act at first for ten minutes, and at subsequent operations gradually increased the time to fifteen, twenty, thirty, forty-five, and sixty minutes. The tumour after each operation became softer, and began to swell; the enlargement continued for twenty-four hours, after which the tumour gradually subsided to a size below its original dimensions. After the twenty-fourth operation (November 24, 1869), the tumour had diminished to the size of a hazel-nut, and consisted of the right lobe alone (the left and middle lobe having been reduced to their normal size). The four succeeding operations, performed weekly till January 5, 1870, did not produce any marked change, although I used sixteen elements, three needles, and permitted the current to pass for an hour each time.

I stopped all treatment for six weeks, during which time the size of the tumour remained unchanged. I therefore adopted another form of treatment—viz., the hypodermic injection of iodine tincture into the enlarged right lobe of the thyroid gland. I at first injected one minim of tinctura iodi diluted with nine minims of distilled water, then two minims with eight minims aqua; then five minims with five minims aqua; then pure iodine ten minims, increased to fifteen minims, and lastly to twenty minims (making two injections of ten minims in two separate places). In all, I operated sixteen times from February 19 to July 20, 1870 (fortnightly till May, after this once a month), by which date the tumour had disappeared. I saw her again in the middle of September, and there was no enlargement of the gland to be noticed.

The pain from insertion of the electrolytic needle was very slight; after the first application the patient felt sick, but never afterwards. The traces of the puncture soon disappeared, and permitted a fresh insertion of the needle.

The hypodermic injection of iodine never caused either pain or suppuration, with one exception; and on this occasion the evil effects were produced by a bend at the end of the injection-needle. Small and diluted doses had no effect, but after the injection of larger doses (fifteen to twenty minims of pure iodine tincture) the result was remarkable.

Now, a few words on electrolysis. This term has been given by Faraday to the electro-chemical decomposition produced by the immersion of the conducting-wires of a galvanic battery into any inorganic or organic compound. Water is thus decomposed, the oxygen appearing at the positive, and the hydrogen at the negative pole. Metallic needles connected with a battery, when introduced into an animal liquid, decompose it, and the positive pole becomes oxidised and chlorinated, and changes from a metal into a metallic salt, while the negative pole remains unchanged, the hydrogen or free alkali formed by the electrolytic current having no chemical effect on the metal. Hence the negative pole alone can be safely introduced into animal tissue; not so the metallic needle connected with the positive pole, which, being thus changed, would act as an irritant foreign body, and cause inflammation or suppuration.

Althaus's observations explain the *modus agendi* of electrolysis on dead or living animal tissue. Firstly, the action is mechanical; the nascent hydrogen formed at the negative pole rises in innumerable bubbles, and forces itself between the structural elements of the tissues, driving them asunder. Secondly, the action is chemical, the free alkali (soda and potassa), which, together with the hydrogen, is formed at the negative pole, acting chemically on the tissues. This action will account for the enlargement and softening of the tumour after each operation. I must add that I never noticed any elevation of the temperature during or after the operation.

I have also used the electrolytic treatment in several cases of obstinate and old warts; they all at first began to enlarge and to swell, and subsequently diminished. In these instances I particularly noticed the combination of the mechanical action of the nascent hydrogen with the chemical action of the free and caustic alkali.

I also used electrolysis with good results in two cases of cystic tumours. The one was that of a young lady, Miss J. O., of Manchester, aged 16. She had a cystic tumour, the size of a walnut, on the left wrist, on the side of the radius. I inserted two needles connected with the negative pole, and closed the circuit by placing a moistened sponge, connected with the positive pole of a battery of four cells, to the skin near the tumour, and allowed the current to pass for ten minutes. She felt a strong pricking sensation during the whole of the operation in the skin, proceeding from the positive pole. I repeated this operation every sixth day, and after four operations the tumour had entirely disappeared. I saw her again a year later, and no traces of the tumour could be seen.

The other case was that of a little girl, J. B., aged 7, suffering from a similar cystic tumour, but one of more solid consistency, situated on the left wrist. I used twelve Daniell's cells, and inserted first one and then two needles. Eight operations within two months sufficed to free her from the cyst. I can, therefore, corroborate the statement of Althaus, that solid cysts require a larger number of cells than liquid cysts; for in my first case four elements were sufficient to reduce the tumour in eighteen days, while in my second case I had to employ twelve elements eight times within two months; the second cyst being more solid than the first.

(a) Read before the Medical Section of the Manchester Royal Institution.

In my case of bronchocele, the tumour was of a solid nature, and I believe the reason that it did not get smaller after the twenty-fourth operation was, that the employment of sixteen elements had been insufficient, while I might have completed the cure without the iodine injections had I used a more powerful battery. Nevertheless, the ultimate good result of the hypodermic injection of iodine appears to me to justify a further trial of that treatment in cases of glandular enlargement.

Manchester.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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UNIVERSITY COLLEGE HOSPITAL.

MYXOMATOUS TUMOUR OVER PAROTID—REMOVAL—RECOVERY.

(Under the care of Mr. ERICHSEN.)

THE account of the following case is taken from notes made under the direction of Mr. Beck, the Surgical Registrar:—

Thomas K., a tailor, aged 47, was admitted into Mr. Erichsen's male ward on August 2, 1870, with a swelling in the position of the parotid gland on the left side. There was nothing special in his previous history, or in the history of his family, except that the man had suffered from repeated acute attacks of gout, which had left him with concretions in the joints of fingers and toes. Two years ago he first noticed a small pimple below the left ear, which gradually increased in size. He never felt either pain or tenderness, but only a sense of tightness over the tumour, and his general health had remained unimpaired.

On admission, the following note was taken:—The patient is a healthy-looking man. On the left cheek is a tumour extending from the zygomatic arch above to the angle of the jaw below, and filling up the hollow between the jaw and the sterno-mastoid muscle. It is rounded on the surface and coarsely lobulated, a small lobule seeming to extend behind the angle of the jaw; its most prominent point is below and opposite to the angle of the jaw. From this point it slopes gently down to the zygoma, but its lower surface is almost at right angles to the vertical plane. The whole mass is about the size of a hen's egg. The most prominent point is rounded, soft, and fluctuating like a cyst. The rest of the mass is elastic. It is freely movable over the parts beneath, and is nowhere adherent to the skin. It has no enlarged veins on its surface, and the lymphatic glands about the angle of the jaw are not enlarged.

Mr. Erichsen made a small puncture into the fluctuating point. No fluid escaped, but some reddish gelatinous substance came out on squeezing. Under the microscope this was found to consist of delicate branched cells in a homogeneous matrix. On August 3, chloroform being given, Mr. Erichsen proceeded to remove the tumour. An incision was made at the posterior border, and another from the middle of this across the tumour, at right angles. The flaps were then raised, and the tumour exposed. In trying to raise the mass from its bed, the whole substance broke down, leaving a fibrous capsule with bits of tumour adherent to it. This was carefully dissected out, no vessels or nerves of importance being involved. Two ligatures were applied, and the wound was then plugged with dry lint, and the edges partly brought together with silver sutures, a pad of dry lint being bandaged over all.

Microscopic Examination of the Tumour.—Mr. Beck's report of the structure is as follows:—The tumour presented the characters of a pure myxoma. It was composed chiefly of branched cells. The cells were various and irregular in shape. The number of tails varied from three or four to one, and in some parts of the tumour masses of simple rounded cells lay packed together. The diameter of the cells ranged from $\frac{1}{2000}$ to $\frac{1}{3000}$ inch. They had faintly granular contents, and a distinct round nucleus, in some cases with a well marked, shining nucleolus. The intercellular substance varied very much. In some parts it was clear and homogeneous, in other granular, whilst in many parts it was fibrillated, containing bundles of white and yellow fibres. It contained no fat, and no cells resembling those of cartilage were found anywhere. The juice from the tumour could not be collected in sufficient quantity for examination for mucin, as the whole tumour broke down in removal. After the operation, the wound healed well by granulation, without any untoward symptoms, the small scar being nearly sound when the man returned to the country on August 19.

SOFT ENCHONDROMA OF PAROTID—REMOVAL OF TUMOUR—ERYSIPELAS—RECOVERY.

(Under the care of Mr. ERICHSEN.)

ISABELLA A., a domestic servant, aged 29, was admitted into Mr. Erichsen's female ward on October 12, 1870, with this history:—She had always enjoyed good health, and had no hereditary tendency to the formation of tumours, but during the last six years she had noticed a gradually increasing lump in front of and under the left ear. This had lately assumed a more rapid growth, but was even now hardly at all painful. She was a stout, healthy-looking woman, with a swelling the size of a large walnut in the left parotid region. The covering skin was tightly stretched, but not adherent, and the tumour was freely movable over the parts beneath. It was smooth and even on the surface, and had a firm and somewhat elastic consistence. There was no enlargement of the lymphatic glands, and Mr. Erichsen, considering it a cartilaginous growth, determined to remove it at once. This was readily accomplished by a single incision, the mass being loosely encapsuled, and turning out easily without any bleeding. The tumour removed was nearly spherical, measuring an inch in diameter, of an opaque yellowish colour, and yielding no juice on scraping. Thin sections from morsels hardened in alcohol showed, in most parts, the following singular structure:—The field of the microscope was mainly occupied by rudimentary cells of the connective tissue type, spindle, or more frequently irregularly branching, the delicate branches forming a fibrillar network pervading the tumour. But here and there, in varying proportions, single or many cells were met with, having all the characters of well-marked cartilage cells, with round or oval nucleus, cell wall, and large outer capsule. Such a cell would be found imbedded in the hyaline basis-matter of the tumour, surrounded on all sides by the branching fibre-cells suggestive of myxoma tissue, and in no place were the cartilage cells sufficiently abundant to present the ordinary appearances of an enchondroma. After the operation, the patient made good progress, the wound healing rapidly by granulation until October 24, twelve days later, when this note was made by Mr. Pellereau, the Ward Clerk:—Patient feels ill. The pulse is 124, and soft; skin hot and moist; tongue dry down the middle, coated with white fur on each side. The face is considerably swollen on the left side. The wound looks dry, and the surrounding skin is of a dark red colour, and slightly vesicated. She was at once removed to a private ward, but the erysipelas spread over the whole face, and an abscess formed in the site of the operation. On this being opened, on November 1, she began to mend again, and by November 12 was sufficiently strong to leave for the All Saints' Convalescent Hospital at Eastbourne.

We are glad of the opportunity of reporting this case, although its only interest lies in its microscopical structure. Mr. Marcus Beck, the Surgical Registrar to the Hospital, kindly informed us of the results of his minute examination, and as such a combination of myxoma and cartilage has been seldom described (although probably existing to a greater or less extent in most of the soft enchondromata of the parotid and elsewhere) we think it well to put it on record. A very similar specimen was described and illustrated in the volume of the Pathological Society's *Transactions* for 1869, but, with this exception, we are not aware of any published account of the curious manner in which the two tissues may be arranged in the same morbid growth.

EPITHELIOMA OF CHEEK—REMOVAL OF GROWTH—RECOVERY.

(Under the care of Mr. ERICHSEN.)

Caroline M., aged 50, a healthy married woman, and free from any constitutional or hereditary taint, was admitted into this Hospital under the care of Mr. Erichsen, on July 12, 1870, with a swelling in the right cheek. Five months before, she had noticed a lump in this position, and it has since gradually increased in size, and at the same time become both tender and painful, with occasional shooting pains in the side of the head, and general swelling of the cheek.

On admission, the dresser, Mr. Pellerean, made the following note:—The patient is a full-faced, florid, and healthy looking woman. On examination, the face is seen to be clearly fuller on the right side, and on putting the finger into the mouth a hardish mass is felt opposite the bicuspid and first molar tooth of the upper jaw on the right side. It seems to be attached slightly to the gum and the alveolar border, but to belong chiefly to the cheek. The mucous membrane over it is pale in colour, and puckered almost like an old scar of an ulcer, but she gives no history of any ulcer at that place. The teeth are sound. Mr. Erichsen, on examining it, pronounced it to be an epithelioma springing from the submucous tissue of the cheek, and becoming attached to the gum and upper jawbone. There was no implication of lymphatic glands.

On July 14, Mr. Erichsen removed the growth, the patient being under chloroform. He first made an incision from the angle of the mouth nearly to the malar bone, and turned up the flap of the cheek. He then removed the growth from the flap, taking the gum with it, and finally scraped the alveolar border with a gouge at the spot where the tumour affected the gum. The wound was brought together with three harelip pins and some silver sutures, the bleeding being arrested by torsion and by the pins. Six days later the wound was all but healed, and the woman left the Hospital well on July 25.

Microscopically, the tumour presented the ordinary characters of squamous epithelioma in this position, well-marked epithelial globes being unusually numerous.

THE MIDDLESEX HOSPITAL.

CASES OF LITHOTOMY.

(Under the care of Mr. HULKE.)

Oxalate of Lime Calculus in a Boy—Lateral Lithotomy—Recovery.

A very stunted boy, aged 13, but looking much younger, was admitted into Percy Ward, April 19, 1869, with symptoms of stone in the bladder dating from early childhood. His foreskin was very long, red, and excoriated by being constantly pulled. He had great pain in the lower part of the belly. The urine was thick, and sometimes bloody. It contained much oxalate of lime, with bladder epithelium and pus. A large rough stone was detected. An egg-shaped, tuberculated, oxalate of lime stone, weighing 212 grains, and measuring 1·3 by ·9 inch in its long and short diameters, was removed by lateral lithotomy on May 4. By the end of the month the wound had quite healed, and he left the Hospital a few days later, convalescent.

Lithic Acid Calculus in a Boy—Lateral Lithotomy—Recovery.

A bronzed, healthy-looking child, aged 4, was admitted into Percy Ward, May 29, 1868, with symptoms of stone in the bladder of four months' duration. His foreskin was long, from being pulled. Before and after micturition he was in great pain, clutching his penis, and bending forward till he was almost doubled. A rather rough stone was at once felt on sounding him. Lateral lithotomy was performed, and the stone extracted with the scoop. It was an oval, lithic acid stone, half an inch long, and weighing, when dried, 20 grains. During the next two days he was frequently sick, and he threw up two large round worms, and voided four others per anum. The urine began to flow per urethram at the end of a week, and at the end of three weeks all of it escaped through this channel. The incision was not quite healed at the end of another week, cicatrisation having been retarded by an attack of diarrhœa.

A Large Rough Stone—Stricture of Urethra—Lateral Lithotomy—Very Profuse Bleeding, necessitating several Ligatures and Plugging—Escape of Fæces through Wound on the Twelfth and following Days, but not after the Twenty-third Day—Recurrence of Rectal Fistula about Five Months afterwards.

A farm labourer, aged 50, was admitted into the Middlesex Hospital, April, 1870, with symptoms of stone in the urinary bladder dating from an attack of retention two years before. He had an uncontrollable impulse to micturate every few minutes, day and night. The urine was turbid, high-coloured, and sometimes bloody. It contained an immense quantity of lithic acid crystals, a few octahedra of oxalate of lime, much vesical epithelium, pus corpuscles, some blood corpuscles, and a little albumen. He had great pain in the lower part of the belly, in the end of the penis, and in the right loin. The urethra was very sensitive, and bled easily; its external orifice was puffy, and had almost a nævoid appearance. Owing to a stricture in the membranous part, a common-sized sound could not be passed; with a small one a large and rough stone was readily detected.

This condition of the urethra, the state of the bladder, the size of the stone, its roughness, and the presumption that the hard oxalate of lime was one of its components being unfavourable for lithority, lateral lithotomy was performed on May 4, the stricture being first dilated with Holt's instrument to facilitate the introduction of a full-sized staff. A rough, flattened, oval stone, weighing 312 grains, and measuring 1·7 inch by 1·3 inch, was extracted. The bleeding was very copious, particularly from a large artery, nearly the size of a quill, near the upper end of the first and superficial incision. This was controlled by pressure until the stone was removed, and then tied. Six other vessels were also tied, and the hæmorrhage was only finally stopped by tightly plugging the wound around a tube. So much blood was lost that he fainted, and could not be removed from the table till brandy had been given to him. On the following day the tube and the plug were removed without any fresh bleeding. On May 16, twelve days after the operation, a little fæcal matter was noticed in the wound, and again, between this date and the 20th, after which the perfect absence of any further escape of fæces into the wound showed that the communication with the rectum had completely closed. Probably owing to the great loss of blood, his recovery was very protracted, and the wound, cicatrising very slowly, become fistulous. An attempt to keep the urinary fistula dry by the use of a Holt's indiarubber winged catheter was frustrated by the patient always pulling it out, saying that it hurt him, although it did not appear to prevent his sleep or disturb his unusually large appetite. The fistula was from time to time cauterised, and became an almost capillary tract, but it never quite closed, and on August 18 he returned home. A month later he was re-admitted into the Hospital, and now complained that fæcal matter passed from the bowel through the fistula, and a small opening was found in the anterior wall of the rectum. At this time he was unwilling to submit to any operative measures, and again went home, but he returned a second time, and the opening, under the application of the actual cautery, seems closing.

Oxalate of Lime Calculus in a Boy—Lateral Lithotomy—Recovery.

A boy, aged 7, residing at Amersham, Bucks, was admitted into Pepys Ward, under Mr. Hulke's care, August 16, 1870. The patient was plump and healthy-looking, and did not appear to suffer from pain on micturition, nor to void urine with undue frequency. The duration of symptoms of stone was uncertain, but the sound passed into the bladder easily detected a hard rough calculus. The urine was acid, free from albumen, with some excess of phosphates, and with a slight deposit containing abundant microscopic octahedra of oxalate of lime. On August 24, the ordinary lateral operation was performed, and a mulberry calculus removed.

During the week following the operation, the evening temperature in the axilla kept up to 100° Fahr., but no unfavourable symptom retarded a steady progress towards recovery, and he left the Hospital cured on September 27.

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Medical Times and Gazette.

SATURDAY, JANUARY 28, 1871.

POOR-LAW MEDICAL OFFICERS AS ASSISTANT OFFICERS OF HEALTH.

No. I.

From what we can gather from recent declarations and opinions, expressed at meetings of the Poor-law Medical Officers' Association, it has by many of that body been considered desirable that they should be invested with preventive as well as curative functions. It is argued, especially, that, inasmuch as a large part of the preventible sickness and mortality in the country occurs in the class of persons with whom they have to do—that is, among the pauper class—they are the individuals, beyond all question, who are best cognisant of the sanitary condition of the lower classes; that, in the course of their duties, they enter daily the very haunts of dangerous disease; and that the local conditions which foster diseases are matters to them of daily observation. In many respects, this is true; and it must be a sore trouble to an Union Surgeon anxious to carry out his work effectively that his efforts are continually baffled by the unsanitary surroundings of his patients.

But they are not the only Medical men thus situated: precisely the same thing may be said of the out-door Medical officers of dispensaries in towns, and, indeed, in a less degree, of Medical men generally, practising among all classes of society. For, although it is admittedly among the poor chiefly that unwholesome conditions favour the origin and spread of diseases, such conditions are operative also among the rich. A Health Officer's work is not confined to the habitations of the poor, by any means. He finds plenty to do—very much to amend—in the houses of the wealthy; and, indeed, it is the presence of unwholesome conditions in the latter that he has the greatest difficulty in arriving at. He rarely hears anything of their maladies, and only becomes aware of the existence of contagious diseases amongst them when death renders concealment no longer possible. With regard to the lower classes of the community, it is the duty of sanitary authorities to keep their dwellings under regular and systematic inspection and control.

The suggestion, however, is not that the Poor-law Surgeons should displace the Medical Officers of Health where such officers exist, or that they should be *ex-officio* Health Officers where such have not been hitherto appointed, but that it should be rendered a portion of their duty to act as Assistant Officers of Health, and that their annual stipend should be augmented, in consideration of this addition to their present duties. We have been among the foremost to protest against the inadequate manner in which the services of the Poor-law Surgeon are requited, and we should hail with satisfaction the day when the arduous and disagreeable work they perform may be recognised as it ought to be. We think that the Association is acting in a spirited and manly way in demanding for their members higher social consideration than they now enjoy. The Poor-law Surgeon is the Surgeon and Physician of half the community, and the obligations of the country to him are scarcely admitted. In many cases, the stipend doled out to him grudgingly is not that of a respectable butler; and on all grounds it is worthy of full discussion whether the alteration suggested, which is calculated to improve his position in all ways, is one which is practicable, and, at the same time, desirable upon public grounds. Whether it is compatible with the private interests of a class of men who add private to public practice, is a question into which we need not enter.

Before anyone can be in a position advantageously to consider the suggestion that the Poor-law Officer shall also be an Assistant Officer of Health, it is necessary that a clear idea should be had of the functions and duties of a Health Officer, and of the amount and kind of assistance that he commonly requires. Let us, then, say a few words upon this subject first, and then we shall be prepared to inquire in what respects Medical assistants are requisite, and what functions they might exercise; what assistance they might render, which cannot be rendered so effectually or at all by non-Medical subordinates. Finally, we will inquire what special claims to such assistant offices the Union Surgeons can put forward.

Briefly we may enumerate the duties of a Medical Officer of Health as follows:—1. In his direct dealing with spreading diseases and others which are preventible, he has first to discover them and to ascertain their whereabouts, and that in an early stage of their progress; and next to put into operation the machinery provided by the law for their check. 2. There are duties thrown upon him having for their object the procuring of such wholesomeness in and about the habitations and in the food of the people as shall tend to hinder, if not the introduction of such diseases, yet their extension when introduced. It is his duty, also, to watch times and seasons, and to advise as to measures of precaution which may be appropriate to either. In districts of even moderate size, a Health Officer cannot possibly carry on the work which these two functions embrace without assistance of some sort. His time would be frittered away in attending to details of sanitary administration—which, if they did not disgust, would weary—and none would remain for the due ordering of the general machinery upon which the efficacy of all sanitary work must rest, and to which, to be effectual, it must all be subordinate. Thus, to take first his duties in the presence of preventible disease, he requires assistance in the discovery of disease, and either directly or indirectly this assistance must be rendered by the Medical members of the community. He looks to them to declare to the best of their ability the nature of disease which proves fatal, and to give information of the occurrence of spreading diseases, which they alone are capable of distinguishing. Without this he could not take a single step towards their arrest; and it is to the honour of the Profession that in London, at any rate, Medical men have not been unmindful of this duty of good citizenship. He would be a sorry member of a liberal Profession who, to serve any private ends, or out of extravagant notions of his private rights, withheld from a Health Officer that which he knew he ought, in the interests of the whole community, to make him acquainted with. In the practical work of checking spreading diseases, accuracy and perfection of detail are everything. It must be well and thoroughly done if it is to be of any use at all; and the Health Officer must have the assistance of others on whom he can rely, either to do it or to see it done in the manner he desires. But, prior to this, it must be determined what is requisite to be done, and this is a task which cannot be delegated to another; all the responsibility of this must rest upon himself. It is he, and no other, whose task it is to trace disease to its origin, the only help that others can give him being such as arises out of the communication of any special knowledge of the circumstances which they possess. And usually this is the most difficult part of a Health Officer's work; it is that which requires the tact, and almost instinct, which experience and devotion to sanitary science can alone furnish. It is this necessity which renders sanitary art a speciality in Medicine.

The duties which devolve upon a Health Officer under the second head are multifarious and heterogeneous. Such are—the systematic investigation of the condition of the dwellings of the lower classes, independently of any cause arising out of invasion by disease; the inquiry into nuisances, some of trivial others of serious importance, when viewed in their relation to public health; the control of factories and workshops, both as regards the welfare of the persons employed in them and as regards the comfort of the neighbourhood; the regulation of places where animals are kept in any number, such as stables and cow-sheds, and of places where they are slaughtered; the regulation of bake-houses; the examination of food offered for sale, etc. Much of this work, too, demands a special kind of knowledge and special kind of study, and cannot be entrusted to a subordinate: such, for example, as the discrimination of the characters of unwholesome meat, the determination of the proper mode of abating trade nuisances, and of many questions of drainage and ventilation which border closely upon the domain of the engineer. Such matters a conscientious Health Officer will leave to no assistant of any kind. But assistance can be usefully rendered in that part of the work which is capable of being rendered a matter of routine. Such, especially, is the systematic inspection of dwellings, in which a skilled and instructed assistant may be used as the eyes of the Health Officer who cannot personally make the inspection himself. Such an assistant can also see that the amendments ordered are properly carried out.

To recapitulate the matters in which it is possible for assistance to be rendered to a Health Officer; they are—1. In the procuring information as to the outbreak and whereabouts of disease, and as to its prevalence. 2. In pointing out any special conditions which appear to be concerned in its origin or propagation. 3. In overlooking the performance of acts or works designed to check their extension. 4. In the details of ordinary and systematic inspection, so far as this can be rendered a matter of routine. But, beyond all this, good service might be rendered to the cause of public health were it possible through any educated officer to approach the poor with advice and instruction in the details of domestic management, especially in seasons of sickness, and in drawing the attention of the proper authorities to those causes of disease, such as destitution, with which a Health Officer can only deal in a very indirect manner.

UNPROFESSIONAL ADVERTISING.

Some months since, when minute reports of the health of the Archbishop of Canterbury were being printed by one of our contemporaries, we took occasion to comment upon the gross impropriety of such a proceeding. We alluded distinctly to the gentleman who was in attendance on his Grace, and expressed our opinion that he would not be guilty of a breach of Professional etiquette, such as that of supplying a public journal with particulars of the illness of a *private* patient, however illustrious. We concluded we were right in our conjecture, and thus the matter dropped. But the "system" of late has been carried to such an extent, and details have been made public of such a character, that to remain silent longer would be a dereliction of the duty we owe to the public, but more particularly to the Profession. To speak out is the more necessary, inasmuch as the *Daily Telegraph* of Saturday last has called public attention to the subject, and has denounced the "system" in a manner which we highly approve, and which we hesitate not to say will be approved by the Profession in general. Sensational paragraphs giving news "in indelicate detail" may suit the purpose of the journalist as a means of being quoted, and thereby advertised; and they may suit the purpose of some "obscure Practitioner," who is rejoiced to see his name in print as an "authority." But these paragraphs are outrages on public decency, are derogatory to us as a Profession, and in some instances, as we know, have been most painful to the friends and relations of patients whose cases have been gibbetted to the public gaze. In one remarkable instance that came to our knowledge, it was sought to ascertain, not only the complete history of the patient's case, but even, after death, a minute account of the autopsy. At first, the permission of some relative was obtained, but, on the subject being brought before the representative of the family, he positively forbade the publication of the particulars, as that proceeding would be most painful to the friends of the deceased, and could be effective of no public good. This was the case of one of the most illustrious Englishmen of the present century. The *Telegraph* justly states that breaches of Professional confidence are very rare amongst us, notwithstanding our occasional quarrels and jealousies. No breach of Professional confidence is viewed with more dislike than the one to which these remarks refer, and there is none which is so rare. Nay, there is one point which escaped the keen glance of our daily contemporary—viz., that some Practitioners carry this "etiquette" to the extent of suppressing the names of Hospital patients whose cases they publish in the Medical journals. Clearly, the name can be of no importance in such cases, whilst in the sensational paragraphs to which we are referring the names are the only important words in them. What does it signify to the public to be told that one illustrious patient is suffering from "renal" affection, and another from "imperfect digestion," or "nervous depression," or "incontinence of urine," etc.? The Profession, as a body, set their face against such indelicate disclosures. The *Daily Telegraph*, in condemning the system, has rendered a public service, and rescued the Profession in general from a serious "blot on its 'scutcheon."

THE NEW "AMBULANCE ANGLAISE" AT PARIS.

Our readers will learn from a letter of Dr. Cormack's, which appears in another column, that an *ambulance Anglaise* with 50 beds has been established in the Rue d'Aguesseau, and that a service of *ambulances volantes*, of which Dr. Cormack is chief officer, is sent to collect the wounded from the battle-field. This establishment is at the sole expense of one munificent Englishman, Mr. Richard Wallace, who, in addition to numberless private acts of charity, has already given £12,000 to establish an ambulance attached to the corps of General Vinoy, besides £1000 to the *Comité Evangélique* for the relief of sick and wounded soldiers. All this we heartily rejoice at; but we must protest against the peevish and unjust tone of a circular respecting this *ambulance Anglaise*, which has been issued to the outside world by *ballon monté*, January 18, 1871. This circular says—

> "It is a remarkable fact that, while the humanity and generosity of most neutral nations has been *nationally* represented during the past four months of the siege of Paris in a more or less conspicuous manner, there existed no publicly apparent manifestation of English sympathy until a few days ago, when an '*ambulance Anglaise*' was opened with fifty beds in the Rue d'Aguesseau."

What then, it may be asked, of Colonel Loyd-Lindsay and the National Society?

> "Colonel Loyd-Lindsay," says the circular, "was allowed, some time ago, to enter Paris as the bearer of £20,000 sterling, one-half of a sum collected in England for the French and Prussian sick and wounded. The manner in

which this money was distributed gave umbrage to some who had taken an active and efficient part in establishing voluntary ambulances, while it failed to attract public attention in such a way as to counteract an unfortunately prevalent opinion, that, at least in respect of the present war, all the sympathies of England are with the relentless enemies of France."

And this document winds up by saying of the ambulance, that it will show "more palpably than has hitherto been apparent, that there are English hearts which tenderly feel for France in her present heroic struggle for national existence."

We suppose we must take this document as evidence that hunger, fatigue, and fear will sour the kindest hearts, and twist the clearest understandings. The way in which Colonel Loyd-Lindsay's donation is spoken of, would lead one to suppose—first, that the sum of twice £20,000 was all that had been collected in England for the sick and wounded; and, secondly, that Colonel Lindsay was responsible for the "umbrages" and miserable bickerings amongst the French voluntary and official promoters of ambulances. It would cast a doubt, too, upon the reality of the sentiments of most painful distress with which the English have regarded the sufferings of the French army and population. The war was none of our making. When it broke out, we resolved to tender such succour as was possible to the sick and wounded of both sides alike. The National Society has collected and expended impartially in this work nearly £300,000. Those whose affinities are German, contributed largely to funds for the German armies; but since the disaster of Sedan and the horrors of Bazeilles, there is no form of evil which the French have suffered for which some special fund is not established. There is one association for relieving the French peasantry; another for giving seed to the French farmers; another for the special relief of distress around Versailles; Messrs. Piesse and Lubin collect money; the *Daily News* collects; the Quakers collect; Archbishop Manning and the *Société Evangélique* (so-called) vie with each other in the work; the Marchioness of Lothian heads an association for relieving French refugees. As the *Medical Times and Gazette* is read by many of our *confrères* in Paris who do not see the columns of charitable advertisements in the *Times*, we beg them to accept our assurance that the idea that the English do not feel for the French people is a mere delusion engendered by despondency and sickness at heart.

THE WEEK.

TOPICS OF THE DAY.

The deliberations of the Sub-Committee appointed by the Royal Colleges of Physicians and Surgeons, and by the Apothecaries' Society, are understood to be satisfactorily tending towards the desired end—a fair, and equitable, and practical scheme for the formation of a conjoint Board of Examiners. The Sub-Committee met on Monday, and we hear that considerable progress has been made in the work entrusted to them.

It is understood that Mr. Quain has declined to be nominated for the Presidency of the Royal Medical and Chirurgical Society, on the ground that the duties of the office, in addition to those of Membership of the General Medical Council, and of the Council of the Royal College of Surgeons, will make too large demands on his time. This decision will, we are sure, be received with general regret by the Fellows. Amongst the senior Surgical Fellows of the Society are, in the order of seniority, Mr. Curling, Mr. Paget, and Sir William Fergusson. The Society can hardly do wrong, therefore, in the choice of its next Surgical President.

Mr. Campbell De Morgan's address to the Medical Teachers' Association, which we publish in another column, brings before the teachers of Medicine several important subjects in a new light. The subject of the address is the New Educational Regulations issued by the Royal College of Surgeons. Mr. De Morgan is a man who thinks for himself, and his opinions are not always the prevalent ones. For instance, he tells his hearers plainly that, although the advances of physiology have made it necessary to separate that science from anatomy as a branch of study, and to teach it apart, the result has been anything but an unmixed benefit. The old lecturer on anatomy and physiology, who got through both subjects in a winter session, attracted large numbers of students, who really learned something of both. Now, anatomy is taught with French minuteness; function is divorced from structure; the smallest detail is made of equal importance with the greatest fact, and as a result the anatomy lecture is, generally speaking, one of the most wearisome hours that the student spends. Mr. Campbell De Morgan is not afraid of being called heretical when he asserts that the most minute teaching of anatomy, and the most extensive and experimental teaching of physiology, admirably successful as they may be in educating the few, are not the most advantageous for the many; and with reference to physiology as a basis of practice, he is not ashamed to confess that he prefers rational empiricism to practice founded on half truth. That there is another side to these arguments, he would himself probably be the first to admit, but that there is some truth in his views it is impossible to deny. There are teachers of Medical science in London who simply lecture over the heads of the greater number of the young men whom they address, with the result that the majority of their pupils know no more at the end of their course of the particular subject they teach than they did at the beginning.

We publish in another column a letter from Dr. Waters, of Chester, in defence of direct representation of the Profession in the Medical Council. It will be at once seen that Dr. Waters offers no reply to two of the arguments which have been frequently urged in these columns. The first is, that no machinery exists for carrying on an election, and that such machinery is expensive, and that there are grave objections to the expense being met either by the public or by the Profession. This, however, is not the main objection. The second is hinted at in the last paragraph of Dr. Waters's letter, in which he says:—"The British Medical Association, by its plan of direct representation, desires to obviate these anomalies by giving every registered Practitioner one vote, and maintains that, as at present with the University of Cambridge, the best men will be elected." Our objection is that the best men will not be elected, that the best men will not come forward, and that, if they did, very likely they would not be returned. The men from whom the electors of the University of Cambridge could select their representative may almost be counted on one's fingers. The election is conducted, we believe, without any expense being incurred by the candidate, and all the machinery for it exists. The position of the graduates of the University of Cambridge and the great Medical Profession is simply unlike in every particular. There can, therefore, be no analogy between them. The University of Cambridge could hardly return an unfit representative. The Medical Profession might easily return a man with the least knowledge of its wants, the smallest success in the prosecution of its art and science, the weakest claims as a Physician or Surgeon, but the largest amount of self-confident vanity, and the longest balance at his banker's. Is it conceivable that men of the stamp of Brodie or Watson would offer themselves as candidates?

The Medical Officer of the Privy Council has instituted an inquiry into the present epidemic of small-pox in the metropolis, which has resulted in his laying the blame at the doors of the Metropolitan Boards of Guardians. He finds that, after the passing of the Vaccination Act of 1867, no action was taken by any of the Metropolitan Boards, except by the Boards of Poplar and St. Luke's. In March last, when the epidemic was threatening, Dr. Seaton, the Superintending Inspector of Vaccination, visited each Board, and advised them as to their duties. None of the Boards, however, with the two exceptions named, bestirred themselves until the epidemic had fully set in. The guardians of St. George's, Hanover-square, are said not yet to have made the necessary appointments under the Act.

Last week there were 188 deaths from small-pox, and 68 from scarlet fever. The mortality from small-pox showed an increase of 53 above that of the previous week. Five died in the Small-pox Hospital at Islington, and 17 in the Hospital at Hampstead. These latter being credited to the districts from which they were admitted, the deaths are distributed as follows :—72 belonged to the east group of districts, 40 to the west, 30 to the north, 29 to the south, and 17 to the central.

"A Biologist" has sent to the *Times* a criticism on Professor Tyndall's recent lecture on water, which so pointedly appeals to the common sense and common experience of mankind, scientific and non-scientific, in the matter that we cannot refrain from extracting some portions of it. "A Biologist" writes :—

> "His (Professor Tyndall's) argument assumes the proposition that water, chemically and physically pure, is best adapted for the use of man, and concludes from it that it is therefore desirable to take whatever means may be necessary in order to obtain such water, or the nearest possible approximation to it. The proposition itself is, so far as I can judge, not proven. Mankind (if we except philosophers), and Nature herself, do not commonly deal with chemically pure substances. Chemically pure air—air that is without a trace of ammonia, carbonic acid, or water—is not to be found ; and the one thing certain about it is, that if it were we could not live in it.
>
> "The votaries of strict science seem sometimes to lose sight of the correlation which subsists between the inorganic and organic worlds; to forget that man, like other animals, is suited to his dwelling-place; and to think, consequently, that he must submit the world to a series of severe chemical operations before it is fit for him to live in. As regards the present matter, every sunbeam which enters a darkened room shows us how thick with solid impurities is the air we breathe, yet we do not on that account fear to breathe it. Professor Tyndall has now shown us that the same thing happens in the case of water, but this need not necessarily make us afraid to drink it. Not all foreign matters, nor even all foreign organic matters, are of necessity unwholesome. What we really know now is exactly what we knew before—viz., that it is the defilements arising from man himself which are really dangerous, and that we should do better to employ our energies in keeping these completely away from our natural sources of supply than in looking out for new ones."

Dr. William McCormac has been elected a Fellow of the Royal College of Surgeons of England. Dr. McCormac is a Fellow of the Royal College of Surgeons of Ireland by examination, and is a Member of the English College. This is the first instance of a Fellow of the Irish College being elected *ad eundem* a Fellow of the College of Surgeons of England. We are glad that such an honour should have been first bestowed on so distinguished a Surgeon and operator as Dr. William McCormac.

At a General Court of the Governors of St. Thomas's Hospital, held on Thursday last, Mr. Sydney Jones was unanimously elected Surgeon to the Hospital in the vacancy occasioned by the retirement of Mr. Solly. Mr. Croft becomes the Senior Assistant-Surgeon, and will no longer reside at the Hospital.

Sir R. Murchison has again received news of Dr. Livingstone. It appears that he has undertaken an extensive journey to the west of Lake Tanganyika, and this accounts for the long-continued absence of all information respecting him. The scientific world will be glad, not only that Dr. Livingstone has been again heard of, but that Sir R. Murchison has sufficiently recovered to communicate the news.

MEDICAL ASPECTS OF THE WAR.

At the last meeting of the Middlesex Hospital Medical Society, Dr. John Murray read a paper "On some of the Medical Aspects of the Franco-Prussian War," in which he gave an outline of the history and present state of the Geneva Convention and Red Cross Societies. From the unfavourable accounts given by competent observers at the seat of war, and from what he had himself observed while attached to the British Aid Society, he had come to the conclusion that, unless radical changes were adopted, the Geneva Convention would be doomed. To be really effective, the aid societies' officials in the field must be placed, with their material, under the immediate orders of the authorities of one or other of the combatant armies, and not allowed to go hither and thither whenever and wherever they listed. A wholesome check on the authorities at the seat of war would be afforded by the withholding of supplies from home in case of any differences arising. Dr. Murray then proceeded shortly to touch upon his experiences at Sedan. He referred to the necessity of sending the wounded to a distance to prevent the terrible effects of over-crowding amongst them, and the ravages of pyæmia which occurred at Sedan, used as carbolic acid was to saturation. He was not prepared to say, however, that the excessive use of carbolic acid in the wet form did not produce toxicological symptoms in numberless instances, and pave the way to an attack of the disease it was intended to prevent. The popularity of marine lint (picked oakum) was, however, fully deserved. Conservative Surgery proved in most hands a failure. Comparatively limited though his experience was, he was unable to perceive wherein the special knowledge, so constantly thrust forward by military Surgeons, lay in the treatment of gunshot wounds. Common principles and common sense adequately represented any such specialism.

PROFESSOR BENNETT ON THE ABUSE OF MERCURY BY ARMY MEDICAL OFFICERS.

At a late meeting of the Medico-Chirurgical Society of Edinburgh, Professor Bennett, in a paper on hepatic abscess, quoted the case of a soldier who, having been discharged from the army as an invalid, on account of enlargement of the liver contracted in India, had come under his care. The man was in an exceedingly unhealthy state, and suffered besides from enlargement of the spleen and from tubercular disease of the lungs. He informed Dr. Bennett that while in India he had been four times salivated for the hepatic affection. On the authority of this *ex parte* evidence, Dr. Bennett, adopting the phraseology of a late rather eccentric Medical agitator, well known as a disbeliever in the existence of syphilis, stated his opinion that thousands of soldiers are annually invalided and hundreds lose their lives in consequence of the abuse of mercury by army Medical officers. We need hardly remind our readers that this statement was completely refuted by the evidence given before the Royal Commission on Syphilis, over which Mr. Skey presided.

It so happened that Dr. Rutherford, C.B., Deputy Inspector-General of Hospitals, and principal Medical officer at Edinburgh, was present at the meeting, and he at once disputed the truth of Dr. Bennett's general charge against the Professional skill of his brother Medical officers, and expressed his strong doubts as to the accuracy of the information on which it was in this particular instance founded. On the 18th inst., Dr. Rutherford read a paper in reply to Professor Bennett, and stated that, having made particular inquiries into the case referred to, he had found from the man's Medical history-sheet, and from documents received from Netley, that there was no evidence whatever of his having been placed under the influence of mercury at any time during his period of service ; although, while at Netley, the ointment of the biniodide had been rubbed into the skin over liver and spleen, without, however, producing any constitutional effect. He had also had an interview with the man himself, in which he ascertained that on one occasion, some years ago, his mouth had been sore for a few days after the administration, through the mistake of a native Hospital attendant, of some pills containing mercury, but, with that exception, he was not aware of having ever taken the drug. Dr. Rutherford, therefore, felt himself justified in calling upon Professor Bennett to retract his statement as to the abuse of mercury in this particular case, and to modify his sweeping charge to the same effect against the officers of the Army Medical Department generally.

Professor Bennett replied that the statement of the patient as quoted by him had been made before his class, and taken down at the time by the clinical clerk; that Dr. Rutherford had not yet given him an opportunity of examining the official documents referred to; that he had no desire to make an injurious charge against army Medical officers, but he was still of opinion that in many instances soldiers were discharged from the service, and in others lost their lives, in consequence of the injudicious use of mercury in the treatment of diseases of the liver.

It is not very long ago since Dr. Thomas Beatty, of Dublin, at a meeting of the British Medical Association, on the authority of statements made by patients, without corroboration by or reference to their former Medical attendants, announced as the result of his experience that in many instances disastrous consequences ensue to military officers, and subsequently to their wives, from the army Surgeons, under whose care they had been, having neglected to employ mercury in the treatment of the early stages of syphilis. One statement is just as well founded as the other, but both assume importance when uttered by men of high Professional reputation. It would certainly conduce to the internal good feeling of our Profession, and to the respect in which we should all wish it to be held by those who come under our care, if all its members would bear in mind that the charity which "believeth all things" is the very same quality which "thinketh no evil," and if they would be more cautious than is the wont of some in founding on hearsay or *ex parte* evidence charges against the skill of their Professional brethren.

DR. CORMACK ON THE SIEGE OF PARIS.

THE following letter has been received from Dr. John Rose Cormack by a friend in Edinburgh. It is dated, "Paris, Wednesday, January 11, 1871":—

"My dear M——,—The Germans have been bombarding us with savage barbarity since December 30; on one or two days they have taken it easy, as to-day for example, but, since they began, the number of shells thrown into Paris has been incredibly enormous. Between ten last night and five this morning, 4000 shells, it is estimated, fell on the left bank of the river, within the town. The museums in the Jardin des Plantes have been much injured; the Hospitals of La Pitié and Val de Grâce and Bicêtre (the latter full of small-pox) have been struck. The Hôpital des Enfants Malades was hit six times on Sunday. These Hospitals and many ambulances have had to be hurriedly evacuated to the extent of 8000 patients since Sunday. During this morning, when the firing calmed down, I went to review the damage in the Quartier Latin—whence all the world was flitting in hot haste—but after a short time the obuses began to come drooping down, so that I was glad to join others in a skedaddle. I have been in all the battles and sorties under Paris—some of them tremendous artillery encounters—but the most awful cannonade that I have yet heard was for an hour or two last night, when I was safe in bed in Rue d'Aguesseau. The fire of the enemy was terrific, but the guns, of enormous calibre, in the Bois de Boulogne batteries and adjoining bastions, with those of Valérien, gave forth a much louder and nearer thunder. We are not disheartened; and though most of the food has been eaten, and most of the fuel consumed in the cannon foundries, we have quite resolved to drive off the Germans, or massacre them in the streets of Paris; our spirit first became warlike, but this bombardment has driven us farther, and made us all murderously enraged. . . . I have my time and strength fully used in the ambulance service. For the first time, an *ambulance Anglaise volante* is to go out when the next sortie takes place. It will consist of three waggons under my direction. The entire expense of these carriages, and of a military Hospital to be ready to receive fifty patients on Monday, is to be borne by one rich Englishman, Mr. Wallace. Drs. Shrimpton, Herbert, and I, are to have the beds equally divided among us, and, in addition to the Hospital work, I am to have command and direction of the *ambulance volante* in the battles. I have been engaged in the field service from the first, besides having twenty beds. With the addition of sixteen new *ambulances Anglaise*, I shall have an Hospital service of thirty-six beds, a duty which is, with my *volante* spurts of hard, anxious service, quite enough for a fellow in the yellow leaf of life's autumn."

THE ALICE HOSPITAL AT DARMSTADT.

THIS model Hospital, which was at first erected by the English National Society for the Relief of the Sick and Wounded in War, and has since been adopted by the German Government, continues to flourish under the management of Dr. Mayo, the director. Many of the patients were removed at Christmas, in order to make room for fresh arrivals from Versailles; but the severity of the weather and difficulty of transport prevented this scheme from being carried out. Dr. Mayo, who has invented a very commodious litter, has been to Versailles, to arrange for the transport of the sick and wounded from Corbeil to Lagny—a distance where the railway is not available. As a proof that the services of our fellow-countrymen in this war receive some recognition, we may add that Dr. Mayo was extremely well received at the Prussian head-quarters during his hasty visit, and had the honour of dining with the Crown Prince.

WATER-PIPES.

THE *Times* of Friday, the 20th inst., contained a leading article full of good advice and erroneous information on the subject of water-pipes. The advice may be summed up as being to the effect that water-pipes ought in all instances to be laid inside rather than outside the houses, and that, as far as possible, they should run close to the chimneys, in order to prevent the freezing of the water. The advice is first-rate, but the reason on which it is founded is entirely wrong—namely, that if the proper precautions be not taken the water will be certain to freeze in one point or other, and that with the thaw comes the bursting of the pipes. The writer must certainly have forgotten his early lessons in elementary physics, or he could hardly have lapsed into such an error. He ought to have remembered that it is the expansion of the water during the act of freezing which bursts the pipes, and that its escape on the re-establishment of the current is only the evidence of the damage. He could hardly have passed through the days of intelligent boyhood without having for himself tested the truth of this statement by the well-known experiment of exposing a bottle, full of water and tightly corked, for a night during severe frost, the result being that in the morning the bottle is found broken by the mass of ice contained in it, unless the cork has been driven out.

HOW MEAT IS PRESERVED.

"How Meat is Preserved," formed the subject of a paper at the Society of Arts on Wednesday evening (January 18), and, if we may judge by the relish of some who stayed long to taste preserved meats, we should answer the question by the simple monosyllable "well." The paper read was by Mr. Richard Jones, and was a description of his method of cooking animal substances at a high temperature, in tins connected with a vacuum, by which means, during the cooking, air and moisture are removed. As we gave a description of the method after Mr. Jones had exhibited it to the Association of Medical Officers of Health,(a) we need only add that the process appears undoubtedly successful, and is likely to be *the* process for the conveyance of cooked meats. The discussion on Mr. Jones's paper was less satisfactory. The irrepressible "germs," of course, had possession of time, and one flowing speaker delightfully mixed up parasites and germs in one common corps of disease-makers, and assumed the destruction of the whole by Mr. Jones's method. The method is, indeed, awful in respect to germs; it kills them by fervent heat, and then pumps them out! What can he who feels for the "poor germs" say to this harrowing practice, except that, as it succeeds, the end justifies even the means?

(a) *Medical Times and Gazette*, 1870, vol. ii., p. 491.

INFANT MORTALITY.

The following extract from the report of the Carlisle Dispensary for 1869, strongly corroborates the necessity of holding inquiry in cases of infants "found dead." It is high time some decisive measures should be taken to protect infant life:—

> "Of the childrens' diseases, hooping-cough numbers 88 cases, of which 6, all under 5 years of age, ended fatally; and measles counts 263, of which 23, all under 5 years of age, were fatal. 'Under 5 years of age' a large proportion of the deaths of the Dispensary are to be found; much larger than ought to be, or would be, were it not for the melancholy fact that the lives of infants are regarded with so heartless levity—nay, it is only too true, ruthlessly sacrificed to vicious indulgences or to criminal malignity, which human agency can seldom bring to light. Of 160 deaths during the past year, more than a half are those of children under 5 years of age—in fact, exactly three-fifths. Were details permissible, it could be shown how much of this infant mortality was not only avoidable, but how much of it involved grave culpability, both under the head of what is now known as 'the social evil,' and that of 'baby-farming,' to the suppression of which evils our present laws are so plainly inadequate, but which it is, nevertheless, the obvious interest of society, and of the Legislature, carefully to study, and, if possible, to mitigate."

REGISTRATION OF DEATHS.

Dr. Syson, the Medical Officer of Health for Salford, read a paper before the Manchester Statistical Society on the "Comparative Mortality in Large Towns." The chief point of the author was to shew that the plan of registration resorted to by the Registrar-General was open to grave and important fallacies. After referring to the dispute between the Registrar-General and Dr. Letheby, and refraining from entering into the discussion, he proceeds to show that the Registrar-General's reports are only approximations to the truth. We make the following extracts as indicating the method by which Dr. Syson thinks the comparative mortality of large towns might be very correctly gauged:—

> "If we took that portion of the population only which is under five years, and compare the percentage the deaths bear to the births, the results for comparative purposes will not be far wrong. In Dr. Syson's opinion, in the end the infantile mortality will be found the truest and best test of the sanitary state of a district; and in expressing this opinion he was only echoing the belief of Dr. Simon, Dr. Gairdner, and Mr. Sargant, all of whom are high authorities. That Dr. Syson's method of dealing with the birth- and death-rate was a correct one, as far as the first year is concerned, the Registrar-General had borne witness. The errors arising from immigration and emigration naturally increase with each additional year taken; but the great opponents of any birth-death-rate method admit that 'from infancy to 15 years are the ages least affected by migration of population.' The errors up to 5 years old will be due almost entirely to immigration. In those towns which, therefore, are increasing most rapidly, the deaths will bear a little greater proportion to the births than they would do were the population stationary. The mere proportion infantile deaths bear to adult deaths can convey no idea whatever as to the mortality among the infants themselves. All that can be learnt from such a comparison is the existence or otherwise of excessive adult mortality. Dr. Syson having heard that the Medical Officer of Health for Manchester had, for a long time past, been preparing some elaborate statistics bearing on the comparative mortality of large towns, he (Dr. Syson) had abstained from drawing up any tables; but, to give an idea of the comparative salubrity of our large towns, he had drawn up, some months ago, a table, which gave the following results:—That, in each of the six years, 1863 to 1868, Manchester was losing her infants, under one year old, at the rate of 12 per 1000 more than Preston, 34 more than Ashton, 33 more than Oldham, 47 more than Bolton, 26 more than Blackburn, 31 more than Salford, 9 more than Leeds, and 32 more than Birmingham. Under five years old, it lost them at a far greater rate—viz., 62 per 1000 more than Preston, 103 more than Ashton, 83 more than Oldham, 104 more than Bolton, 97 more than Blackburn, 58 more than Salford, 56 more than Leeds, and 68 more than Birmingham."

Dr. Syson concluded his paper by the following:—

> "As far as sanitary arrangements, excepting main sewers, are concerned, Birmingham is a long way behind Manchester and Salford. Back-to-back houses, *cul-de-sac* passages, and courts undrained and unpaved, are still the rule. Did Birmingham meet with her deserts, her rate of mortality would be very high. Nature, however, had been kind to her. The meteorology of this district has a great deal to do with our death-rate. Knowing as we do the intimate relation subsisting between dampness and consumptive diseases, a higher death-rate from diseases of the chest must be expected in a climate abnormally damp."

SMALL-POX.

At an inquest held on the 18th inst. by Dr. Lankester, on the body of an infant, seven months old, who had died of small-pox, it was stated that, shortly after the child was taken ill, Dr. Rugg, who was called in to attend it, wrote to the Medical Officer of Health for Marylebone, asking that it should be removed to the Small-pox Hospital. The Inspector called at the house of the mother with a small quantity of disinfecting fluid, and said that the child could not then be taken into the Hospital, as the house was not ready. Four days afterwards he called again, and said that an order must first be obtained from the relieving officer. The order was applied for, but in the meantime the child died. Application was then made for the body to be removed to a public mortuary; but the relieving officer declined to receive it till he was furnished with a Medical certificate of the death. There were four persons living in the house at the time, and one of them, a young man, had to be removed to the Small-pox Hospital that night. The jury found that the child died of small-pox, and expressed an opinion that the child ought to have been removed, immediately on the breaking out of the disease, under the direction of the sanitary officer of the parish. They were also of opinion that at all events, the child ought to have been removed to the parish mortuary when dead.

SMALL-POX IN THE LONDON HOSPITALS.

Since our last notice, small-pox has broken out in another Hospital—the Middlesex. The patient, a female, was admitted for anæmia, and some days after her admission was taken ill, and soon presented the characteristic eruption of the disease. On her way to the Hospital, she travelled in an omnibus, in which was a person having an eruption on her face resembling small-pox. Six days after her admission, the symptoms began, and on the ninth day the eruption made its appearance. She was sent to Hampstead, and the patients in the Hospital were vaccinated. This fact is worthy of the attention of omnibus travellers—the more so that an eminent Physician, availing himself of that mode of travelling, encountered exactly a similar case the other day. In this last instance, however, the diagnosis was made before the person entered the omnibus, and admission was refused.

At Charing-cross Hospital, although the disease has not broken out in the wards, in face of the difficulties which would attend isolation, owing to the construction of the building, the managing body have resolved to stop all visitors except to patients dangerously ill, and then only after being examined by the Resident Medical Officer. It was also resolved to exclude all out-patients suffering from the disease, as a single case admitted into a crowded room of sickly people is calculated to spread the disease far and wide.

From the London Hospital we have received the following note, which we make haste to publish, the information on which we had reason to rely having proved fallacious:—

"Sir,—May I beg you to correct, in your next impression, a misstatement made in your last. We have been quite free from small-pox for some weeks, and the last case that occurred was sent, on December 27, to the Small-pox Hospital at Hampstead. We had remained quite free from the disease until last Saturday, when a man suffering from small-pox was brought in a dying state to the Hospital. It was impossible to refuse him admission, which he only survived about ten minutes. There is no intention of the authorities of the Hospital to admit small-pox into the Hospital, and any case occurring in the Hospital will be sent away to Hampstead.

"I am, &c.,
"Stephen Mackenzie, Resident Medical Officer.
"London Hospital, Whitechapel-road, E."

SMALL-POX HOSPITALS.

Dr. Hardwicke, the Paddington Medical Officer of Health, strongly condemns, in a report on the epidemic of small-pox, the system of erecting Hospitals at a long distance from the parishes affected, and recommends that every parish should have its own Hospital. Dr. Marson, Resident Physician of Highgate Small-pox Hospital, strongly supports Dr. Hardwicke's view. "I cannot," says the Doctor, "see the wisdom of erecting temporary Hospitals four miles off. Why not open a temporary Hospital on the spot where the patients are, instead of conveying them four miles through the heart of London? I think a hundred small-pox patients together are quite enough, for we have tried the experiment." It was stated the other day at the Hampstead vestry that many of the patients arriving at the Hospital died within twenty-four hours of their arrival. The Hospital stands on a clay soil. From every part of London patients are brought, after a toilsome journey, and the drivers of the vehicles which have brought them frequently leave their vehicles standing close to a cab-stand whilst they refresh themselves in a neighbouring public-house. Is it any wonder that small-pox is spreading? If the Poor-law Board would only listen to Drs. Hardwicke and Marson, they would cease infecting perhaps a dozen persons for every one they take to the Hospital at Hampstead.

SMALL-POX IN AN OMNIBUS.

In the *Times* of Monday last is inserted a letter from a gentleman, who states that in coming from Upper Holloway on the previous Friday, in a "Favorite" omnibus, he observed a little girl, "bearing the appearance of receding small-pox, sitting snugly in the corner, under some shelter of her father." He communicated the fact to the conductor, and the man with his child were ejected from the vehicle. He was some miles from home, and he could not get a public conveyance. The writer of the letter then complains with some bitterness of the conduct of the authorities of the Hospital in sending out patients at such a stage of the disease, "knowing perfectly well that they will get into the first cab or omnibus they meet." The remedy is clear enough. The Hospital, indeed every Hospital, should have proper conveyances for their patients, and not undo with one hand—as they are now doing—what they have done with the other.

GOING TO THE WASH.

In the midst of an epidemic of small-pox, next in importance to the protection of the healthy by vaccination, and the isolation and cure of the sick, is the disinfection of clothes and bed-room furniture which may have been exposed to infection. We may say that this is the most important of the three, for it is an undoubted fact that small-pox lurks in the old uncleansed bedding, blankets, and woollen clothes which are harboured without suspicion in even the most respectable houses. We all know the story of the Vicar of Wakefield's bride—how she chose a silk gown that should wear for years. Economical persons boast how long they can make a coat last, and when worn out it is too precious to be got rid of, and is stowed away for future possible use. But it is no breach of delicacy to say that some of these ancient habiliments may offend the sense of smell, and that they may be the lurking-places of some of those germs of infectious disease which at certain seasons are lit up into activity. Every prudent housekeeper will rout out and get rid of all useless clothing that cannot go to the wash.

PUBLIC VACCINATION IN LONDON.

At the last meeting of the Medical Officers of Health, Dr. Druitt in the chair, a most important discussion took place as to the present system of vaccination in London. The great question was whether it was most advisable to have one or two vaccination stations in a parish, or so greatly to increase their number that every properly-qualified Medical man should be in the position to act as public vaccinator if called upon to do so. As usual, there are two sides to the question. With a small number of vaccinators, a supply of lymph is more readily kept up than when they are multiplied, and arm-to-arm vaccination is thus more readily practised. On the other hand, it cannot be denied but that among the poorer and dirtier classes—exactly those most likely to be attacked in an epidemic—there is a degree of carelessness which absolutely forbids them to take the trouble of attending any vaccination station at a distance, whereas, had they only to go to the nearest Practitioner, the tendency they have to call upon Medical men at odd times with slight ailments would induce them to call upon him to vaccinate their children. Then, again, it is considered right and proper by many that the Practitioner who brought the child into the world should also vaccinate it. Under the old plan, it was alleged that vaccination was often imperfect, that it gave rise to the idea of protection when there was no protection. The question comes to be, Is this imperfect protection better than none at all? It is urged by many that vaccination must be vaccination; like any other disease, it must either affect the system or leave it untouched. If so, vaccination, however imperfect the scars may be, must be better than no vaccination. It may not protect from small-pox, but it protects from fatal small-pox. Our own opinion is —1st. That all gratuitous vaccination at Hospitals, dispensaries, etc., should be abolished. 2ndly. That private Medical Practitioners should vaccinate all their patients who are able to remunerate them for the trouble of choosing a healthy "vaccinifer," and transferring the lymph from arm to arm. Practitioners ought to have every facility for selecting children at the public vaccinating stations. 3rdly. All who cannot pay well should be referred to the public vaccinator, who should have at least 300 children annually to vaccinate, and who should, if need be, go to the patients, if the patients will not come to him.

DISINFECTION OF CLOTHES.

It is a discredit to the local authorities of England, and another instance of the futility of permissive legislation, that disinfecting apparatus for public use have been set up in so few places during the four years since the Sanitary Act was passed. There is none in the parish of St. George, Hanover-square, and none at Kensington; but whilst the epidemic is raging, it is some comfort to know that the Kensington Vestry have begun to think about it. They say, in a truly vestrified spirit, in a late report, "Having regard to the importance of the entire subject, and to the necessity of proceeding with caution and deliberation . . . . your committee intend to bestow upon it a very careful consideration." They say, also, that "the Guardians of the parish intend, *at an early date*, to provide a suitable vehicle for the removal of fever cases." Meanwhile, how are the small-pox patients to travel? and how can their clothes be disinfected? As this question has been raised by more than one correspondent, we may say that clothes, bedding, etc., may be purified by Armfield's steam apparatus, at 11, Belgrave-street, S.W. And we may call attention to the notice of Messrs. Fraser's disinfecting apparatus in another column.

NEW HOSPITAL FOR SMALL-POX—WRONG POSITION.

A Correspondent of the *Daily Telegraph* complains that a small-pox Hospital is just now being finished at Homerton, next door to the Homerton Schools.

> "There are 600 children there, and several large buildings close to it. It is—to relieve the Shoreditch district, one of the worst neighbourhoods for small-pox—to be brought here to a closely packed locality, and a crowded neighbourhood of New Clapton on one side, and Hackney and South Hackney on the other. It is dreadful to think we shall have such a fatal, malignant disease brought to our doors. I think all these things should be made public."

FROM ABROAD.—PROFESSOR VON SIGMUND ON THE PREVENTION OF SALIVATION—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

Professor von Sigmund, of the Vienna General Hospital, has recently published some papers in the *Wiener Medicinische Wochenschrift*, upon the "Prevention of Mercurial Salivation." A warm advocate for the employment of mercury in the treatment of syphilis, he quite agrees with those who do not regard the production of salivation as exercising any critical or beneficial effect. Among the immense number of patients who come under his care in the Hospital, stomatitis and salivation are of extremely rare occurrence, and, indeed, are never met with in an excessive degree, except in patients who have been already treated before being admitted. Nevertheless, he considers that the belief in the advantage of salivation is too prevalent, and that mercury is often so carelessly administered as regards its prevention, as to call for some observations on the matter. He gives a graphic sketch of the various stages which salivation passes through in producing its mischievous local effects, and passes on to its influence on the general nutrition. This it thoroughly disturbs, which is an important matter in regard to syphilis, seeing that in the subjects of this disease nutrition is already greatly enfeebled, if not altogether perverted. Mastication is rendered impossible, and saliva, which should pass into the stomach in aid of digestion, is discharged in large quantities, while its qualities are utterly changed by the mingling with it of pus, mucus, blood, and epithelium. Additional causes of general disturbance arise from the pain, sleeplessness, fever, and impeded respiration which are so often present.

It thus becomes the duty of the Practitioner to resort to all the preventive measures in his power which can be derived from exact observation of hygienic precautions, and careful attention to the condition of the mucous membrane of the mouth, throat, and nose. One of the most important rules to be observed during the administration of mercury, in order to obtain its beneficial effects, and ward off those of a contrary character, is to keep the patient in a warm temperature, not allowing this to be lower than 14° Reaumur (better still from 2° to 4° higher), and to avoid too sudden changes of this. The air that is respired should be kept as pure as possible, especially during sleeping hours. In Hospitals this must be carefully provided for, and in private practice we must energetically strive against the carelessness and prejudices we meet with on this point. Careful attention to the condition of the skin is also essential; and the more so, as, in the treatment by inunction (which is Professor von Sigmund's favourite mode of treatment), change of linen is prohibited. This, however, in the hygienic relation we are now considering, is essential. If a confirmed smoker, the patient may still be allowed his pipe—that is, if he will engage to keep his mouth thoroughly cleansed. Great attention must be paid to the condition and local treatment of the mucous membrane by means of tooth-powders and mouth-washes; and the Practitioner must not be content to merely prescribe suitable means, but must see with his own eyes that his orders are punctually and completely carried out. Such a proceeding is very troublesome at first, but, in the end, it will be found to be the only satisfactory one. When the mucous membrane is as yet intact, thorough cleansing three times a day should be enforced. For this, pure vegetable charcoal, chalk, or magnesia may be used by means of a soft brush, a piece of sponge, or dossil of linen; or washes may be employed every two hours, composed of two drachms of chlorate of potass to a pound of water, used at the temperature of the room. This cleansing should be especially performed just before going to sleep; and in the case of long sleepers it should be repeated in the night, for it is in such persons, who are often indolent and careless, that stomatitis most frequently occurs. When the teeth are decayed, they should be removed or stopped at the commencement of treatment, and good gold stopping will remain quite undisturbed if the patient keep his mouth clean. When the gums become loosened and swollen, astringents should be employed. Crude alum or tannin, in the proportion of a drachm to an ounce of charcoal or chalk, may be ordered, or tinctures of cinchona, rhatany, or kino, in the proportion of one or two drachms to a pint of water. When the gums are very loose, bleeding, and painful, the astringents should be applied by means of a pencil, a syringe, or an irrigator, at a temperature which proves agreeable to the patient—tincture of galls, rhatany, or cinchona being used. When the gums peel off, are necrosed at their edges, or exhibit diphtheritic ulcerations, carbolic acid (one part to eight of spirit of wine) is indicated, while, as a gargle or wash, from five to twenty grains may be added to a pound of water; chlorate of potash, three or four drachms to a pound, is also useful; and, as a substitute for these mixtures, tar or *oleum cadinum* may be applied from three to six times a day. When the throat and posterior nares are affected, some of the above washes in an undiluted state may be used by means of an irrigator. Professor von Sigmund has no confidence whatever in the utility of the various internal medicines that have been recommended as prophylactics.

So unexpected was the severe fighting at Weissenburg, that at first there was only the military Hospital, with forty beds, in readiness. Others, however, were speedily organised, and the inhabitants exhibited the utmost goodwill in contributing nearly all they had for the succour of the wounded. At first, indeed, owing to the block on the railways, nothing could be got from the depôts, and everything had to be begged or bought in the vicinity. Amidst all these emergencies, Professor Billroth greatly admired the nursing as conducted by a branch of the Sisterhood of All Saints, Strasburg; and he singles out the two sisters Clemence and Georgette as examples of the immense amount of good that may be done by intelligent and trained women.

> "They were," he says, "the very soul and brain of the nursing department, and a kind providence for the sick; and as for Sister Clemence, I am under the conviction that she neither ate nor slept, for, go into the wards when I would, by day or by night, there she was always in full activity. She knew not only how to place her patients in the easiest positions, to assist at operations, to tie vessels, to cleanse instruments, but, together with Sister Georgette, she was constantly engaged in comforting her patients, studying their little peculiarities, finding out their favourite articles of food, and calming their sufferings in the most heartfelt manner."

Weissenburg being on the frontier, it was at first much feared that it might again fall into the hands of the French, which would have been unfortunate for the numerous wounded patients; for, although the Geneva Convention might protect them and their attendants, yet, seeing that the French were scarcely able to provide for their combatants, they could have done little, indeed, towards the feeding and care of the wounded. There was no system organised in France for giving aid, either by volunteer societies or provincial depôts; and although the German newspapers were always grumbling at the want of organisation in these matters, the wounded were admirably tended to what they would have been had they fallen under the care of the French. We need not follow Professor Billroth in the details which he gives of the arrangements made at Weissenburg; but we may observe that he is no admirer of the tent Hospitals, of which we have heard so much of late. By whitewashing, cleansing the floors, good ventilation, and the disinfection of the privies, he says he had no difficulty in keeping the military Hospital in a good hygienic condition; and it is pretty well agreed among military Surgeons that the advantages expected to be derived from tents have not been realised. During the war of 1866 he had ample opportunity of seeing them torn to shreds by the wind, soaked through by the rain, and soon abandoned by the wounded, the air under them soon becoming foul, especially when they were waterproof. At Weissenburg, not wishing to spend time in discussion, he allowed their uselessness to be shown by experience. After taking a considerable time to erect, the wounded were almost forced into them—regarding it, as they did, as a kind of punishment. As ill luck would have it, a storm of wind and rain came on the same evening, and in five minutes all the patients were wet to the skin, and, amidst their groans and imprecations, had to be carried back again to shelter.

Invested with the office of Inspector of the Volunteer Reserve Hospitals, Professor Billroth soon had his hands full of work for September. At Mannheim he found an admirable organisation all ready, the Aid Society of that town having undertaken the care of the sick and wounded at its own cost, large as this was. It provided twelve temporary Hospitals, furnishing 600 beds for the wounded, and 782 for the sick; together, 1382 beds. An important adjunct was the Hospital set up at the railway station, under the care of Dr. Hoffmann, with assistants and nurses from Gröningen. This was invaluable, for here the wounded and sick obtained temporary rest and attention before they resumed their journeys, or, if they were too bad to go on, were detained altogether. As the other Hospitals were situated at a considerable distance from the town, this one saved the sick who arrived at night, or in the midst of rain, from being at once carried to their destination. This transport, indeed, was a difficult matter at first, a badly wounded patient requiring the aid of eight men. It was, however, wonderfully facilitated by means of twelve barrows or waggonettes, which the Dutch Surgeons brought with them, and by the aid of which one attendant was able to transport a badly-wounded patient without suffering. Professor Billroth strongly recommends that at all large Etappen stations, a Hospital containing fifty beds should be erected at the railway station. After the blowing up of the bridge between Kehl and Strasburg, the number of trains diverted to Mannheim was very large, but the inhabitants made every exertion they could to meet the wants of the wounded. Still, they did not escape without their share of blame, when the somewhat overbearing Johanniters in charge of wounded found their trains delayed at the station owing to the enormous traffic on the line. With the exception of two, all the Hospitals were wooden sheds (*barracken*) run up for the occasion, varying in form and arrangement according to the localities they had to be adapted for. At a later period, when the wounded had diminished in number, numerous cases of dysentery were treated in them; and altogether, although not very sightly in appearance, they seem to have answered their purpose very well, and to have cost very little in their construction. We must refer our readers to Professor Billroth's letters for a detailed account of their structure. One of them, built on the American plan, was erected in a meadow at some distance from the town, its nine separate edifices resembling almost a small village. Sometimes fully one-half the patients were able to be carried into the open air.

(*To be continued.*)

ST. THOMAS'S HOSPITAL.

On Monday evening last, Henry Currey, Esq., read a paper, before a largely-attended meeting of the Royal Institute of British Architects, on the General Construction and the Details of the Arrangements of the New St. Thomas's Hospital, of which he is the architect, and which is now steadily approaching completion under his superintendence.

The advisability of erecting, in a permanent form, vast piles of buildings intended for Hospital purposes, is a question on which considerable difference of opinion still exists among sanitarians, but to which a practical and decided reply in the affirmative has been given by the Governors of St. Thomas's Hospital. We have no desire to support the negative proposition, as, however great may be the advantages of Cottage Hospitals in villages or small towns, it must be admitted that large Hospitals are essential adjuncts of large cities during the stage of civilisation at which we have now arrived. Whether the further development of sanitary science is likely to increase the public health of large cities to such an extent as to render Hospitals comparatively unnecessary, or whether the resources of physical science will increase the means of intercommunication so as to render unnecessary the congregation in cities of immense numbers of human beings, and of the lower animals which contribute to their convenience and luxury, is a question with the solution of which we can feel only a very remote interest. But we cannot refrain from expressing some surprise that at the reading of Mr. Currey's paper—which, as the most recent exposition of modern ideas as to what the construction of a large Hospital should be, contained many subjects of great practical interest to Medical men generally—a greater number of them should not have attended. The presence, however, of Drs. Balfour, Massy, Crawford, and some other army Medical officers, of Mr. R. Brudenell Carter, and of our correspondent, saved the Profession from being entirely unrepresented.

Having given a short sketch of the early history of the Hospital, and of the causes which led to the change of site, Mr. Currey proceeded to describe the construction of the new building from its earliest stage. At the outset, much time and considerable expense were saved by carrying on the foundations simultaneously with the filling-up and levelling of the site on a strip of land partially reclaimed from the Thames, at the southern end of Westminster-bridge. This work was so thoroughly performed, that Mr. Currey had the gratification of stating that at no point throughout the vast building has there been any settlement of the foundation. The site had been unfavourably criticised on sanitary grounds, but Mr. Currey considered its alleged defects to be more than counterbalanced by its advantages, among which are its central position and the vicinity of the river—supposing, of course, the latter eventually to become clear of sewage. The large volume of comparatively cool and fresh air conveyed along the surface of the water will, in Mr. Currey's opinion, materially contribute towards the ventilation of the building; the patients are also likely to benefit from the tranquillising effect of the quiet yet cheerful flow of the great water-highway past the building, the quadrangles, corridors, and flat roofs of which will afford excellent lounging ground for convalescents, while for the more weakly, in suitable weather, beds may be arranged in the open air.

With the nature, cost, and quantities of the various materials employed, we have, of course, but little to do. Suffice it to say that the sum expended on the Hospital proper will be about £650 per bed, or on the total of 600 beds, £390,000—the cost per cubic foot being ninepence. The school and museum buildings being included, the total cost will be about £470,000.

The walls of the wards and internal passages are coated with Parian over Portland cement. The employment of this non-absorbent and perfectly smooth material as a suitable lining for Hospital walls is now well established, one of its chief advantages being the ease with which it can be thoroughly cleansed. The floors of the wards are of oak, the planks being most accurately adapted, and when polished and waxed they will be almost as thoroughly non-absorbent as the walls.

The ventilation of such a building is, of course, the problem of most interest to our Profession; and on this point alone, in the subsequent discussion, was any hesitation displayed in the expression of complete approval of all the sanitary arrangements. The cubic space for each patient will be ample—namely, 1800 feet—and the proportions of the wards are admirable. The natural lighting and ventilation of the wards are effected by opposite windows, opening up to the level of the ceiling, the upper sashes being arranged so as to open inwards when necessary; the lower sashes can be raised in the ordinary manner. In each ward, according to size, are two or three stoves, with open fire-places, arranged along the centre; there are also, in corresponding number, hot hearths, as they may be called, composed of coils of cast-iron pipes, for the circulation of hot water, and covered with cast-iron perforated framework. The supply of air for the stoves is obtained from the external atmosphere, through metal tubes beneath the floor; a supply, obtained in the same way, circulates through the coils of hot-water pipes in the hot hearths before distribution to the wards. All the air so entering the wards in winter, when the stoves are at work, will be thus not only heated, but in a very dry state. The suitability of such a dry atmosphere in Hospital wards may be questioned. The flues of the stoves are surrounded, at a distance, by metal casings, thus forming a hot-air chamber of three or four inches, into which perforated mouldings in each ceiling open, and afford additional means of exit for impure air from the ward. To this arrangement it was objected by Dr. Balfour that, under certain circumstances, a down-draft from the ward above might directly enter the lower ward, instead of the up-draft from the latter being carried away through the tube surrounding the smoke-flue. This method, however, of carrying off the impure air is only available in winter as an auxiliary to a much more extensive system through outlets at each end of the wards, opening both at the floor and at the ceiling into air-passages communicating with large central shafts, in which a high temperature will at all seasons be maintained, by the furnaces and chimneys of the boilers employed in circulating hot water for the baths and other requirements of the establishment. This, being to a great extent identical in principle with the system of ventilation in the Lariboisière Hospital in Paris, and involving the necessity of long horizontal flues, in which, however well placed, some angles are entirely unavoidable, appeared, in Dr. Massy's opinion, likely to be liable to the same practical difficulties and obstructions as had been encountered in the Lariboisière. The fact appears to be that, in the present state of our knowledge on such subjects, no artificial system of ventilation of large buildings, and particularly Hospitals, yet exists in which some defect or excess does not in practical working develope itself.

Mr. Brudenell Carter passed a high eulogium on the building and its arrangements, the only defect which struck him being, that perhaps the supply of light to the operating theatres is hardly sufficient. Mr. Currey explained that, if more light be found necessary, there are several built-up window spaces, which can be opened, and the skylights also can be increased.

In the passage leading to each ward from the general corridor are the "sisters'" room, a kitchen for preparing or warming drinks and extra articles of diet, a ward for special cases, and another small private room. At the opposite end are the lavatories and water-closets, the atmosphere of which is separated entirely from that of the wards by a passage, through which perfect cross-ventilation is obtained. Dust and refuse from the wards, and the soiled linen, etc., are disposed of by being discharged down shoots with tightly-fitting trap-doors. There are, of course, hydraulic lifts to the several wards, one set for raising patients and attendants, and another for food and medicines.

The dead will be removed by an underground passage, first to the post-mortem room, and then to the mortuary. The arrangements of the latter are very complete, consisting of four separate compartments, constructed of highly-polished grey enamelled slate, with black border. The effect is appropriate, and in particularly good taste. A suitable waiting-room for friends is attached, and the outer door opens immediately into the street.

The educational portion is also on a most liberal scale, containing museum, library, three lecture theatres, reading-, smoking-, and dressing-rooms, chemical laboratory, and dissecting-room. To the latter a well-fitted injection-room is attached.

Everything has been done to make this noble Hospital efficient in every particular, and we cannot better conclude this notice than in the words of Mr. Currey, in expression of the hope "that it may for ages to come be a benefit to the poor of London, and a valuable means of instruction in the science and art of Medicine and Surgery."

MEDICAL TEACHERS' ASSOCIATION.

REPORT OF AN ADDRESS DELIVERED JANUARY 20, 1871, BY

CAMPBELL DE MORGAN, F.R.S.,

Surgeon to, and Lecturer on Surgery at, Middlesex Hospital.

GENTLEMEN,—On taking the chair for the first time, the thought which is uppermost in my mind, as it assuredly is in yours, is the sad event which has deprived us of one of the most useful and zealous of our members—of a President whose high character and attainments rendered him in every way a fitting successor to Simon and to Jenner. In acknowledging the honour you have done me in electing me your President, I must, at the same time, confess that I accepted reluctantly a position hitherto filled by men so eminently qualified to establish and to advance the character and influence of the Association. I did not feel justified, however, in refusing, under the circumstances, an invitation so flatteringly made. But while confessing to a want of those qualities which have distinguished your former Presidents, I yield to no one in the earnest desire to promote our common object. Nor do I think that any one among us is more deeply impressed with the conviction of the usefulness of such an institution as this, if it confine itself strictly to its true and legitimate objects—the improvement of education, the efficiency of the schools, and the cultivation of a cordial co-operation and good feeling between them.

The two questions which it was intended should be brought forward this evening come within the scope of this definition. The one—that of the propriety of doing away, under certain conditions, with certificates of attendance on lectures—leads directly to the important subject, which has frequently cropped up in the course of our discussions, of the enforcement on the student of a fixed special mode of acquiring knowledge. This question, as you may remember, was referred back to the Council, and, on reconsideration, it was found that fresh information would be necessary before it could be again presented to a general meeting; and this information a committee is engaged in collecting. The other question—that relating to the amalgamation of schools—has a bearing yet more weighty on education, and especially, perhaps, on the most important branch of it: practical teaching. But this, too, is postponed; and we can only now sympathise deeply with the gentleman who was to introduce it on the occasion of the severe domestic calamity which has befallen him, and which obliges him for the time to withdraw his motion.

Thus we might have been left to-night without occupation. But there was a subject which would of necessity have taken precedence of either of those which are for the time withdrawn. One of the objects of our meeting is to hear and to discuss one another's views as to the best and most practicable mode of carrying out the regulations imposed on us by the Examining Boards. The effect of this is to harmonise, without trammeling, the actions of the schools.

The College of Surgeons has issued regulations, some of them novel in character, which must come into immediate or early operation, and which compel an enlarged area of action in the schools. The regulations are somewhat vague, perhaps intentionally so, and they must therefore be interpreted by the teachers. I think we may congratulate ourselves on the action of the College of Surgeons, for to a great extent most of the schools were in advance of the then regulations, and had voluntarily adopted modes of teaching which the new regulations only now render compulsory. We may congratulate ourselves, because these regulations enforce that for which we have been striving—a higher recognition of practical education. The new rules will not find us unprepared, for the most part, to adopt them. But there are questions requiring consideration, and which can be best considered at a combined meeting of the schools. Such are—What is meant by practical physiology? to what extent should it embrace experimentation on animals? In what manner may students take part in physiological experiment? Or does practical physiology really mean only the practical study of subjects auxiliary to physiology, as histology, chemistry, and physics? The latter seems to be now the interpretation of the Council of the College, but doubtless many schools are prepared to take the wider view.

In connexion with this subject, I must claim your indulgence if I express opinions which I know are not shared by many of you, but which I have long entertained, and which time only strengthens. In the days which at a former meeting were alluded to as having produced lecturers on anatomy and physiology, whose class-rooms were thronged by willing students, those subjects were united in one course not longer than the anatomy course in the present day. Then came in the teaching of French anatomy, as it was called, an attention to minute details, a lengthened description of each unimportant part with a minuteness which would be tedious in connexion with even the most important. Physiology—a science whose boundaries were rapidly enlarging—was necessarily dissociated from descriptive anatomy, which was thus deprived of what gave it its principal charm. The dissociation was unavoidable; but has the result been unmixed good? Now, I speak from my own experience (having lectured on both subjects), that one is apt to forget the object of our teaching, and the receptive powers of mind of the majority of our hearers. We address ourselves to the intelligent few, and as if these subjects were the end of their pursuit, and not mere steps towards it. Remembering that it is the general mass of future Practitioners that we have to prepare, is it desirable to track physiology through all the widely extending channels which are now being explored? Should we not rather labour to fix in the minds of students the established facts of the science, and to rest content if we can fix them deeply and permanently?

Of course, we may be told that all scientific practice must be derived from and have its foundations in physiology. But this, while received as an abstract proposition, must be acted on with considerable reserve. All good practice will be consistent with physiological truth. But are we yet possessed of physiological truth? For the most part we know as yet but little of the force, the mechanism, or the mode of action at work in our organism. The truth of to-day is the error of to-morrow. Doubtless, when a law is once established, we may base our practice upon it securely and unalterably. But how many laws are established? I think that, whatever our feeling may be, we do admit to ourselves that a rational empiricism is better than a rigid adherence to a practice founded on a half truth. If physiology were taught in our schools for the purpose of training physiologists simply, and not Practitioners of Medicine, then the case would be different. Do we not, in teaching up to the few exceptionally intelligent minds —which would work out the subject for themselves—shoot beyond and above the ordinary majority.

I fear I shall be looked on as heretical, and quite below the spirit of the age, if I put in a claim in abatement of over-minute anatomical teaching. I would say again, that if anatomy—of the bones, for example—is to be taught with the object of training comparative anatomists, minuteness cannot be carried too far. But the end should direct the means. Let the student dissect with the greatest possible care and minuteness; it trains his hand and eye; but I doubt whether in the lecture-room anatomy could not be better taught (for the preparation of Medical men) if important practical points were dwelt on—over and over again, if you please—to the neglect of useless minutiæ, which serve as mere exercises of memory to the student, and which are forgotten in a short time, even by the teacher, and are never brought to bear on actual practice.

You will not, I am sure, think me so wanting in common sense as to ignore the all-importance of anatomy and physiology. My plea is for the better teaching and the more permanent retention of the true and necessary to the repression of the, as yet, hypothetical and useless. Let us demand of those who seek the higher academical honours of the Profession such an amount of scientific knowledge as will justify their receiving a stamp of excellence. They can always find, by independent study, the means of satisfying our demands. But for those whose aim is more limited, let us be satisfied if we can instil into them a thorough knowledge of what is useful and practical. Under any circumstances, I am glad to think that the practical element in physiology is to be more cultivated.

In the case of practical Surgery, attention to which is now specially enforced under the new rules, we must all admit that the change is most excellent. But the question has been raised, whether it is necessary that the practical Surgery course should extend over six months—whether all that is embraced under this head might not be better studied in a three months' summer course. As operations on the dead body must form one element of the course, the difficulty of procuring a sufficient number of subjects will create, perhaps, a formidable impediment to its being carried on in the winter.

There is another point which must be considered, and on which it would be well could the schools come to a general agreement. It is true that many of the subjects which the new regulations render compulsory have been taught in most of the schools in supplementary classes. For the most part these have been added on without the requirement of extra fees from the students who benefit by them. The necessary expenses under the new rules must be increased. Should there not be a corresponding increase in the fees? You may say that this, at least, is no question of improvement of education; but I have no doubt that if the emoluments of teachers are reduced to a minimum, and their work is increased to a maximum, teaching will be carried on in an unsatisfactory manner.

Such, amongst others, are the questions which will more than occupy our time to-night.

Whatever may be our view as to the application of the new regulations, we cannot but be glad that they all tend to enforce practical teaching, and are so far in advance of the prevalent competitive examination system, which is, I believe, producing great injury to the minds of the rising generation. There is no doubt that the primary object of the teacher is to instil into the minds of the students as much knowledge as he can, and the new rules put fresh means and appliances into his hands. But it has always appeared to me that there is one, and that perhaps the main, branch of education which is in danger of being sacrificed in this attempt to instruct, and that is, teaching a student the uses and powers of his own mind. At the ordinary school he should be taught how to learn; at the special college he should be taught how to think and to reason. Our endeavour should be to induce him to try as far as possible to work out questions for himself, rather than to explain everything to him. One problem worked out by independent thought would be more useful to him than twenty of which he had learned the demonstration by book. By such a process his mind will be rendered both more able and more willing to receive new truths and new ideas. Of course, any information given to an intelligent being will fructify; but while a truth imparted will yield a twofold harvest, a truth educed will yield a hundredfold. The opportunity for this mental training is now placed more within the reach of the teacher, and it will be for us to utilise it. The task may be somewhat irksome, but it will always be beneficial. If well carried out in the practical courses, the clinical teaching will be far more interesting to the teacher, and far more useful to the student; and it is, after all, towards clinical teaching that our main endeavours must tend in the education of future Practitioners.

I have said that we may congratulate ourselves on the establishment of the new regulations of the College of Surgeons; and I cannot help thinking that, whether admitted or not, the strong and unanimous opinion of so large a body of teachers as is enrolled in this Association has had some share in leading the College to frame them. It must have had the effect, at least, of satisfying the Council of the College that the rules would be cordially received and conscientiously acted upon by the teachers. And if this be so, have we not an answer to those who ask of what use is the Association? There is a doubt, perhaps, on the minds of some few who are of us and work with us; for it is said that we do not represent the London schools. It is true, and it is a subject of regret—regret for our own sakes, as we are deprived of the advantage of gathering the opinions of men of experience—regret for their sakes who are not of us, inasmuch as they lose an opportunity of advancing an object of common interest to them and to us, of learning the opinions of men of equal experience with themselves on subjects which must engage their minds as deeply as they do our own. Though we may regret that any should hold aloof from us, yet I do not see that our position is materially weakened thereby, or our usefulness diminished. We are not, and we do not aspire to be, a legislative body. We do not seek to enforce laws, even on schools affiliated to us. Our function is consultative, and our end is gained if we can obtain a concurrence of opinion on unsettled points on the part of so large a majority of the schools and teachers as belongs to our Association.

And our Association has produced another beneficial effect. Those who, like myself, have had experience in former years of the difficulty of obtaining anything like cohesion for any purpose amongst the London schools must be struck with the inclination displayed amongst us to merge individual interests in common benefit. Our rivalries may remain; but the frankness with which the various systems and opinions are explained and discussed shows that it is no mean or jealous rivalry which actuates us. For one, I may express my hope that the Association will continue, and will be a permanent benefit to what we may call the great metropolitan school.

I have intentionally condensed the thoughts which have passed through my mind within the narrowest possible limits. Our time for discussion is short. Inexorable custom has obliged me to occupy some part of it in expressing my own views; but in allowing as much as possible for the full consideration of the subjects which will be brought before you, you will agree with me in thinking that I have best discharged my duties as your President.

THE VACCINATION ACT.

(From the *Law Times* of January 21, 1871.)

A letter has been addressed to our contemporary the *Times*, in which it is stated that a difficulty has arisen in enforcing the Vaccination Act. The writer says that in the borough of Newport several parties who had refused to comply with the Act were summoned before the magistrates, and, with one exception, in which the full penalty of 20s. was inflicted, were fined 1s. each. Such as still refused were again summoned under another Section, which requires the parent to bring the child into court that the magistrates might make an order for the vaccination. Among those so summoned was a gentleman who had been fined by the county bench on the first occasion 1s., and who, by his advocate, refused to produce his child, and denied the power of the magistrates to compel him to do so. The bench adjourned the case for a week, to consider the objection, and, at the next hearing, decided that they had no power to compel the production of the child. The same objection having been raised in the other cases, the whole were dismissed. The borough magistrates took the same view of the law, and dismissed the cases before them also. "The consequence is," adds the writer, "that those who pay a penalty of 20s. may afterwards set the authorities at defiance."

Section 16 of the Act enacts as follows:—"The parent of every child born in England shall, within three months after the birth of such child, or where, by reason of the death, illness, absence, or inability of the parent, or other cause, any other person shall have the custody of such child, such person shall, within three months after receiving the custody of such child, take it or cause it to be taken to the public vaccinator, or cause it to be vaccinated by a Medical Practitioner." Then, by Section 29, it is provided that "every parent or person having the custody of a child, who shall neglect to take such child or cause it to be taken to be vaccinated, or, after vaccination, to be inspected according to the provisions of the Act, and shall not render a reasonable excuse for his neglect, shall be guilty of an offence, and be liable to be proceeded against summarily, and upon conviction to pay a penalty not exceeding 20s." Then, by Section 31, it is provided "that if any Registrar, or any officer appointed by the guardians to enforce the provisions of the Act, shall give information in writing to a Justice of the Peace that he has reason to believe that any child under the age of 14 years, being within the union or parish for which the informant acts, has not been vaccinated, and that he has given notice to the parent or person having the custody of the child, which notice has been disregarded, the Justice may summon such parent to appear with the child before him, at a certain time or place, when, upon due examination, the Justice may order the child to be vaccinated within a certain time; and where default is made without reasonable cause, the parent or person so making default is liable to a penalty of 20s.

Now, there are obviously two cases calling for the enforcement of the Act. There is the primary liability of parents and others neglecting to have children under three months vaccinated. Where that neglect is proved, the penalty imposed by Section 29 may be inflicted. In the next place, if a child under 14 remains unvaccinated, the Justice may proceed as directed by Section 31.

Undoubtedly, under Section 29, the penalty can be inflicted but once; but is a similar construction to be put on Section 31? What is to prevent a Registrar from giving information repeatedly to Justices? And can it be said that a conviction under Section 29 is a bar to proceedings under Section 31?

It is our opinion that a parent or other person may be convicted under Section 29, and again and again convicted and punished under Section 31. The maxim, *Nemo debet bis vexari pro eâdem causâ*, does not apply to such a case. Each time that the notice of the Registrar is disregarded there is a fresh offence, and the punishment inflicted on the disregard of the second notice is not the same as the punishment inflicted for the first offence. To hold otherwise is simply to say that anyone who can pay 20s. may escape from the provisions of the Act altogether. The Vaccination Act, being a sanitary Act, was clearly intended to have a continuing operation, not for the infliction of penalties, but to enforce compliance with its directions, in order to stop the spread of contagion.

This was our view, independently of the recent case of Allen (appellant) *v.* Worthy (respondent), L. Rep. 52, B. 162; 21 L. T. Rep. (N. S.) 665, in which the Court of Queen's Bench held that a parent, having been fined under Section 31, may be proceeded against from time to time so long as the child remains unvaccinated. See, also, remarks on that very case by Mr. Weightman, in his "Medical Practitioners' Legal Guide," entirely according with those expressed by ourselves.

ST. THOMAS'S HOSPITAL.

ATTEMPTED LEGAL PROCEEDINGS.

ALLEGED CASE OF AMPUTATION OF ARM FOR RECURRENT FIBROID TUMOUR WITHOUT CONSENT OF PATIENT.

A solicitor appeared before Mr. Ellison, at the Lambeth Police-court, on Saturday last, desiring to know if some proceedings could not be taken against a Surgeon at St. Thomas's Hospital, for amputating an arm without, as he alleged, the consent of the patient. The woman stated in Court that she did not even know the solicitor, and that she had not instructed him to proceed against the Surgeon in question. Mr. Ellison refused to proceed with the case. He was sorry to say he was quite aware of a system carried on at police-courts by some parties. He would not hold out the slightest facility for such sums as 5s. or 10s. to be wrung out of poor people without, in many instances, doing them the slightest benefit.

The facts of the case being of some interest, Mr. Churchill has forwarded them to us for publication:—

S. A., aged 47, a washerwoman, was admitted to St. Thomas's Hospital, February 20, 1868, with a fibroid tumour, situated just between the insertion of the deltoid muscle and the bend of the elbow. She had noticed the tumour for forty years; but it had not troubled her until a twelvemonth before her first admission, being then about the size of a hazel-nut.

February 22, 1868.—The growth, about the size of a large hen's-egg, was removed, with the patient's consent, and she was dismissed cured a month after. The tumour was found to be connected with the fascia of the forearm. It was carefully dissected out, and the wound left to heal by granulation. After careful microscopic examination, it was decided to class the tumour as belonging to the spindle-celled sarcoma type, with elements which prognosticated a probable recurrence. There was no glandular enlargement in the axilla. She was unable to resume her ordinary occupation as laundress, in consequence of a contraction of the biceps tendon and bicipital fascia of the forearm not permitting extension of the arm beyond a right angle.

November 28, 1869.—She was admitted with a recurrence of the growth in the cicatrix of the old wound. It had been growing for six months, and very rapidly of late, being about the size of a large orange when she returned to the Hospital. It was freely movable. The integument covering it was smooth and glazed, and mapped out by a dense plexus of venous capillaries, the main branches of which converged towards the old cicatrix. The tumour was uniformly oval and elastic, softer at the most dependant part, where it was growing most rapidly. There was marked surface heat about the tumour.

She left the Hospital, and returned in three weeks prepared to submit to whatever treatment was necessary, the tumour having increased to double its former size in this short interval. The integument over it was ulcerating. Her general health was not good. Her face was sallow, and she was anxious and depressed. She complained of stabbing pains in the tumour. The glands in the axilla were not enlarged. After consultation with his colleagues, Mr. Croft informed the patient that "amputation was the only remedy which could hold out any hope of a cure, and Mr. Paget informed her the same at St. Bartholomew's Hospital. She was fully aware that that was the only proper treatment. Naturally, even at the last, she wished to have her arm preserved. Before going into the operating theatre, Mr. Croft told her that if he could he would save her arm, but that he did not expect to be able to do so."

December 29, 1869.—Two days after her re-admission, Mr. Croft proceeded to amputate. Anterior and posterior flaps were obtained by transfixion at about the centre of the arm. Free torsion was used for the brachial artery without rupturing the middle coat, but the artery uncoiled itself and bled freely; it was secured by ligature, as also two other vessels. Four small muscular branches were secured by torsion. The flaps were approximated with wire sutures, and the stump dressed with carbolic acid. She continued to progress favourably; the stump did not heal by primary union, for a large piece of cellular tissue sloughed inside, and was removed a week after the operation; a quantity of pus escaping at the same time from inner angle of flap. She suffered some pain in the stump, and required morphia draughts at night.

January 22, 1870.—No swelling, pain, or tenderness now about stump; firm union of flaps throughout, except at inner edge, where there is slight purulent oozing. General health much improved.

She was dismissed cured on February 8, an artificial limb having been provided for her at the Hospital expense.

The growth presented much the same microscopic characters as the one previously removed, but with a greater predominance of the fusiform-cell element.

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,
Now prisoner of War at Versailles.

(*Continued from page* 79.)

When we arrived in Metz that afternoon, the city was full of excitement; everybody appeared at work preparing beds and mattresses for the wounded, which were fast coming in from the battle-field of Gravelotte. (The Emperor had left Metz the same morning; and the escape was a narrow one, for his escort was fired upon by the enemy as he reached the road to Etaire. Ten minutes more, and his Majesty would have been obliged to return and become a prisoner with us in Metz.) Only a part of our ambulance was at the Hospital, the rest had left for the field.

Marshal Bazaine, in retreating from Borny, which lies east of Metz, had taken the Verdun road, due west, in order to unite with MacMahon or fall back in the direction of Paris; but when a little beyond the line of Gravelotte and Rezonville, he found himself headed off by a Prussian army 200,000 strong. It has been said that if Bazaine had pushed his advantages gained that day, he could have passed onward, and consequently would never have been shut up in Metz. It must not be forgotten, however, that the troops under him were fatigued, and pretty well used up; for the losses of the 16th amounted to near 10,000.

As soon as my little cargo of wounded had been taken charge of, and without stopping to feed either horses or ourselves, Mr. Boylan, my assistant, and I hurried off towards the field of battle. The roads were blocked up with baggage trains, *caissons*, and wounded, so that the evening was pretty well advanced when we reached Rozerieulles, a hamlet this side of Gravelotte, where our ambulance had been established. We remained here until after midnight, dressing the wounded brought in by our *infirmiers*.

It is difficult, I have no doubt, to make known to the different regiments in action the place where their wounded should be sent to; but on this day there seemed to be a greater confusion than ever. Wounded such as could walk were seen straggling in every direction, looking for Surgical aid. One thing which especially struck my attention was the great number of men shot in the lower extremities. I should not be surprised that, some day, when the statistical records of this war will be complete, the proportion of such wounded will be found much greater in the French than in the German army. The "chassepôt" is an excellent arm, far superior to the needle-gun, but not, I venture to say, in the hands of French troops. The great amount of "shooting too high" during this war is due to nothing else than the gun in question, handled by an impetuous soldier. Give the same arm to the English or the German, who aims with more *sang froid*, and the result will be different. I have known soldiers to shoot away 100 cartridges in an hour; such an one, I should say, has probably neither killed or wounded a single person. One of the reasons why we have had so many wounded in the lower extremities, aside from the great calm with which the Prussians make fire, is, I imagine, the peculiar dress of the French. No finer mark in the world than the red pantaloons!

The battle of Gravelotte lost us two good *infirmiers;* one, mortally wounded while in the act of putting a French colonel on a stretcher; the other, missing altogether, probably killed on the spot.

The French Intendance had taken measures, on that day or the day previous, to hold the Hospitals and other military buildings in readiness for the coming wounded, so that they all, after the villages of Maison-neuve, Moulins, and Longeville had been converted into ambulances and filled, could be sent to Metz.

In order to be able to follow the movements of the army, as it had been our intention to do from the commencement of the war, M. Lefort, on the following morning, gave our Hospital over into the hands of the Physicians of Metz, who had expressed a willingness to take charge of the same. This gave general satisfaction to the members of our ambulance; everybody was in high glee, getting ready, when an officer from the Intendance came to tell us of quite a number of wounded left in the house and barns of a farm-yard called "La Ferme de Moscow," close to Gravelotte.

The battle-field—of the 16th, namely—like that of the 14th, was again abandoned, and the army moving north, in the direction of St. Privat, thus exposing whatever wounded there may yet remain near and around Gravelotte to fall into the hands of the enemy, who, by-the-bye, never failed to occupy any territory evacuated by our troops. The Intendance—which in France (unfortunately for the Surgeon) controls everything appertaining to the sick and wounded—the Intendance, I repeat, came to ask us to look after the wounded in La Ferme de Moscow, saying our badge and uniform would protect us. A part of our Medical staff and twenty waggons were sent off; they returned the same night, bringing 172 wounded. From that time—or, at least, I believe that this mission did much towards it—the French army Surgeons and everything belonging to the Intendance received orders to wear the white band with the red cross. Another motive, perhaps, for the adoption of the band was the murder of a military Surgeon, who, on the previous day, and while in the discharge of his duties, was run through with a lance by a Prussian Uhlan.

(*To be continued*.)

REVIEWS.

Der Diabetes Mellitus auf Grundlage Zahlreichen Beobachtungen Dargestellt. Von Dr. J. Seegen, Professor der Medicin an der Wiener Universität.

Diabetes Mellitus Expounded on the Basis of Numerous Observations. By Dr. J. Seegen, Professor of Medicine in the University of Vienna, etc. Leipsic: Weigel. Pp. 285.

Dr. Seegen's work is a valuable contribution to our knowledge of saccharine diabetes on more grounds than one, not the least that it contains careful records of 140 cases of the disease. This is not the author's first appearance as an authority on the subject, for from time to time he has communicated articles on it to the *Wiener Wochenschrift* and to Virchow's "Archiv."

The former portion of the book is divided into nine chapters, and is followed by the histories already alluded to. The first of these chapters deals with the Origin of Sugar in the System. Its existence in animals, as the result of a vegetable diet, could be understood; but its presence in those existing exclusively on flesh was more difficult of explanation. The discovery of the glycogenic function of the liver rendered matters more plain; for, were it excessive in amount, or were the ordinary machinery for its consumption insufficient, or were it to become sugar in arterial blood and in the urine, it could not fail to make itself apparent. So, also, perhaps, if the quantity of sugar consumed as food was unusually large, for in this way the quantity of post-mortem liver sugar is notably enhanced. The latter question is discussed in the next chapter, on the Nature of Diabetes. Here the author points out that there may be diabetes without glycosuria, and glycosuria without polyuria; but in diabetes mellitus the excess of sugar is the constant symptom, bringing with it, however, others in its train, the same constituting the disease. Pavy has admitted that excess of starch or sugar in food may make itself apparent in the urine; the question comes to be—Can there be protracted or permanent mellituria without the symptoms of diabetes? Seegen says "No" most decidedly. And he also holds the existence of sugar in the system during life as a pathologic phenomenon. "Sugar secretion," says he, "is the result of an abnormal metamorphosis of material. Sugar excretion is the fundamental symptom of diabetes mellitus." So, again, after inquiring into the origin of this sugar in derangements of the bloodvessels or of the blood itself, or in lesions of the nervous system, he concludes, after citing physiological research—"We have also, on the ground of Medical experience, the right to say that the essence of diabetes mellitus consists in an abnormal metamorphosis of material, which, for the most part, is evoked by derangements of the nerve centres." But it is with the presence of sugar in the blood that the fatal train of symptoms begins—thirst, polyuria, general decay, loss of sexual power and vision, wasting, etc. A curious and interesting inquiry concludes this chapter: it is the liability of corpulent people to diabetes. If he does not prove corpulence to be a direct cause of diabetes, the author at least shows that it is by no means an uncommon precursor of that affection. Of the next chapter, which treats of the Etiology of the Disease, we shall only say that heredity has something to do with it, and antecedent brain disease or exhaustion perhaps more; but the most curious fact is, that of the 140 cases recorded, in thirty-six instances the patients were Jews. As to the sexes, 100 were males to forty females.

Of diabetes mellitus, Seegen recognises two forms—in the one the patients are often well-nourished, even stout; thirst and polyuria are only temporarily notable. In the second variety, emaciation is speedy and well marked, the skin is dry; in short the symptoms are those universally recognised in diabetes. These two forms have also, we should say, been recognised in this country. The succeeding chapter deals with the Symptoms of Diabetes—the existence of sugar in the urine, the quantity of that fluid, the changes in its constitution, the thirst, hunger, constipation, the changes in the tongue, the loose and carious teeth, enlarged liver, and so on. The skin is usually dry, but sometimes perspiration is excessive. Most frequently patients complain of itching, and there is a great tendency to boils and carbuncles. During diabetes the patient may become phthisical; this should not be confounded with the slight glycosuria common in phthisis. Sight is affected often by the formation of cataract, which may, however, disappear as the patient improves. Sometimes with the loss of sight no optic change can be noted; sometimes there is the peculiar form of inflammation seen in Bright's disease. Loss of muscular strength is at all times a notable symptom, as is loss of sexual power. In females there may be amenorrhœa.

As to the prognosis of the affection, in the severe form it is unfavourable. It must be founded on the following particulars: The quantity of sugar formed, the more the worse; the age of the patient, the younger the worse; and the degree nutrition is interfered with, the more the worse; the digestive powers, the greater the better; the social status of the patient, the richer the better. The mental condition of the patient should also be considered; depression, which is common in the disease, being very prejudicial. We could hardly deal with the post-mortem appearances without entering into greater detail than we can afford. Suffice it to say that the liver is often enlarged, the pancreas atrophied, the kidneys congested, and the lungs cavernous.

For the quantitative determination of sugar in urine, Seegen recommends either Fehling's copper solution or the polariscope. The former we have long used, and can cordially commend, but we give this hint to those who only examine diabetic urine at intervals, that after standing for a time the solution will give the sugar reaction when there is no sugar present. It ought to be freshly mixed, and therefore its two ingredients should be preserved separately.

The final chapter deals with the Dietetic and Medicinal Treatment of Diabetes. "Of these," says Seegen, "the former is the more important." To most people, it is nothing new that a flesh diet diminishes, as a saccharine or a starchy diet increases, the quantity of sugar passed by the patient. Further, this increase in the formation and excretion of sugar intensifies all the symptoms of the disease, especially the polyuria and the thirst, and further tends to derange the digestion. But as life is hardly bearable on a flesh diet alone, and as bread is inadmissible in its ordinary form, in 1840 Bouchardat proposed a kind of bread made of gluten to take the place of that ordinarily eaten. It is interesting to know that Seegen has always found this bread to contain a notable percentage of starch. Pavy's almond bread is too sweet and too dear to be generally adopted as a substitute for bread. We append a list of substances permitted and forbidden in food or drink as adapted for English use:—

Food.—*Allowed in any Quantity.*—Flesh of any kind: Smoked meats, bacon, tongue. Fish of any kind: Oysters, mussels, crabs, lobsters. Jelly, aspic, eggs, caviare, cream, butter, cheese, lard. Vegetables: Spinach, certain salads, as endive, gherkins, asparagus, watercress, sorrel, artichokes (green), mushrooms, nuts. *Allowed in Moderate Quantity.*—Cauliflower, turnips, white cabbage, French beans, oranges, and almonds. *Strongly Forbidden.*—Starchy food of any kind (bread may be allowed in very moderate quantity by the Physician's orders): Sugar, potatoes, rice, tapioca, arrowroot, sago, peas and beans, green peas, sweet fruits (especially grapes, cherries, peaches, apricots, plums, and dried fruits of any kind).

Drink.—*In any Ordinary Quantity.*—Water, soda-water, tea, coffee. Wines: Claret, Rhine wine, Moselle—in point of fact, all wines not sweet, and not very rich in alcohol. *In very Small Quantity.*—Milk, brandy, bitter beer, lemonade without sugar. *Forbidden.*—Champagne, mild ale, cider, sweet lemonade, liqueurs, fruit-juice, ice and sherbet, cocoa and chocolate, home-made wines.

The medicinal treatment recommended must next be considered.

Foremost in the rank of therapeutic agents, he places Carlsbad water. This effects improvement, not only in the general symptoms—thirst, polyuria, etc.—but also, in most instances, a notable diminution in the quantity of sugar passed; the bodily weight increases, and there is often an increased tolerance of starchy food. After Carlsbad, he places Vichy water. Carbonate of soda has been recommended by Griesinger, and both he and Pavy have found alkalies beneficial. As secondary agents, after the alkaline waters have been used for a time, Seegen recommends the feebly ferruginous waters of Schwalbach and St. Moritz, or the baths of Gastein and Ragaz. He further alludes to the use of opium, of iodine, and arsenic; to gymnastics and hydropathy; but his trust is in the waters we have named.

Next comes the collection of cases already referred to, and this concludes one of the ablest and most exhaustive treatises we have seen on the subject of diabetes. It is at all times difficult to handle with accuracy, and to be perfectly informed on, the literature of another language. This difficulty has been overcome in a wonderful manner, for references to French and English literature are very numerous and, let us add, very accurate.

NEW BOOKS, WITH SHORT CRITIQUES.

The Diseases of Children. By Fleetwood Churchill, M.D., Fellow and ex-President of the King and Queen's College of Physicians, Ireland, etc.; and Fleetwood Churchill, jun., F.K. & Q.C.P.I., Physician to the Dispensary for Sick Children, etc. 3rd Edition. Dublin: Fannin. Pp. 900.

⁂ The present edition of Dr. Churchill's well-known work has been carefully revised and so much enlarged as to be hardly manageable, for, whilst the number of pages has been greatly increased, the size of each has remained unchanged. We are, however, bound to confess after a careful survey that the work has been materially improved, constituting a perfect mine of knowledge, but withal a book rather to be referred to than to be read straight through. The work is divided into two parts, the latter consisting of eight sections. The former part deals with the management of childhood and infancy, the latter with the diseases incident to that period of life. The eight sections refer in order to the following subjects:—Affections of the cerebro-spinal system, of the respiratory system, and diseases of the heart, digestive organs, and skin; eruptive fevers, other fevers; and finally, infantile syphilis. It would be difficult to indicate all the points where special praise is due to the author. We would rather point to the book, as a whole, as affording a good instance of personal experience, amplified by the experience and researches of others, the whole amalgamated by passing through the mind of one thoroughly acquainted with the subjects of which he treats in all their details.

The Food Journal. Vol. I. London. 1871.

⁂ We congratulate the editor of the new periodical on the completion of his first year's labours. The idea of bringing out "A Review of Social and Sanitary Economy, and Monthly Record of Food and Public Health" was a good one, and, on the whole, it has been well worked out. Many subjects which must be interesting to a large class of readers are discussed in a pleasant, popular style—as, for example, Food Legislation, Popular Food Analysis, Domestic Hygiene, Public Health, and Foreign Office Reports on the Adulteration of Food; besides which, we meet with chatty and amusing articles on such topics as "London Dinners," "How Foreigners Live in London," etc. The January number contains a very interesting letter by Mr. Yapp "On the Food in Besieged Paris," dated December 15, and transmitted by balloon post.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

January 24.

Warrants were granted by the Liverpool magistrates, on Saturday last, for the commitment to prison for seven days of two householders who had not had their children vaccinated after having been previously summoned and fined for neglecting to do so. This summary procedure will, it is to be hoped, serve as a caution to a great number of offenders. How general the neglect of vaccination has been is only becoming apparent now that the actual presence of epidemic small-pox is stimulating the authorities to investigation. On Thursday last, Dr. Trench stated to the Health Committee that he had requested lodging-house inspectors and those under the inspectors of nuisances, when engaged in their ordinary duties, to examine the children in the houses to which they went, for the purpose of finding out whether they were vaccinated or not, and that, although there had been only three days of such routine work, they had already reported 133 persons as not having been vaccinated at all, and 12 in whom vaccination was doubtful. The ages of these persons were not mentioned, and it may be that some of them were born before the enactments concerning vaccination had their present stringency. Such plea cannot, however, be urged in the case of children born within the past few years. Yet Dr. Beard, who has been visiting this district in his capacity as inspector of vaccination, pointed out a day or two since to the Guardians of the West Derby Union that there were the names of no less than 3000 children on the Registrar's book unaccounted for as regards vaccination during the past three years.

At the suggestion of the inspector, a house-to-house visitation has been undertaken in the West Derby district, and the two persons to whom this duty was assigned reported on Friday last that they had examined 1200 persons, of whom 32 had never been vaccinated; and that the same was the case with 3 out of 7 children whom they found suffering from small-pox. An additional vaccination station is to be established, and the existing one at Everton is to be opened twice, instead of only once, a week.

It is fairly probable that the rapid decline in the mortality from small-pox during the past week has been due to the very energetic measures taken by the Health Committee and the various boards of guardians in isolation, cleansing, disinfection, etc. In the first week of the present year the numbers of fatal cases in London and Liverpool respectively were 79 and 50, whereas in the second week they were 135 in the former and only 35 in the latter place. But even this reduced number, however satisfactory it may be as indicating a decline in the epidemic, gives Liverpool a relative preponderance over London, which, if her population be reckoned at six times that of ours, should have had 210 fatal cases to our 35 in order to make the mortalities proportionate. During the past five weeks the mortalities have numbered 26, 38, 36, 50, and 35. Happily, it is not in small-pox alone that the diminished mortality is manifesting itself, as there were 125 fewer deaths last week than in the one immediately preceding.

Of course, our very high rate of mortality has excited much attention, and numerous have been the theories of its cause and the suggestions for its cure from many quarters. The water supply, the water-closets, the sewers, the soil, the drunkenness, etc., have all been taxed individually, in not very reasonable fashion, with being the source of our present ill condition.

A little consideration of the peculiarities which distinguish Liverpool ought, we think, to lessen the surprise which is so often expressed at its unhealthiness. There is probably not another town in the kingdom the particular character of whose trade attracts to it anything like so large a proportion of unskilled, and therefore poorly-paid, labour. There certainly is no other town with so densely-packed a poor population; and though we have made no exact comparison, we should feel quite safe in asserting that in no other are the relative numbers and trade of the public-houses so great. Poverty, overcrowding, drunkenness, dirt—for nobody will consider us libellous when we say that the lowest classes of the Liverpool poor are dirty to a most disgusting degree;—here we have the most faithful allies of disease; and until effectual means can be devised for diminishing these, we cannot see how this can be any other than an unhealthy town. We are told that, with our favourable site, our sandstone foundation, our good drainage-fall, our magnificent river, and our many other advantages, we ought to be pre-eminently blessed with health; and our critics do not see that a poverty-stricken, over-crowded, drunken, dirty population must be an unhealthy population anywhere, and that the peculiar circumstances of the town favour the permanent retention of such a population in its midst. It is not that we have more epidemics than other towns, but because no other has a soil so peculiarly favourable to their growth, that we suffer so fearfully whenever one is planted among us.

Much criticism has been expended on a paper, read a few weeks since by Mr. Newton, at the Medical Institution, on the causes of the permanently high rate of mortality in Liverpool, in which he boldly stated his belief that its unenviable notoriety in sanitary matters was attributable to the permanent residence within it of immense numbers of the very lowest Irish, who, by their modes of life, persistently set at defiance all the laws of health, and constitute a standing menace to its well-being. With every proposition advanced in that paper we fully agree. Thousands of these men hang about our docks and other great centres of labour by day, and retire to sleep, with the family that invariably attaches to them, in some filthy, ill-ventilated room at night; and, when we consider that, from these thousands, the vision of a meal is often cruelly blown away by a veering of the wind from west to east, we cannot help feeling that poverty is almost a necessary condition of a great proportion of our people. We are not in the condition of Manchester, whose tolerably steady and competent remuneration to her labouring class enables them to counteract, by good food in their stomachs, much of the ill effect which her smoky air would have on their lungs.

IRELAND.

Belfast, January 13.

Belfast, the second town in Ireland, not only in size, but also in importance, justly called the commercial capital of the country, is at present the seat of a wide-spread epidemic of small-pox. The Poor-law Commissioners of Dublin, a few weeks since, issued a commission to investigate the cause of the present outbreak, and, from the evidence that they obtained, it appeared that the disease was in the first instance imported from Liverpool. Every means is being adopted by the Sanitary Committee of the Town Council, Hospital authorities, etc., to check its spread. The Board of Guardians have fitted up special small-pox wards in connexion with the Union Hospital, both for pauper and paying patients. The Committee of the General Hospital have also opened a ward, but it is very difficult to gain the consent of patients and their friends for removal to either of these institutions. Indeed, in some houses in the poorer parts of the town, three and four patients are ill from small-pox. A circular has been sent by our local guardians addressed to the proprietors of the various flax-spinning mills, weaving-factories, warehouses, and other places where a number of people are engaged, calling upon the employers to have their *employés* examined, either by the Dispensary Surgeons (who, by the way, do not in one sense care for this additional work, as it brings no extra remuneration) or by a "properly qualified Medical Practitioner" at the expense of the firm, so as to have any cases upon which a doubt exists, as regards protection from former vaccination, re-vaccinated. Indeed, a general vaccination *en masse* and isolation of the attacked would be the proper thing. Of course this could not be accomplished without a great deal of trouble and opposition from the very class it is intended to benefit. In one large mill, a Surgeon has been engaged to examine and report upon nearly 3000 workers, out of which number he expects to find at least 600 or 700 who will require to be re-vaccinated. The Commission in their late report state that vaccination has hitherto been very carelessly performed in Belfast. The writer, however, knows that this is not the case; so far, there have been but few deaths from the present epidemic in proportion to its magnitude. A few months since, nearly simultaneously with the appearance of the small-pox, cow-pox was reported to have occurred near Belfast.

Typhoid fever, from which we suffered during the autumn of last year, is now dying out, and our town is otherwise healthy, especially since the severe frost and fall of snow that lasted for several weeks, which is popularly thought to purify the air; and when our new drainage and sewerage scheme is completed, Belfast will compare favourably with any town of the same size in the United Kingdom.

The number of students attending Queen's College in the Medical Faculty is about 190, an increase over last year. The College is in connexion with the Queen's University in Ireland, whose graduates have taken high places at the competitive Medical examination for the army and navy, the Civil Service in India, and elsewhere. Indeed, if we get fair play we shall prove a powerful rival to Dublin, not only in Medicine, but also in law, engineering, arts, etc.

A new library has been recently built in connexion with the Belfast Queen's College, and Professor Redfern has opened a special class in histology, which is exciting a good deal of interest amongst the students. The General Hospital is the only recognised Medical and Surgical Hospital in Belfast, but I hear that small classes are held at the Ophthalmic, Lying-in, Skin, and Insane Hospitals.

The Ulster Medical Society was opened for the winter session in November last by Mr. William McCormac, F.R.C.S.I., Surgeon to the General Hospital, and late Surgeon-in-Chief to the Anglo-American Ambulance, who, as President of the Society, took for his address his recent experience in gunshot injuries, etc., at the war. The lecture was illustrated by specimens, etc., and was of a most interesting description. Mr. McCormac, before leaving Belfast to reside in London, was presented with a handsome illuminated address by the students attending the General Hospital, the meeting being held in the theatre of the Institution. The Rev. the President of the Queen's College, and several of the principal Medical men practising in Belfast, were present.

Such are a few brief "jottings" regarding our doings in Belfast during the last six months.

GENERAL CORRESPONDENCE.

GENERAL REPRESENTATION IN THE MEDICAL COUNCIL.

LETTER FROM DR. E. WATERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—The impartial and full reports of the proceedings of the General Medical Council, and the gentlemanly tone which characterises the *Medical Times and Gazette*, embolden me to request your insertion in this week's number of the following observations on your remarks on the resolutions of the Reform Committee of the British Medical Association.

First, I wish to exculpate the Reform Committee from the charge of undue modesty in accepting the responsibility of drafting a Medical Bill.

It is well known that, after all successful Parliamentary opposition, though many may have combined to aid it, one party alone has to assume the place of those defeated.

In regard to the withdrawal of the Government Medical Bill last session, though some of the Corporations actively opposed it, the withdrawal followed the refusal on the part of the British Medical Association to accept the Bill unless direct representation was conceded; but for this refusal, the Bill would, as far as is known, have been pressed forward, and a general opinion was entertained that it would have passed the second reading; and as in the House of Lords all the opposition of the Universities and Corporations was disposed of in a single sitting, it is not impossible that their opposition in the House of Commons might have been equally futile.

Be this as it may, the British Medical Association was the only body with which the Government offered to make conditions; and it was quite in order for members of Parliament who were cognisant of the fact to declare that, by the refusal of the proposed condition, the Association made itself responsible for the preparation of another Bill to supply that which was lost.

This is the responsibility which the Reform Committee could not forego, and decided to accept.

In reply to your observation, that it would be dangerous and impracticable to leave the whole of the Profession directly represented in the General Medical Council, I ask permission to submit to you and to your readers that it is quite practicable in the manner proposed by the British Medical Association. The Association proposes that representatives shall be elected for the three divisions of the Kingdom. At present the representative on the General Medical Council for the University of Cambridge is elected by all the graduates of the University, who form a constituency of about double the number of the registered Medical Practitioners residing either in Scotland or in Ireland. If the graduates of Cambridge experience no difficulty in making their election, a constituency of half the number, with the improvements in the mode of election which experience has suggested, and which the British Medical Association proposes to adopt, need not, therefore, shrink from the attempt. So much for the application of direct representation in Scotland and in Ireland.

As regards England, the constituency will be much larger—in round numbers, say 15,000. This is about the number of the Members of the Royal College of Surgeons; and the President of the General Medical Council maintains that, as at Cambridge, so with the other Corporations and Universities, each member should have a vote in the election of the representative. What he proposes for the Royal College of Surgeons, the British Medical Association proposes for a constituency of equal size—that, namely, of the Profession of England and Wales.

Again, under any Act which embraces the one-portal system, which you uncompromisingly advocate, a body of Practitioners unconnected with any Corporation will necessarily arise. These unfortunates, unless through direct representation, can have no influence in the election of the Council.

Further, different Corporations—for instance, the Royal College of Surgeons, the Royal College of Physicians, and the Apothecaries' Society of London—are now forming conjoint boards to grant a general licence. To which of the Corporations are such licentiates to belong—to one only, or to all?

In the last place, many Practitioners belong to more than one University, and to several Corporations. Such men, though not more distinguished than others who are simple graduates of one University, will have a plurality of votes in the election of the General Medical Council.

The British Medical Association, by its plan of direct representation, desires to obviate these anomalies by giving every registered Practitioner one vote, and maintains that, as at present with the University of Cambridge, the best men will be elected. I am, &c., EDWARD WATERS.

Chester, January 18.

THE HOSPITAL REFORM COMMITTEE.

LETTER FROM DR. ALFRED MEADOWS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you allow me to state that the only response I have had to the letter of Sir William Fergusson, which appeared in your last issue, asking for funds to defray the expenses of printing, etc., incurred by the Hospital Reform Committee, has been a guinea from Mr. Heckstall Smith, and five shillings from Mr. Francis Mason and Mr. Fairlie Clarke.

The expenses at present amount to about £30, and more must be incurred, if the work of the Committee is to be completed. Surely the 200 members of the Profession who appointed us a Committee do not intend that we should pay as well as work! We are quite willing to do all the latter, but we think we ought at least to pay only our share of the former. I am, &c., ALFRED MEADOWS.

George-street, Hanover-square.

CAMBRIDGE EXAMINATIONS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I trust you will permit me to say, in reply to "An ex-University College Man," that, inasmuch as I never attempted to argue "that the Cambridge M.B. of to-day is as hard to get as the London one," and as I certainly never asserted such a proposition, I cannot have "fallen into the great error of basing my argument on the fact that nearly twenty years ago the London B.A. was not a very good degree." I know nothing of the relative merits of the respective examinations, and should be very sorry to hazard an opinion expressive of an invidious distinction, having no means of forming a judgment on the subject. All I desired to point out, and to illustrate by an anecdote, was, that for ordinary degrees, no matter in what Faculty, it was a mistake to make the examination questions so difficult that either the standard of the answers must be lowered or perhaps one-half of the candidates be rejected. I submitted that an ordinary degree, unlike an honorary degree, is not supposed to be a certificate of superior acquirements, but merely of competency in the subjects of a liberal education, or of a particular Faculty. The London University "standard of rejection," as your correspondent asserts, "is tremendous," undoubtedly; but the only question originally at issue was, whether a lower standard of questions and a greater accuracy of answers was not a more desirable alternative than a wholesale pluck. The late Mr. Burcham seems to have thought it was. I humbly venture to think with him; but, with the utmost courtesy, must protest against being misrepresented, or made to draw odious comparisons, which I studiously guarded myself from attempting.

I am, &c., A Cambridge M.A.

REPORTS OF SOCIETIES.

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CLINICAL SOCIETY OF LONDON.

Friday, January 13.

Mr. Paget, F.R.S., President, in the Chair.

Annual Meeting.

The report of the Council was read, showing the Society to be in a flourishing condition, with 211 members, and a balance of £206 in their favour.

The adoption of the report was moved by Dr. Powell, and seconded by Dr. Silver.

Dr. Barclay moved a cordial vote of thanks to the President on his resigning the chair. This was seconded by Dr. Cracknell.

Dr. Cholmeley moved a vote of thanks to Mr. Callender, and the retiring members of the Council. This was seconded by Dr. Cayley.

Dr. Pavy read notes of a case of Paroxysmal Hæmaturia, and exhibited specimens of the urine. The patient, previously in good health, was seized, after exposure to cold, with nausea, and passed urine porter-like in colour. He was sent to bed, and the urine gradually became natural. Eleven days after, he was again exposed to cold, and a relapse occurred. The urine in these paroxysms contained coloured granules and oxalate-of-lime crystals, but no blood corpuscles and no casts of tubes. Dr. Pavy spoke of the affection as one characterised by well-defined symptoms, quite distinct from ordinary hæmaturia, and said that the attacks always followed exposure to cold. He had a characteristic case just then under his care in Guy's Hospital (Philip ward, No. 43), who could be visited by members interested in the subject.

Dr. Broadbent had such a case under his care during the last two years. After exposure to cold, the man passes dark urine, containing a quantity of albumen, but not commensurate with the colouring matter passed. He has a sallow tint at these times. He had never seen any oxalates, nor was he inclined to put a high value on their presence.

Mr. Gant had seen a somewhat similar case after a railway collision. The patient had been subject to the disease before, but became worse after. It was specially excited by harass or worry.

Mr. T. Smith knew an instance of a gentleman who could not eat rhubarb-pie without having his urine next day dark and bloody. This ceased with change of diet.

Dr. Greenhow said all cases of intermitting hæmaturia were not intermittent hæmaturia in the sense he adopted. Exposure to cold was the usual cause. The patients got well in Hospital, and kept well while there, falling back when they went out. It depended on some constitutional cause. He thought oxaluria had something to do with it. Prout had long ago noted the connexion between the two.

Dr. Langdon Down said he had seen a case of intermittent albuminuria. The patient was seized with a rigor, and passed some urine rich in albumen. By-and-bye it became quite free. He came to London, and there had a rigor, when it again turned albuminous. He had seen a similar case in a young lady. There were no casts.

Dr. Wiltshire said cattle sometimes had a disease in cold weather known as red-water. In a case now in hand, the milder attacks were in the form of lithiasis. In his paper on the subject he did not read the part referring to the analysis of the urine. The patients may get well spontaneously.

Dr. Pavy said, with regard to the blood following the use of rhubarb, the tint was quite different. His patient suffered after exposure to cold. Oxalates did not exist in all.

Mr. Brudenell Carter next resumed the adjourned discussion on Syphilis following Vaccinia. He thought the subject should be considered generally, and he would speak of cases occurring in ophthalmic practice. He referred to the signs laid down by Mr. Hutchinson as those of inherited syphilis; they were mainly admitted, although denied by Mooren, but they were so typical that one or all must be taken as syphilitic. He was compelled in certain instances to look for some infection other than parental, and he thought vaccination afforded the explanation. In constitutional syphilis the first child was worst, but the others suffered gradually less and less, although the poison was never totally eliminated. In one case, with the ordinary signs of inherited syphilis, the symptoms were, he thought, plainly due to vaccination. Could these signs be induced by vaccination from a child syphilitic by inheritance? He thought it quite as likely that infection could be brought about by vaccine lymph as by blood. He thought this mode of propagation very common in country towns and villages.

Dr. Cholmeley said, before accepting Mr. Carter's terrible theory, they ought to insist on sound proof. He thought there must be a special local lesion in all instances of syphilitic infection. The two poisons, vaccine and syphilitic, ran quite a different course. Mr. Carter said that of the two poisons one only produced a local lesion, the other affected the constitution.

Mr. Teevan said that from Germany it was reported that the blood of a syphilitic patient introduced into the person of a healthy individual produced secondary symptoms without any primary sore. In one case it was propagated by saliva. He thought any secretion would propagate it, and that, too, without any local lesion.

Mr. Hill said that, in the case of children who had accidentally acquired syphilis early in life, and had got on to their second dentition, there were no characteristic appearances. Vaccinal syphilis would most likely be the same. Sometimes the mother was strongly syphilitic, yet the child was not affected.

Mr. Kesteven was surprised at the doctrine advanced by Mr. Carter. He thought that, in all instances, there was a chance of the disease being imported. This young man was not an infant; was it certain that syphilis was not superadded. If the disease was so very easy of transmission, they should see it oftener.

Mr. Gascoyen was glad he could not believe Mr. Carter's theory. In referring to cases of so-called vaccinal syphilis, he mentioned Trousseau's, which were doubtful. He believed this to be the first undoubted instance which had occurred in England; other real cases had occurred abroad. When dormant, syphilis cannot be transmitted; there must be some active symptom at the time of begetting. He did not hold with Mr. Carter's theory of gradual vanishing of symptoms.

Dr. F. Simms referred to the instances recorded abroad. He believed blood was drawn.

Mr. T. Smith said that, as to secretions being affected, the seminal fluid was evidence on that score. He thought there was enough evidence to enable them to put down the case as one of vaccinal syphilis. The man was now quite well.

Mr. Carter, in reply, said he had advanced no theory. He had stated certain facts, and had framed an hypothesis to account for them.

Mr. Paget said he would not consider heredity disproved unless the grandparents as well as the parents were shown to be healthy.

In conclusion, he alluded to the pleasure he had experienced in filling the chair of that Society, to its prosperity, and to the eminence of their new President. The officebearers, a list of whom was given last week, were declared elected.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, January 21.

Dr. Druitt, President, in the Chair.

Dr. Robert Barnes read a paper on the question—

HOW FAR IS THE PRESENT PREVALENCE OF SMALL-POX TO BE ATTRIBUTED TO THE PLAN RECENTLY INTRODUCED OF LIMITING THE NUMBER OF PUBLIC VACCINATORS?

Since it might be assumed, said Dr. Barnes, that the present prevalence of small-pox is evidence of the neglect of vaccination, the practical question arose as to what were the causes of the neglect, and how was it to be remedied? That a country could be secured against the ravages of small-pox, was proved by the immunity of Ireland, as compared with the havoc caused by the disease in England. A comparison of the systems of vaccination carried out in the two countries would show where the fault lay. He would prove that the English system was unsuccessful, from the Registrar-General's weekly reports during the six months ending December 31, 1870. The deaths from small-pox in London rose from 12 in the twenty-sixth week to 110 in the fifty-second week, and the mortality is still increasing. The total number of deaths in the latter half of 1870 was 749; of these, 389, or more than one-half, were children under 5 years of age, of whom it may be assumed that a large proportion were unvaccinated. From an examination of the books at the Small-pox Hospital, it appeared that 25 children under 3 years of age were admitted during the latter half of 1870. Of these, 20 were unvaccinated; the 5 vaccinated recovered; 12 out of the 20 unvaccinated died. From these figures, and from a knowledge of the fact that small-pox is not often fatal in vaccinated persons, it may be concluded that only a small proportion of these 749 persons were vaccinated. It is in the highest degree unsafe to rely upon a comparison between the number of registered births and of registered vaccinations, in seeking to estimate the extent to which vaccination is practised. But, after all, the practical point was to find out the individuals who were unvaccinated, for the sake of protecting them and the community. As an example of the manner in which this might be carried out, Dr. Barnes mentioned that in 1861, when Medical Officer of Health for Shoreditch, he inspected two schools. Of 264 children examined, 8 had had the small-pox, 164 had good scars, 56 bad scars. He had 95 of these children vaccinated immediately; 49 took the disease fully, and 33 in a modified form. Medical Officers of Health in various parts of the metropolis reported, from inspection alone, about the same time, that 10 per cent. of the children were not vaccinated. Tested by vaccination, he (Dr. Barnes) found that 30 per cent. were unprotected. He, in consequence, advised the Shoreditch Guardians to increase the number of vaccinators from six to eight, for he was of opinion that increasing the number of vaccinators would tend to dispel prejudices and to increase facilities for vaccination. He considered that the new system of limiting and concentrating vaccine stations had not shown itself successful. At Islington, for instance, the number of vaccinations had fallen considerably. Dr. Barnes allowed there were many advantages in the new system, but thought they were too dearly bought if the number of children to which the advantage was brought was thereby diminished. The two primary conditions for securing good and universal vaccination were so to work the registration of births as to bring every child promptly under Medical observation; and to utilize as large a number of Medical men as possible in the work of vaccination. To effect this, he suggested that the registration of birth should be made compulsory; the freest communication between the Registrars of births and the vaccinators must be provided; the parents of children vaccinated by a private Practitioner must be made answerable for the return of a certificate of vaccination to the Registrar; the number of public vaccinators should be made at least co-extensive with the districts of the Poor-law Medical Officers; and, lastly, some comprehensive scheme of Medical inspection of schools and the community at large as to immunity from small-pox must be instituted.

Dr. Iliff was decidedly adverse to any diminution in the number of vaccinators. The stations in Southwark were too few, too distant, and too cold, and the hours were alike at each; so that if a poor woman missed her opportunity one day, she would have none for a week.

Dr. Letheby showed how, by an efficient system of vaccination, small-pox was almost stamped out in the City. A diminution of the number of vaccinators would, he maintained, be fraught with mischief.

Dr. Tripe not only was adverse to the concentration of vaccine stations, but even advised that house-to-house vaccination ought to be pressed, especially at the present time.

Dr. G. Ross thought the proper thing would be to find out how many children would require the services of the vaccinators; and that the number of vaccinators should be in proportion. He considered that inspection of the poor was necessary, and that vaccine should be carried to them in their houses. In the City of London, the vaccinators got access to the register of births, and then saw to the vaccination of the children.

Mr. Liddle disagreed with many of the preceding speakers. In the present state of vaccination, he thought that many children were not properly vaccinated, and that bad vaccination was worse than none. An efficient system attended with inspection was, he thought, desirable. Mr. Liddle remarked upon the universality of vaccination among the Jewish population, and their almost total immunity from deaths by small-pox.

Dr. Seaton said he was glad to find that the present epidemic was not laid at the doors of the system of vaccination of the Privy Council, otherwise he was prepared to show that those parts of the metropolis where that plan had not been introduced were subject to the greatest ravages. He then proceeded to speak of the investigations that had preceded and paved the way for the present system; the abuses that were found to exist, both with respect to the capacity of the vaccinators, the quality of the vaccine, and the manner in which vaccination was carried out. He maintained that in Coventry, Bristol, Exeter, Manchester, and other places where the system of the Privy Council had had a fair trial, it had been found successful. Public vaccinators were, heretofore, not bound to look after unvaccinated children. Vaccination was so divided and subdivided, that there were not children enough to keep up a regular succession of arm-to-arm vaccination, which is the only perfect method. He agreed with Mr. Marson, that to vaccinate imperfectly was mischievous; it did away with the chance of perfect vaccination, which could not be repeated. The Privy Council Regulations provided that each vaccinator should have an adequate supply of children, so that there should be a weekly succession of fresh lymph for arm-to-arm vaccination. This could not be done without an annual average of at least 500 infants, and in towns a district yielding this number need not be a large one. In the metropolis it had not been got fairly to work, and he therefore recommended that they should suspend their judgment until the system had had a fair trial.

The debate on Vaccination was then adjourned to the next meeting, in order to make room for a paper by Dr. T. Spencer Cobbold, "On Entozoa in relation to the Public Health, especially as regards Sewage Irrigation." This will be found in another column.

Mr. Michael criticised the statements of Dr. Cobbold, and maintained that such dangers had been greatly exaggerated.

Mr. Smee, on the other hand, corroborated the views of Dr. Cobbold, and described the sewage operations of the Croydon Board, in the immediate neighbourhood of his experimental garden, which he believed to be highly injurious to health.

Mr. Hope agreed with Mr. Smee as to the operations of the Croydon Board, for their land was an undrained swamp. He maintained, however, that, under proper conditions, sewage irrigation could be carried on with great benefit and free from the dangers mentioned.

Dr. Hawkesley had long taken interest in the dry system, and thought Dr. Cobbold had proved that the water system was highly injurious.

Dr. Letheby moved, and Dr. Buchanan seconded, that the debate should be adjourned to the next meeting.

Dr. Buchanan expressed a wish that Dr. Cobbold would show, at their next meeting, that entozoa were able to live under the various conditions of sewage, a fact which had been called in question by some of his opponents.

MEDICAL SOCIETY OF LONDON.

Monday, January 2.

John Gay, Esq., F.R.C.S., President, in the Chair.

The President recounted a case of Glanders in the human subject, to which he had been called for the purpose of performing tracheotomy, but there was no dyspnœa, though otherwise the man was very ill. He was an omnibus conductor, and caught glanders from a horse which sneezed in his face. Coryza, pain in neck, difficulty in swallowing, exalted temperature, rigors, etc., were present. The skin looked dusky, and a remarkable stench pervaded the room. The nostrils and fauces were implicated, and sanious pus was discharged from the bowels. There was an eruption on the skin, and the only gland implicated was the submaxillary. The patient died. No examination of the body was procurable. The President made some remarks on the nature and pathology of glanders.

Dr. Webster narrated a case he saw post-mortem at the Hospital at Copenhagen. There was no eruption on the skin. The disease seemed not so rare in North Germany. He thought the disease might be contracted by those who lived in stables occupied by glandered horses, just as, in Spain, Italy, and other warm climates, consumption is believed to be caught from residence in a house with consumptive invalids.

Dr. Fred. Simms inquired as to the degree of prevalence of glanders in London stables.

Dr. Wiltshire remarked that the disease was called glanders when it affected the air passages, and farcy when it affected the skin, areolar tissue, lymphatics, and glands. The disease was communicated by contagion, and possibly by infection. Globules of mucus snorted into the air might be carried some distance, and thus the disease was made to appear infectious. Dr. Wiltshire inquired if the disease was known to affect animals with divided hoofs, and whether, also, carbolic acid had been made use of as a curative agent.

Mr. Roalfe Cox showed specimens from two recently killed Horses, subjects of Chronic Glanders. The septum nasi was especially affected, and also the glands, the special affection of these giving the name to the disease. As Dr. Wiltshire had said, farcy was one and the same disease affecting a different tissue of the system. The name farcy was of Latin origin, and alluded to the stuffed condition of the animal's limbs in this disease. The specimens shown were portions of lung. These organs were studded with small indurated deposits like shot, and these deposits were scattered throughout the lung. In reply to a question from the President, Mr. Cox said that the animals did not recover from this disease, and the only thing to be done was to slaughter them. He never knew an animal of the bovine tribe to be affected with glanders. Further remarks followed, from which the opinion seemed general that glanders occurred more frequently in the human subject than was commonly known.

Dr. Thudichum then read the paper of the evening, being a continuation of the Clinical Experiences of the War. He dwelt especially on the character and effects of the wounds inflicted by the chassepôt and the needle-gun. Many German soldiers were wounded at distances where they could scarcely distinguish the enemy. The wounds so caused were characterised by slight penetrations of the tissues; sometimes the clothes were not rent by the ball, but carried forward into the fleshy parts a short way, and on pulling away the intruded portion of clothes, the ball came away also. The effect of the German bullets was, at their longest range, more severe than that of the French; and at equal velocities, the German bullets, being the larger, had the greater penetrating power. The wounds caused by fragments of shells were fearfully lacerated; the large pieces of shell tear, break, and kill, the smaller penetrate deeply. These fragments often kill without external laceration. The majority of cases in the Hospital to which Dr. Thudichum was attached, were injuries of bones in the secondary state, requiring operative interference. In dressing the wounds, no sponges were used, carded oakum being employed, and after use this was at once burned. Oakum itself was too coarse a dressing for wounds; and Dr. Thudichum preferred phenylised lint. Bone operations did well, because sharp chisels were used; rigorous cleanliness of hands, instruments, and bandages was observed. The patients had plenty of fresh air, and the tents were kept clean. Dr. Thudichum condemns the use of saws, and thinks that bones are the most manageable parts of the body. Wounds from sabre or bayonet were rarely seen, for at close quarters that side generally retired which had the least liking for cold steel. Typhoid fever and dysentery were seen abundantly, the patients being many of them poor, and coming from distant parts of Germany. The author adhered to the old dictum, "that gunshot wounds of the knee-joint required amputation."

Dr. McCormac said his experience agreed with that of Dr. Thudichum. Out of 1800 cases, he could only find one of a bayonet wound, and not one of a sabre cut. He thought excision of the knee-joint for a gunshot wound a very fatal operation; better success attended excisions of the upper extremity. He had seen many cases of injury of the knee where the ball had traversed the joint without penetrating.

Mr. W. Adams said that conservative Surgery on the battle-field was a failure. He mentioned Stromeyer's experience in the Schleswig-Holstein campaign. Then antimony was a great deal used as an antiphlogistic.

Dr. Peter Allen said that in the Crimean campaign they did not practise excision; the rule was amputation.

Dr. Webb, U.S.A., believed the success of conservative Surgery to depend mainly on the cases selected for operation. He detailed several successful cases he had seen during the American war. Amputation in severe injury of the knee-joint should be done on the field; and he considered too much searching after the ball in the wound an objectionable practice.

Dr. Thudichum replied, and the meeting adjourned.

OBITUARY.

GEORGE DAGLISH, Esq., F.R.C.S. Eng.

Mr. George Daglish, of Wigan, died October 20 last. The deceased had practised in that town for more than forty years. In early life he served an apprenticeship with the late Dr. Martland, of Blackburn, and subsequently studied at St. Bartholomew's Hospital, London. He obtained a large practice in Wigan and the neighbourhood, and was held in high esteem both by his patients and fellow-townsmen. His kindly voice and cheery smile will long be remembered by those who knew him. About eight years ago he had a slight attack of an apoplectic character, which passed off. His health, however, gradually failed, and about four years ago he consulted Dr. Noble, of Manchester; subsequently, about a year later, he consulted Dr. Waters, of Liverpool. Symptoms of valvular disease of the heart and fatty degeneration had then developed themselves. From this time Mr. Daglish retired very much from practice. He occasionally suffered from severe attacks of angina and dyspnœa, but he still continued to visit some of his patients and to perform his duties as an alderman and magistrate. On October 18, as he was about to leave his house to pay some visits in his carriage, he had an apoplectic attack. He was at once attended by his assistant, Mr. Hunt (his partner, Mr. Shepherd, being from home); and Dr. Waters, of Liverpool, saw him in the afternoon. He was then slightly conscious, but his condition appeared perfectly hopeless. Dr. Waters saw him again on the following day, and was then joined in consultation by Dr. Noble, of Manchester; but coma had set in, and death took place on the following morning, the attack having lasted only forty-four hours.

Mr. Daglish was a Fellow of the Royal College of Surgeons of England, a Justice of the Peace for the county of Lancaster, and an Alderman of the borough of Wigan. He had been on more than one occasion asked to accept the office of Mayor, but had declined. In politics he was a staunch Conservative. He was a very old member of the British Medical Association, and of its Lancashire and Cheshire Branch, the annual meetings of which he used regularly to attend; and his absence from them in future will be much felt by many of his friends. He was 65 years of age, and was twice married; his second wife survives him. His funeral assumed almost a public character, and was largely attended by the Profession and inhabitants of Wigan. He is succeeded in his practice by Mr. C. D. Shepherd, who joined him in partnership some years ago.

JOHN HARRUP HAMMERTON Esq.,

formerly Resident Medical Officer to St. George's Hospital, died at his residence at Henley-on-Thames on the 10th inst., aged 69. Mr. Hammerton was connected with St. George's Hospital for upwards of forty years, and it may truly be said that the energies of his life were devoted to the interests of that institution. His influence was felt in every department of the Hospital, and either directly or indirectly his opinion had a large share in the regulation of all its affairs. Even the senior officers were often glad to profit by his advice, which was always available for the benefit of the institution, or of any one connected therewith. Whenever any difficulty occurred in the management of the Hospital or the care of the patients, the same influence for good was at hand. Mr. Hammerton's opinion might always be asked, and was always readily given, although the reasons for that opinion were seldom heard. The estimation in which the Governors of St. George's Hospital held Mr. Hammerton, and the sense which they entertained of his services extended over so long a period, have been indicated by a resolution, passed at the weekly Board, and directed to be sent to his nearest relatives. On January 11 it was moved and unanimously carried—"That this Board, fully sensible of the valuable services of Mr. John Hammerton during the long period in which he resided as Medical Officer in the Hospital, are desirous of expressing the sincere sympathy of the Board with Mr. Hammerton's family in the loss which they have sustained." The Treasurer was requested to be good enough to communicate the above resolution to the family of the late Mr. John Hammerton.

Death of a Centenarian.—In the Dublin papers of Monday last, the 23rd inst., was recorded the death of Mrs. Ballantine, of Dundrum, county Dublin, in the 106th year of her age. It is stated that she retained all her faculties to the last.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners, on the 24th inst., viz.:

Aikin, Charles Edmund, Clifton-place West, of Guy's Hospital.
Beamish, James Maybury, M.D. Queen's University, Ireland, Cork, of the Dublin School.
Bradford, Henry, L.R.C.P. Edin., Great Ormond-street, of St. Bartholomew's Hospital.
Carey, Francis James, M.A. Lond., Clapton-square, of Guy's Hospital.
Cass, Stafford Thomas, L.R.C.P. Edin. and L.S.A., St. George's-road, of King's College.
Clapham, William Crochley Sampson, Southsea, of Guy's Hospital.
Claridge, William, L.S.A., Brook-street, St. George's Hospital.
Clarke, Thomas Kilner, M.A. Cantab., Huddersfield, of Guy's Hospital.
Doran, Albert Henry Griffiths, Lansdown-road, Notting-hill, of St. Bartholomew's Hospital.
Duke, Bernard, L.S.A., Littlehampton, of King's College.
Epps, Washington, Devonshire-street, of University College.
Feltham, Charles, Portsmouth, of St. Bartholomew's Hospital.
Harril, Charles Henry, Leeds, of the Leeds School.
Image, Francis Edward, M.B. Cantab., L.R.C.P. and L.R.C.S. Edin., Bury St. Edmunds, of the Edinburgh School.
Johnson, Arthur Jukes, M.B. Toronto, of St. Thomas's Hospital.
Lewis, Lewis, Argyll-square, of University College.
Longhurst, Alexander Keene, L.S.A., Farnham, Surrey, of University College.
Moore, Henry Cecil (late Lieutenant Royal Engineers, H.M.'s Bombay Army), of the Birmingham School.
Moss, James West, L.R.C.P. Edin., of the Manchester School.
Mugliston, Henry Boyes, L.S.A., Upton, Essex, of the London Hospital.
Netherclift, William Henry, L.S.A., H.M.'s Convict Prison, Portsmouth, of the Charing-cross Hospital.
Newton, Charles John, L.S.A., Cheltenham, of St. Bartholomew's Hospital.
Ray, William Joseph Richard, L.S.A., West-square, of the Westminster Hospital.
Ree, Frederick George, Fulham, of St. George's Hospital.
Skinner, Edward, L.R.C.P. Edin., Sheffield, of the Sheffield School.
Tomlins, James, Manchester, of the Manchester School.
Whitehead, Alfred, Birmingham, of the Birmingham School.

The following candidates passed on the 25th inst., viz.:—

Bullock, James Lawrence, Berkhampstead, of University College.
Cross, Francis Richardson, Clifton, Bristol, of King's College.
Davenhill, Robert Septimus, L.S.A., Wolverhampton, of St. Bartholomew's Hospital.
Doyle, Jeremiah, Enniscorthy, of the Dublin School.
Dunnage, Arthur Richard, Surbiton, of Guy's Hospital.
Evans, Charles, Oldham, of the Manchester School.
Holman, Robert Colgate, L.S.A., East Hothley, Sussex, of Guy's Hospital.
Hosegood, Samuel, L.S.A., Williton, Somerset, of Guy's Hospital.
Kay, Hildreth, Commercial-road, of the London Hospital.
Lyell, Robert Wishart, Upper Norwood, of King's College.
Parker, Walter Augustus, Chelsea, of St. George's Hospital.
Pires, Joseph Octaviano, Bombay.
Rowland, George Le Hunt, Gray's Inn, of King's College.
Slaughter, William Budd, L.S.A., Farningham, Kent, of St. Thomas's Hospital.
Sparrow, Richard Henry, Dublin, of the Dublin School.

Eleven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for six months.

Apothecaries' Hall.—The following gentleman passed his Examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, January 19, 1871:—

Wood, Robert Arthur Henry, Liverpool.

As Assistants in Compounding and Dispensing Medicines:

Holding, John, Exeter.
Throake, Marler Hamilton, Kingsbridge, Devon.

The following gentleman also on the same day passed his First Professional Examination:—

Dudley, William Henry, University of Glasgow.

MILITARY APPOINTMENTS.

Medical Department.—Staff Assistant-Surgeon Robert Turner, from half-pay to Staff-Surgeon, *vice* George Thomas Bourke, deceased; Assistant-Surgeon Henry Joseph O'Brien, M.B., from 8th Foot, to be Staff Assistant-Surgeon, *vice* Albert Halahan L'Estrange, appointed to the 8th Foot; Assistant-Surgeon Edward Connellan, Supernumerary in 7th Foot, to be Staff Assistant-Surgeon, *vice* Hunt Johnson Bailey, placed on half-pay.

8th Foot.—Staff Assistant-Surgeon Albert Halahan L'Estrange, to be Assistant-Surgeon, *vice* Henry Joseph O'Brien, M.B., appointed to the Staff.

65th Foot.—Staff Assistant-Surgeon William Graves, to be Assistant-Surgeon, *vice* John Williams, whose transfer from the Staff, in the *Gazette* of November 11, 1870, has been cancelled.

BIRTHS.

Gill.—On January 16, at 4, Camden-crescent, Dover, the wife of J. B. Gill, M.D., of a daughter.

James.—On January 20, at 87, Clarendon-road, Notting-hill, W., the wife of Richard James, M.R.C.S., of a son.

Kirkman.—On January 23, at Barming-heath, Maidstone, the wife of Dr. Kirkman, of a son.

McCoy.—On Janury 19, at No. 6, Selwood-villas, Cotham, Bristol, the wife of Robert William McCoy, M.D., F.R.C.S.I., Colonial Surgeon, Sierra Leone, West Africa, of a son.

Savage.—On January 17, the wife of Thomas Savage, M.D., F.R.C.S., of Birmingham, of a daughter.

Ward.—On January 23, at Saltburn, Twickenham-common, the wife of Martindale C. Ward, M.D., of a daughter.

Wise.—On January 17, at Gothic-villa, Burrage-road, Plumstead, the wife of William C. Wise, M.D., of a daughter.

MARRIAGES.

Birch—Lambert.—On January 17, at St. John's, Hackney, George Birch, M.R.C.S.E., to Eliza Isabella, eldest daughter of Mr. John Lambert, of Finsbury.

Good—Summers.—On January 20, at All Saints' Church, Gordon-square, William Clements Good, Esq., of Aberdeen, son of Clements Good, K.D., his Danish Majesty's Consul-General, Hull, to Emily Elizabeth, daughter of John Summers, M.D., Deputy Inspector-General of Hospitals, Peshawur, India.

Harling—Pickering.—On January 19, at New Brighton, R. D. Harling, M.D., of Seymour-street, Portman-square, to Katherine Elizabeth, eldest daughter of C. W. H. Pickering, Esq., New Brighton, Cheshire.

Istomin—Edgcome.—On January 20, at St. Petersburg, Serge Istomin, eldest son of Admiral Istomin, of the Imperial Russian Navy, to Mary Philp, second surviving daughter of James Edgcome, M.D., of 24, Brunswick-square, London, W.C.

Stilwell—Blest.—On January 19, at St. Andrew's Church, Sibertwold, Arthur Finnis Stilwell, Esq., eldest son of the late Arthur Stilwell, M.D., of Moorcroft, Hillingdon, to Caroline Louisa, second daughter of Alexander Melville Blest, Esq., of Sibertwold.

Ussher—Johnston.—On January 19, at the Iron Room, Balham, Henry Ussher, A.B., M.B., T.C.D., of Lansdowne-terrace, Wandsworth, son of the late Richard Beverly Ussher, Captain in H.M.'s 86th Regt., to Charlotte Elizabeth, eldest daughter of Robert Lyon Johnston, Esq., of St. Ann's-hill, Wandsworth.

Vines—Stevens.—On January 19, at Edgbaston, Henry J. Kendrick Vines, F.R.C.S., of Reading, to Caroline Ellen, fourth daughter of the late Rev. W. H. Stevens.

DEATHS.

Archdall.—At 10, Bolton-row, Mayfair, the daughter of Dr. Gordon Archdall, on January 18, aged 10 weeks.

Armitage, Alice Mabel, only daughter of C. H. Armitage, M.D., at 9, Huntress-row, Scarborough, on January 19, aged 5 years.

Brown, Tobias Rustat, second son of the late John Browne, Surgeon, of Camberwell, Surrey, at Buenos Ayres, South America, on November 25, aged 43.

Jackson, Agnes Hildegarde, the beloved wife of Dr. James Jackson, and the third dearly-loved child of the late Francis Helfrich, of Brompton, at Mount Gambier, South Australia, on November 29, 1870.

Latham, Anne Hodges, relict of the late John William Stanley Hodges, M.D., R.N., at her residence, 66, Gloucester-place, Portman-square, on January 15.

Lucas, St. John Welles, House-Surgeon at the Royal Infirmary, Windsor, son of St. John W. Lucas, Esq., Withington, near Manchester, and grandson of the late Capt. J. W. Bazalgette, R.N., at Windsor, on January 14, of scarlet fever.

Nisbet, Matthew, M.D., H.E.I.C.S., at 10, Lansdown-crescent, Cheltenham, on January 17, aged 74.

Oldfield, Henry Ambrose, M.D., late Surgeon-Major in the Bengal Medical Service, on January 19, in his 49th year.

Packman, John, Esq., formerly Assistant-Surgeon 72nd Regt., at Canterbury-place, Lambeth, on January 17, in his 85th year.

Parker, Frank, third son of the late Henry Parker, M.D., of Overton, at the Watergate, Chester, on January 17, aged 41.

Rice, Charlotte, eldest daughter of the late Rev. John Howard Rice, LL.D. and M.D., at 1, Westmoreland-road, Westbourne-park, on January 21.

Richardson, Isabella, the dear wife of Mark Richardson, M.D., late Surgeon Bengal Army, at 95, Inverness-terrace, Hyde-park, on Jan. 18.

Soden, John, F.R.C.S., late of Bath, on January 19, aged 57.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Dursley Union.—Medical Officer for District No. 3. Candidates must be duly qualified in accordance with the General Orders of the Poor-law Board. Applications and testimonials to Mr. George Weaden, Clerk to the Guardians, on or before February 15. Election on the 16th.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Royal Cornwall Infirmary.—House-Surgeon, Secretary, and Dispenser; must be L.S.A. Applications and testimonials to R. Tweedy, Esq., Truro, on or before February 1. Election on the 9th.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

Windsor Royal Infirmary and Dispensary.—House-Surgeon. Applications and testimonials to the Secretary on or before February 7.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bellingham Union.—Mr. C. R. Kendal has resigned the Fourth District area, 9860; population, 285; salary, £12 per annum.

East Retford Union.—Mr. Marshall has resigned the Clarborough District; area, 20,817; population, 5106; salary £40 per annum; and the Workhouse, salary, £15 per annum.

Farnham Union.—Mr. Knowles has resigned the North District; area, 4350; population, 4831; salary, £75 per annum.

Neath Union.—The Llansamlet District is vacant; population, 5475; salary, £35 per annum.

Wrexham Union.—The Hope District is vacant; area, 11,703; population, 4646; salary, £15 per annum.

APPOINTMENTS.

Bramley Union.—Alfred Rickards, L.R.C.P. Lond., M.R.C.S. Eng., to the Armley District.

Guisborough Union.—Alexander Keith, L.R.C.P. and S. Edin., to the High Ormesby District. James Glen, B.M. and M.C. Univ. Glas., to the Low Ormesby District.

Lichfield Union.—Augustus Newman, M.R.C.S. Eng., L.S.A., to the Alrewas District.

Merthyr Tydfil Union.—Walter R. S. Jefferiss, B.M., M.C., L.M. Univ. Edin., L.R.C.S., L.R.C.P. Edin., to the Penderyn District.

MRS. LEGGATT passed the preliminary examination in Arts at the Apothecaries' Hall, Dublin, on Friday, the 20th inst.

BABOO KANYELAH DEY, a Bengalee Chemist of local distinction, has been appointed a Fellow of the Calcutta University.

THE office of London Physician to St. Ann's Royal Society's School has become vacant by the death of Dr. Mayo, F.R.S. The appointment is in the gift of the whole body of subscribers. Office, 52, King William-street, London-bridge.

IMPRISONMENT FOR NON-VACCINATION.—The parents of some children in Toxteth-park having refused to have their children vaccinated, and, on being fined, neglecting to pay the fine, the Liverpool county magistrates, on Saturday, granted warrants for their commitment to prison for seven days.

LONDON WATER. — At the lecture of Professor Tyndall, at the Royal Institution, on Friday last, "On the Supply of Water to London," nine bottles, containing samples of the water of the nine London Companies, were passed before the electric lamp, and revealed a condition of things which disgusted the audience considerably. Lambeth was pre-eminent in bad qualities, but all the specimens were far from pure.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK. — During the Christmas week, the patients in this institution, in addition to the usual dinner and tea, had small presents given them at the expense of some members of the committee, consisting of flannels, chest-protectors, comforters, shawls, etc., made by the female patients under the superintendence of the matron.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—At the meeting of this Society, held on Friday, January 13, Dr. Clapton, F.R.C.P., President, in the chair, a paper "On the Treatment of Stricture of the Urethra by the Employment of the Stricture Dilator" was read by Barnard Holt, F.R.C.S., Senior Surgeon to the Westminster Hospital. After reading the paper, Mr. Holt exhibited and explained the action and use of his "winged" catheter. Drs. Ralph Gooding, Moon, and Purvis, and Messrs. Johnson, Smith, J. P. Purvis, and Lockhart, took part in the discussion which followed.

UNUSUAL INVASION OF SMALL-POX.—The weekly report of the Alice Hospital at Darmstadt, for January 5, gives the following case:—"A case reported last week as admitted with sciatica, developed into small-pox of an unusual and severe type. The man died on Christmas-day. He was a Prussian soldier, and came direct from the neighbourhood of Paris. The eruption, which was not preceded by any of the usual symptoms, began in the right groin, and had the appearance of a common erythema. It spread upwards over the trunk, and reached the face, which became somewhat swollen. During this time the temperature was about 40° Celsius, but the patient suffered no inconvenience. He took food well, and slept well. On the fifth day pustules appeared, which on the body were isolated, but on the face extremely numerous and confluent. They also appeared on the fauces and tonsils. The conjunctivæ were not affected. The patient was now unable to swallow, and the lungs became œdematous. Death occurred on the eighth day. Another case, commencing in a similar way, has been transferred to the garrison Hospital."

DEATH IN A POLICE-CELL.—Yesterday afternoon an inquest was held by Dr. Diplock, at the Isleworth Workhouse, on the body of an elderly man, named Benjamin Vaughan, who was found in an insensible condition on the floor of the Acton Police-cell on Saturday night, where he had been consigned on a charge of being "drunk and incapable." The man was found lying in the road in front of the King's Arms, Acton, by Police-constable 327 X, who, as he smelt of rum, conveyed him to the police-station, and charged him with being drunk and incapable. He was placed in the cell, which was warmed by hot air, and was visited every half-hour until about half-past ten, when Police-serjeant 35 went to him, and found he was on the floor of the cell, having fallen off the seat, in an insensible condition. A Medical man was sent for, who certified that he was suffering from prostration, and ordered his removal, having first given him a stimulant. The serjeant then procured a cab, and sent him to the Isleworth Workhouse, a distance of between four and five miles. He arrived there about two on Sunday morning, and, notwithstanding that the Medical officer attended him, he died shortly afterwards. The post-mortem examination of Dr. Mackinlay, yesterday morning, showed that the deceased died from congestion of the brain. On an examination of the intestines, he found no trace whatever of either beer or spirits, and only about four ounces of a semi-fluid substance of a yellow colour. The coroner, in summing up, pointed out how injudicious it was to remove a man upwards of four miles when in a dying condition, when Police-constable 17 X, of Acton, said the police had no other alternative but to do so, as there was no accommodation at the station. The jury eventually returned a verdict that the deceased died from the effects of effusion on the brain, and that the said death was due to natural causes. They also suggested that Colonel Henderson should be written to, with a view to providing accommodation for such cases at police-stations, and for allowing the officers to exercise more discretion in such matters. The coroner concurred in the suggestion.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Gross, Gibraltar.—Your letter, with enclosure, came safely to hand.

Alpha.—Try the late Dr. George Wilson's "Five Gateways of Knowledge."

D.C.L.—The article is by Professor Nagel, of Tübingen, and appeared in the *Centralblatt für die Medicinischen Wissenschaften* for December 24, 1870.

B. H. E.—The mistake arose at the institution in question, not with us. We trust it has occasioned you no annoyance.

Dr. Harrison, Baltimore.—Your letter, with inclosure, has come safely to hand. The paper shall be sent in monthly parts, though it will be at the higher rate of postage.

John Thimbleby.—Clark's process for softening water is only available for waters owing their hardness to bicarbonate of lime, the soluble form of the compound. To render it insoluble, quicklime is added, converting the bicarbonate into the carbonate or ordinary chalk, which is insoluble and so thrown down.

Anti-Vaccination League.—The contemptible statements of this contemptible clique are no doubt injurious to the public welfare, but they do not exercise so much influence as some imagine. The noise made by the "League" is great, and the cry loud, but it is losing ground; the "logic of facts" is stamping out the efforts of the silly but wicked conspirators.

An Articled Pupil (Liverpool).—It is derogatory to his position and not within his duties—1. To wash and dust the surgery bottles. 2. To act as groom to the Surgeon to whom he is articled, by holding his horse and trap at the doors of his various patients whilst he goes in. 3. Carrying out medicines. 4. Acting as errand-boy in fetching medicines. The "master," being bound to instruct his apprentices—1. Should take one of them to any accident that might occur. 2. He is not exempt from Sunday duty. 3. From 9 to 9 is not excessive; an hour to each meal.

Preston.—We have read with care and interest the proceedings at the Police-court at Preston on Monday last, as reported in the *Preston Evening News*. After the statement of the Medical witnesses called for the prosecution, we think that Dr. Bowen should have consented to the examination of the patient by Mr. Harrison, of Liverpool. What are the facts? That the man Forster was stabbed in the region of the stomach with a dagger; that the wound was one inch and a half in length; that the stomach itself protruded; and that this organ had a wound through its entire structure of two inches and a half in extent. That the man vomited, took drinks, and that after this the protruded stomach was replaced, without anything being done to the wound. The external wound was sutured, and the man kept quiet. But he took fluids, and, as we gather from the report, occasionally vomited; yet there was no evil result, no peritonitis, and the man recovered without a bad symptom. In such a miraculous case as this, no trouble is too great to arrive at the truth. We trust the Mayor will issue an order for the fullest investigation. The paltry quarrels between the "Doctors" must have no influence on the inquiry.

CORRIGENDUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—My attention having been called to an article in your paper of the 14th instant, headed "Reminiscences of an Old Guy's Man," I should feel obliged by your permitting me to correct a slight inaccuracy in the allusion to myself which that article contains.

It is stated that the eldest son of the late John Morgan succeeds his grandfather and uncle in the Old Equitable Life Assurance Office. This is not quite correct. On the death of my uncle, Arthur Morgan (the late Actuary), in March last, Mr. John W. Stevenson, who had for many years occupied the position of Assistant-Actuary to the Society, was unanimously elected to fill his vacant place; and the position which I have the honour to fill is that of Assistant-Actuary, vacated by Mr. Stephenson.

I am, &c.
W. Morgan.

Equitable Assurance Office, London,
January 19.

COMMUNICATIONS have been received from—

Mrs. Baines; Mr. W. Morgan; Dr. Edward Waters; Mr. E. P. Martin; Dr. McKilliam; Mr. John Becke; Mr. H. Courtenay Fox; Mr. J. P. Purvis; Alpha; Mr. T. Piper; Mr. B. H. Eccles; Mr. Walsh; Mr. Sydney Jones; An Old University College Man; An Articled Pupil; D. C. L.; Mr. G. J. Scale; Mr. Weightman; Professor Laycock: Mr. H. Arnott; Mr. Spencer Wells; Mr. J. Chatto; Mr. John D. Hill; Dr. F. A. Hartsen; Dr. Wahltuch; Dr. T. Spencer Cobbold; Mr. Jones; Dr. Thomas Jones; Mr. Stephen Mackenzie; Dr. Phillips; Mr. Lawson Tait; Dr. T. Gibson; Mr. D. W. Crompton; Mr. H. C. Lawrence; Dr. Meadows.

BOOKS RECEIVED—

John Woodman, F.R.C.S., on Transplantation of Skin—Dr. Allen on Aural Catarrh and Curable Deafness—Dr. N. Chever's Manual of Medical Jurisprudence for India—Transactions of the Odontological Society of Great Britain, vol. iii. No. 3—What we Observed during a Visit to the Seat of War in 1870.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—The Leeds Mercury—The Journal of Anthropology, January, 1871—Pharmaceutical Journal—New York Medical Journal, January—Woodhull and Claflin's Weekly—The Manchester Courier—The Preston Evening News—Medical Press and Circular—The New York Medical Gazette.

APPOINTMENTS FOR THE WEEK.

January 28. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Rev. W. H. Channing, "Laws of Life Revealed in History."

30. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. W. Spencer Watson, "Two Cases of Ptosis Treated by Operation." Dr. Richardson, F.R.S., "Notes on Transfusion of Blood, and on a New Apparatus for Transfusion." Mr. Jno. Gay (President), "A Case of Internal Strangulation by a Band, and its Successful Treatment." Dr. Peter Allen, "On the most Recent Methods of Inflating the Tympanum" (the Instruments exhibited).

31. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Anthropological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

February 1. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Obstetrical Society, 8 p.m. President's Address. Dr. Playfair, "On Irritable Bladder in the Latter Months of Pregnancy." Drs. Braxton Hicks and Phillips, "Remarks on Tables of Mortality after Obstetric Operations."

Society of Arts, 8 p.m. Meeting.

2. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

3. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Meeting of Council.

Royal Institution, 9 p.m. Mr. W. Spottiswoode, Treas. R.S. and R.I., "Some Experiments on Successive Polarisation of Light made by Sir C. Wheatstone."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 21, 1870.

BIRTHS.

Births of Boys, 1187; Girls, 1175; Total, 2362.
Average of 10 corresponding weeks, 1860-69, 2113·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	915	931	1846
Average of the ten years 1860-69	817·3	849·5	1666·8
Average corrected to increased population	...	...	1834
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa,
West	458125	35	4	10	1	6	...	...	3	4
North ...	618210	45	1	16	3	7	1	2	3	...
Central ...	383321	12	3	6	1	7	1	4	...	2
East	571158	67	2	12	...	21	2	1	6	6
South	773175	29	7	24	1	10	1	5	5	5
Total	2803989	188	17	68	6	51	5	12	17	17

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·147 in.
Mean temperature	37·1°
Highest point of thermometer	45·7°
Lowest point of thermometer	30·7°
Mean dew-point temperature	35·1°
General direction of wind	S.S.W.
Whole amount of rain in the week	1·32 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 21, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Jan. 21.	Deaths Registered during the week ending Jan. 21.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2362	1846	46·7	30·7	37·1	2·84	1·32	3·35
Portsmouth ...	125464	13·2	74	29	48·2	31·4	38·5	3·61	1·55	3·94
Norwich	81787	10·9	61	48	43·2	26·0	34·5	1·39	0·08	0·20
Bristol	173364	37·0	122	95	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	48	32	43·2	27·3	35·1	2·73	0·75	1·90
Birmingham ...	378574	48·3	273	248	44·0	27·7	36·3	2·39	0·53	1·35
Leicester	101367	31·7	91	58	43·7	25·0	34·5	1·39	0·56	1·42
Nottingham ...	90480	45·3	60	49	44·6	25·8	36·0	2·22	0·24	0·61
Liverpool	526225	103·0	422	510	43·4	26·2	34·9	1·61	0·56	1·42
Manchester ...	379140	84·5	256	211	...	...	...	...	...	...
Salford	123851	23·9	119	79	43·4	21·8	34·4	1·33	0·45	1·14
Bradford	148030	22·5	69	81	45·8	28·2	36·7	2·61	0·15	0·38
Leeds	266108	12·3	182	135	47·0	28·0	37·9	3·28	0·37	0·94
Sheffield	255247	11·2	193	124	44·5	25·9	36·0	2·22	0·66	1·68
Hull	135195	38·0	93	80	42·0	18·0	32·7	0·39	0·26	0·66
Sunderland ...	103037	31·2	71	54	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	96	73	43·0	23·0	33·4	0·78	0·00	0·00
Edinburgh	179944	40·6	138	104	41·7	29·0	36·1	2·28	...	...
Glasgow	477627	94·3	363	302	43·5	26·6	35·5	2·95	0·38	0·97
Dublin (City, etc.†)	322321	33·1	137	218	44·0	28·0	36·4	2·44	0·87	2·21
Total of 20 Towns in United Kingd'm	7336941	34·4	5230	4376	48 2	18·0	35·6	2·01	0·54	1·37
Paris—Week ending Jan. 21	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Jan. 7 ...	622087	68	...	421	...	...	15·8	−9·00	...	...
Berlin—Week ending Jan. 21 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·15 in. The highest was 29·68 in. on Sunday, and the lowest was 28·70 in. on Monday.

The general direction of the wind was S.S.W.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

LECTURES DELIVERED
IN THE
PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

Lecture III.—On the Coloured Blood Corpuscles—(*Continued*).

Of the several methods I referred to in last lecture by which the more delicate-coloured part of the blood corpuscles may be caused to leave the more solid resistant stroma, the simplest is that which consists in freezing and thawing it. The experiment is easy. In this mortar some ice has been pounded, along with a similar quantity of common salt. In the platinum capsule there is about half a teaspoonful of bullock's blood, which has been deprived of its fibrioe by stirring. It is now opaque, and looks bright scarlet by reflected light. We set the capsule in the mortar, pressing it down into the ice and salt. As soon as it becomes solid we shall remove it, and let it thaw. We shall find that its appearance is entirely altered; that it has become darker in colour, and that we see through it rays of light which are reflected from that part of the surface of the porcelain capsule which is covered by it. And if we place a drop of it under the microscope, it will be seen that, microscopically, the alteration is as striking as that we have observed with the unaided eye. At first we shall be inclined to suppose that the corpuscles have disappeared, but if we look more attentively we shall discover the remains of them in the form of circular outlines of extreme delicacy, while the whole field is uniformly stained yellow by their escaped contents. [Unless the quantity of blood used is extremely small, it is necessary to repeat the freezing and thawing several times; but in the experiment made in the class one freezing was found to be sufficient.]

When human blood through which an induced interrupted current has been passed is examined, its condition can scarcely be distinguished from that produced by freezing. If, however, fresh blood is used, and the experiment is performed with care, and particularly if single opening shocks (see last lecture) are applied in succession at intervals of a few seconds, a series of changes in the corpuscles themselves are observed before the ultimate result is attained. The corpuscles lose their spheroidal contour and become knobby, the knobs being at first rounded, afterwards more conical or pointed, and eventually the colour is discharged as above described. In the corpuscles of the frog the changes are of a similar nature. There are, however, some facts relating to the conduct of the nucleus which are worthy of special note. In living blood corpuscles the nucleus becomes rounder, apparently smaller, and much more refractive than it was before, while the contour of the corpuscle itself becomes less elliptical. In the newt I have observed that the nucleus approaches the surface of the corpuscle just before the discharge of the coloured part from the stroma, and not unfrequently escapes along with it. It is also common to observe at an early stage in the process, that the coloured substance, after it has become free, forms itself into drops which look like drops of coloured oil, and swim about for a short time in the comparatively colourless liquor sanguinis without being dissolved in it. After coalescing with other drops of similar origin, they eventually fade away.

In interpreting these phenomena, it is necessary to distinguish carefully between those which are peculiar to living blood and may be dependent on contractility, and those which result from molecular changes of other kinds. Great care must also be taken not to confuse the results of electrolysis, particularly those which occur at the positive—that is, acid—pole, with the more direct effects of the induction current. The last of these two sources of uncertainty may probably be avoided if single opening shocks are used throughout; for, when this is the case, there is no development of gas in the neighbourhood of the tinfoil points. As regards the former, further observations are wanted. I have noticed that, so far as relates to the mere solution of the colouring matter in the liquor sanguinis, the action of the induced current is just the same, whether the blood used is taken from the living animal or from one which has been dead for several days; but I believe that the changes of form observed in the corpuscles of mammals, and in the nuclei of batrachians, are seen only in living blood. The action of chloroform on the blood I shall have to refer to in connexion with another subject.

On Blood Plasma.

Observation XIII.—Demonstration of the Modes of Separating the Constituents of the Blood by Mechanical Means.

As the blood is not a liquid, in the strict sense, but consists of coloured and colourless corpuscles suspended in liquor sanguinis, it is necessary, in order to examine this liquid, to separate the corpuscles from it by mechanical methods—*i.e.*, by subsidence and decantation or filtration. As, however, you cannot, under ordinary circumstances, remove blood from the body without its undergoing that remarkable change which we call coagulation, you cannot apply either of these methods to the blood unless by some means or other you can contrive to keep it in a liquid state.

The earliest attempt to overcome the difficulty was made by Johannes Müller. His experiment consisted in allowing a frog to bleed into a solution of sugar (half per cent.), and then rapidly filtering the mixture. The large corpuscles of the frog's blood are retained, and the liquid passes transparent and free from corpuscles. After a time it solidifies to a trembling jelly, which eventually contracts into a clot surrounded by serum.

This experiment was, for a long period, the only proof of the existence in the blood of a liquid possessing the properties of plasma—that is, of the fact that the liquor sanguinis solidifies when left to itself quite independently of the corpuscles. It does not, however, enable us to study the properties of this liquid completely, because in Müller's filtrate it is diluted with saccharine solution. The experiment we are now going to make is a modification of that of Müller. This test-tube (No. 1), which is capable of holding about a couple of drachms of liquid, is already filled to about one-fifth of its depth with saturated solution of sulphate of soda. A second test tube of similar size is a quarter full of a solution of sugar of the strength employed by Johannes Müller. The liquid in the third tube is solution of common salt, containing one part of chloride of sodium in 200 parts of water. Having exposed and divided the pericardium of a frog, taking care not to open the pleuro-peritoneal cavity, I make a snip in the ventricle with sharp scissors, and allow some of the blood which escapes from it to fill the remaining four-fifths of tube No. 1, and the rest to flow into tubes 2 and 3, adding to the liquids contained in them about the same quantity of blood. In tube No. 2 we have, of course, a repetition of Müller's experiment, the only peculiarity being that we have used the liquids in definite proportions. We throw the liquid on to a filter, taking care that it is made of strong, close-fibred paper. You will find that a very short time after the filtrate has passed, it will solidify and form a gelatinous clot. In tube No. 3 the liquid will also solidify spontaneously, but not nearly so promptly. The process will be much accelerated if the tube is placed in an air-bath in which the temperature is maintained at 100° Fahr. We shall first see what result we get at the temperature of the room, and then, if it does not gelatinise, subject it to the higher temperature. In tube No. 1 we are following a method used by Denis.(a) By filtering a mixture of frog's blood with four or five times as much sulphate of soda, we obtain a liquid which differs from either of the other two filtrates in its not being spontaneously coagulable. From the sugar-mixture we have a liquid which coagulates immediately; from the salt a liquid which coagulates after a time; but from the sulphate of soda a liquid of which the coagulation is indefinitely postponed; the reason being that the two neutral salts exercise, though in very different degrees, a retarding effect, whereas sugar is indifferent as regards coagulation, and facilitates filtration merely because it dilutes the liquor sanguinis without destroying the blood corpuscles as water does.

In the present instance we may satisfy ourselves that the reason why the liquid does not coagulate is that it is prevented by the sulphate of soda, by observing the effect of dilution. If the solution of soda with which we mix the blood is saturated, we may go on adding distilled water, even in considerable

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(a) Denis, "Nouveaux Etudes Chim. sur les Substances Albumineuses." Paris. 1856.

quantity. It is not until we have added about seven times its volume that the liquid becomes spontaneously coagulable. If, as in the present instance, the liquid used contains only one part in four of saturated solution, we have a much more striking result. Undiluted, the liquid does not coagulate, but the addition of a single volume of water is sufficient to bring about the effect for which seven volumes were required before. Now, saturated solution of sulphate of soda contains about 50 per cent. of the crystalline salt. It must, therefore, be present in a proportion of not less than 6 per cent. in a coagulable liquid, to prevent its coagulation at ordinary temperatures.

It is not possible to filter mammalian blood, for the corpuscles are so small that they will run through the finest paper. We must, therefore, have recourse to subsidence. Here is a tube in which bullock's blood, which has been defibrinated by the process of stirring, has been added to one-half per cent. of sugar solution, and allowed to stand. You see how completely the corpuscles have subsided, and that they form a sharply-defined stratum at the bottom. Here, again, is a large beaker, containing the same blood diluted with ten times its volume of one per cent. solution of common salt, in which the subsidence is complete. In the undiluted whipped blood you see no such subsidence, although it has stood quite as long; but in the other two cases the sinking of the corpuscles has been facilitated by the addition to the blood of a liquid of less density than the liquor sanguinis.

It has been long known that, in the horse, coagulation of the blood takes place much more slowly than in other animals. The blood of the horse remains liquid even at ordinary temperatures for nearly an hour. Here you see a glass jar, into which a horse was bled yesterday. The blood is coagulated. The cylindrical clot, which has scarcely yet had time to contract, and still adheres to the side of the glass at one or two points, is divided by a tolerably defined horizontal line into an upper colourless and a lower deeply-coloured part, the former being a little more than half the depth of the latter. In the other glass, which contains bullock's blood, and is also coagulated, the clot is all of one colour. The meaning of the difference between them is, that in the one case the corpuscles have had time to descend through the upper stratum of liquid before it solidified, whereas in the other their descent has been anticipated by the formation of the clot.

The fact that in the blood of the horse the clot is formed more slowly than in other animals, renders it specially suitable if we desire to separate the corpuscles from the liquor sanguinis by subsidence; but, as you see, we do not even here accomplish our object. To succeed we must have coagulation not merely delayed but prevented. For this purpose there is but one means available—*i.e.*, cold. We have already seen how much temperature has to do with the process; for example, liquid which coagulates at once when introduced into the air-bath, remains liquid at the ordinary temperature. The only process by which plasma can be obtained in an unmixed state is by subjecting the blood, as it flows from the animal, to a freezing temperature. We have attempted to do this in the large jar surrounded with ice which stands on the table, but I am sorry to say not successfully. It is two-thirds full of blood, which, as you see, is in great part coagulated, notwithstanding that before the blood was allowed to flow from the veins of the animal into the vessel, it was surrounded with a mixture of snow and salt, and that it has been kept in it ever since. If the experiment had been successful, the blood would have remained liquid. In the course of a few hours the corpuscles would have fallen to the bottom completely, and the upper half of the column would have consisted of transparent, somewhat viscous liquid, of the colour of serum, but differing from it in being coagulable. As it is, I am able to demonstrate that the liquid in which the upper colourless part of the clot floats, although not plasma, is yet not mere serum—that although it has lost some of its fibrine-forming constituents it has not lost all, for some of it which was placed last night in the air-bath has coagulated.

We need not, I think, be at a loss for an explanation of the failure of our experiment, although it was performed strictly according to rule. What we may presume to have happened is this: the cylinder being somewhat too large for the purpose, those parts of the mass of blood introduced into it which came in contact with the sides of the vessel were suddenly frozen, while the rest remained liquid, and at a higher temperature. As temperature equilibrium was gradually restored, some of the frozen blood thawed, and consequently acquired a greater tendency to coagulate. Another time we shall use somewhat smaller cylinders, and probably not add any salt to our ice, for unquestionably the rapidity with which freezing occurred was prejudicial to the result.(b)

OBSERVATION XIV.—ON THE CONDITIONS OF COAGULATION.

In the experiments we have been making, we have not only learnt how to separate the constituents of the blood mechanically from each other, but have become familiar with one fact of great importance as regards coagulation—namely, that it is dependent on temperature; that at 0° C. it is indefinitely postponed; and that at temperatures between this and that of the body, the delay becomes shorter as the temperature rises. We have also learnt the influence of certain neutral salts as hinderers of coagulation, and have seen that their power of doing so varies with the strength of the solution. Another condition which we might illustrate experimentally is that of the influence of acid and alkaline reaction. The addition of alkalies or alkaline carbonates to any coagulable liquid prevents the formation of a clot; so, also, if blood or plasma is feebly acidulated with acetic acid, it loses its power of coagulating, but regains it if the acid is accurately neutralised. I content myself with the bare mention of these important facts, in order that I may at once direct your attention to those experiments which relate to what may be called the vital conditions of coagulation—*i.e.*, to the so-often-repeated question, Why does the blood coagulate?

Fibrine is mainly distinguished from other albumens by the fact that it originates by concretion from the whole mass of coagulating blood, either in the form of a hyaline jelly, or as a meshwork of infinitely minute fibres. The gelatinous form you have had several opportunities of observing. Its perfectly hyaline character is well seen when the coagulation of a drop of frog's blood is watched under the microscope. The other form is that which fibrine always assumes, sooner or later, in larger masses of blood, when coagulation is not interfered with. Here is some fibrine which has been prepared by merely washing in water the colourless upper layer of the coagulum of horse's blood. You will see that it is of almost snowy whiteness, and in the highest degree elastic. Under the microscope, you can readily satisfy yourselves of its reticular structure. When treated with very weak hydrochloric acid (a quarter per cent.), it swells enormously, becomes transparent, and eventually dissolves, but not until it has been transformed into another albuminous body (syntonin) by the prolonged action of the acid. Its most characteristic chemical property is one which depends on its power of decomposing peroxide of hydrogen. I place a portion of fibrine, which has been soaked for a few minutes in a solution of the peroxide, on a sheet of filtering paper, which has just been moistened with tincture of guaiacum. It will soon be edged with a border of blue, indicating that the guaiacum is oxidised, and that ozone has been disengaged. No other albuminous substance exhibits this property.

You are already well aware that, in every act of coagulation, fibrine is produced by the combination of two substances, both of which are to be found in the blood corpuscles and plasma; that these two substances are closely allied chemically, and that they are both obtained from plasma by passing through it, after dilution with ice-cold water, a stream of carbonic acid gas. The only difference between them is, that one (paraglobulin or fibrino-plastic substance) is precipitated first; the other (fibrinogen) later, and after more copious dilution of the plasma with water. You know, also, that whereas serum contains only fibrino-plastin, certain other liquids of pathological origin contain only fibrinogen, and that these last, although incapable of coagulating by themselves, acquire that power even when a trace of serum or any other fibrino-plastic liquid is added to them; for in the formation of fibrine the two generators, as they are called, do not take equal parts. The quantity of paraglobulin which is required is a mere nothing compared with that of fibrinogen. Bearing, then, in mind that the blood contains at all times both of these two antagonistic principles, ever ready to combine, we are rather led to inquire why the circulating blood remains fluid than why it coagulates when removed from the body.

(b) That transparent blood coagulates more readily than opaque blood, may be understood if we bear in mind that the corpuscles themselves contain the material out of which fibrine is formed in very large quantity —a fact before merely conjectured, but now proved by the recent experiments of Professor Heynsius. At the time this lecture was delivered I had not seen Professor Heynsius's paper, but have since received it through the kindness of my friend, Dr. Brunton. His method is as follows:—The blood of the horse (112 grammes) is received into a cooled glass, and immediately mixed with ten times its volume of one per cent. solution of chloride of sodium, contained in a flask surrounded with ice. After complete subsidence, the diluted plasma is decanted from the corpuscles, which are then mixed with serum (bovine), and subjected to a temperature of 40° C. The decanted liquid is also mixed with serum and exposed to a similar temperature. After coagulation has taken place, the fibrine in each liquid is collected and weighed, and at the same time the total amount of fibrine contained in a second quantity of the same blood is determined. The result of one of Professor Heynsius's experiments is as follows:—Percentage of fibrine in corpuscles, 1·1; in plasma, 0·1; total, 1·2. In the second quantity the total percentage of fibrine was 1·21; so that of the whole quantity of fibrine the blood contained, only about one-tenth was derived from the liquor sanguinis. These experiments, which were repeated with corresponding results, afford direct evidence that the product of coagulation is mainly derived, not from the plasma, but from the corpuscles. (Pflügers Archiv f. Physiologie, B. III., S. 419.)

The knowledge we at present possess of the whole subject is almost entirely founded on Professor Brücke's well-known experimental essay "On the Causes of the Coagulation of the Blood," published in 1857. Of the many excellent experiments recorded in that essay, the following are among the most instructive:—

(1) 110 cubic centimètres of blood received from the vein of a living dog are introduced directly into an eudiometer over mercury. The blood coagulates, but no gas or vapour escapes.

(2) The arterial trunks leading from the heart of a tortoise are first tied, and, as soon as the heart has distended, the venous trunks. The heart, full of blood, is then removed from the body, and suspended in a small flask by one of the ligatures, the end of which hangs outside, and is so arranged that, on pulling it, the heart will fall to the bottom, and the blood escape. The flask is allowed to stand so long as the heart still continues to pulsate. The flask is then filled with pure hydrogen, and the ligature pulled. The heart falls, and it is found that whereas the blood which escapes coagulates, that which is retained in the cavities remains fluid.

(3) Blood from the divided arterial trunks of a tortoise is collected in a test tube, and kept fluid by being surrounded with ice and salt. The heart is then filled with blood through a vein, with the aid of a pipette, all the other vessels having been tied. The pipette having been withdrawn, and the ligatures secured, the organ is suspended in air saturated with moisture. After twenty-four hours, the blood remains uncoagulated. This experiment may be varied without affecting the result if, instead of the heart, arteries or veins are used to contain the blood.

(4) A small but closely-fitting glass tube is introduced into the pulmonary artery of a tortoise, which, with the rest of the vessels leading to and from the heart, is subsequently secured in such a way that the whole organ is full of blood. It is left in saturated air for twenty-four hours, at the end of which time it is found that there is no clot either in the heart or any of the vessels, but that the blood in the interior of the tube has coagulated.(c)

From these and other like results, Brücke was led to adopt those conclusions which are now generally received by physiologists—namely, that when blood coagulates nothing is either taken from it or added to it, and that its coagulation is not to be attributed to any special influence exercised upon it by the media with which it is in contact or relation, but rather to the instability of its constitution. The fibrine generators it contains have so strong a tendency to combine, that the slightest interference with the conditions which normally surround it is sufficient to upset its equilibrium.

On the Colouring Matter of the Blood (Hæmoglobin, Hæmatoglobulin, or Hæmato-crystalline).

The colouring matter of the blood is a crystalline immediate principle, readily soluble in warm water and in weak spirit, distinguished above all by the facility with which it is decomposed, either by acids or alkalies, the decomposition resulting in the production of hæmatin and an albuminous compound.

The facts I shall be able to demonstrate to you are the following:—

1. That it exists as such in the blood.
2. That although a crystalline body it is indiffusible.
3. That when subjected to the action of reducing agents it undergoes a change of colour identical with that which arterial blood undergoes when it becomes venous, and that the original colour can be restored by agitation with air.
4. That when subjected to the prolonged action of acids and alkalies it undergoes a change of colour of a different nature, due to the formation of hæmatin, which is permanent.

Observation XV.—Proof of the Existence of Hæmato-crystalline in the Blood.

That hæmoglobin exists as such in the blood is proved by the simplicity of the methods which are employed for its preparation. It may be obtained from blood which has been rendered transparent by any of the methods I have to-day described, without the addition of any chemical reagent. In such blood the hæmoglobin is in solution; to induce it to assume the crystalline form, all that is necessary is to add to the solution gradually some other liquid, such as alcohol, in which it is not soluble. The specimen I now show you was obtained by treating for several hours with ether the corpuscles of the blood of the horse, separated from the plasma by subsidence and decantation at freezing temperature, and well agitated with air. Ether, as you already know, renders the blood transparent. The mass of corpuscles to which it has been added changes colour, and an ethereal solution is obtained which may be rendered crystallisable by the gradual addition of alcohol. The quantity of alcohol which is required for this purpose must be judged of by the effects. It must be added so long as the precipitate which is first formed is redissolved —in other words, until the precipitate becomes permanent. As soon as this point is attained, the liquid will crystallise, if left to itself, especially if it is subjected to a freezing temperature and faintly acidulated with acetic acid. The crystallisable mass may then be agitated with ice-cold alcohol, again collected on a filter and washed with ice-cold water, and finally redissolved in water at a temperature of 40° Cent. On evaporating the liquid *in vacuo*, the material you see was obtained. It is not pure, but could be made so by repeated recrystallisation.

I have given you the simplest method by which hæmoglobin can be obtained in quantity. But the mere demonstration of its existence as such in the blood is even simpler. In some animals the substance crystallises much more easily—as, *e.g.*, in the rat and guinea-pig. Thus, in the guinea-pig, the solution of blood in water will crystallise when subjected to a low temperature. Here is some guinea-pig's blood, which has been rendered transparent by driving through it chloroform vapour with the aid of a Richardson's pump. If we examine a drop under the microscope, we shall find that it is full of well-formed tetrahedral crystals.

Fig. 10.

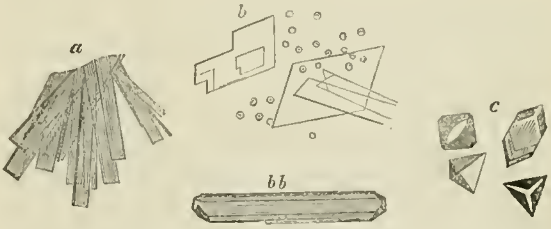

Fig. 10.—*a*, hæmoglobin from human blood; *b*, hæmoglobin from the blood of the horse, in the form of rhombic plates: the round bodies are altered blood corpuscles; *bb*, a prismatic crystal from the same; *c*, tetrahedral crystals from the blood of the guinea-pig.

Observation XVI.—Indiffusibility of Hæmoglobin.

Hæmoglobin, though crystalline, is indiffusible. This fact stands in relation with the enormous weight of its molecule, which is supposed to be 13280 times that of hydrogen. The demonstration of it is easy. Here are two diffusion cells containing solution of blood in water. In one of them the septum is of parchment-paper, in the other of bladder. The outer vessel contains distilled water. Here there has been no diffusion, either through the parchment or the bladder. In the case of parchment-paper, it is known that hæmoglobin is absolutely indiffusible, but it does pass to a certain extent through animal membranes, as could be shown by more careful experimentation.

Observation XVII.—Optical Changes Produced by Oxidation and Reduction.

The most interesting and important properties of hæmoglobin are those which relate to its function as a carrier of oxygen, the manner in which it combines with this gas and again sets it free, and the difference of colour and other optical properties which it presents in the two states of oxidation and reduction.

The form in which we are best acquainted with hæmoglobin is that in which it is combined with oxygen, so that hæmoglobin and oxyhæmoglobin (as it is called) are synonymous. In all solutions of hæmoglobin which are freely exposed to air, as well as in arterial blood, the whole of the hæmoglobin is in the oxidised form. Under the opposite condition, and in venous blood, the oxyhæmoglobin is mixed with a variable proportion of reduced hæmoglobin.

(c) Professor Brücke's original essay, written in English, is to be found in the *British and Foreign Medical Review* for January, 1857. It was submitted to the authorities of Guy's Hospital in 1856 in competition for the Astley Cooper prize.

Excepting the fact that reduced hæmoglobin is much more soluble than ordinary hæmoglobin, the optical differences between the two are the only ones that admit of demonstration. These are—first, that venous blood and reduced solutions are dichroitic—*i.e.*, they look red by reflected light, but green by transmitted; and, secondly, that the tinge of yellow which corresponds to that part of the spectrum which lies halfway between the *D* and *E* line is present in light which has passed through solution of oxyhæmoglobin, absent in light which has passed through reduced solutions.

Fig. 11.

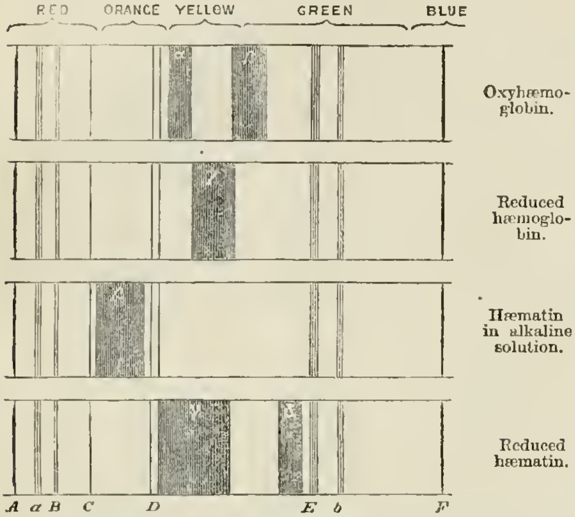

Fig. 11.—Diagram of the principal absorption spectra of the blood, showing the relation of the absorption bands to Frauenhofer's lines. The letters of the Greek alphabet on the bands are those by which they are usually designated.

The first of these changes can be judged of without the aid of any instrument. In one of these test-tubes I have a solution of the blood which was rendered transparent by freezing; in the other a similar solution, which has been reduced by mixing it with sulphide of ammonium. If you compare the two, you will have no difficulty in seeing that whereas they look alike by reflected light, they are easily distinguished when held up together between the eye and the window. The difference in colour may also be judged of by the unaided eye easily enough, but much more accurately if we use the spectroscope.

The application of the spectroscope to the examination of absorption spectra—*i.e.*, the spectra which are produced when the light which is admitted into the spectroscope has passed through coloured transparent liquids—is neither more nor less than a method of analysing colour. The optical facts which it enables us to estimate by precise measurement are the same of which we judge by the eye alone, the only difference being that our judgment of them is much more accurate. In this regard the spectroscope stands in the same position with other instruments of research, which do not bestow upon us any new faculty, but only enable us to use those we already possess to greater advantage. We will now examine spectroscopically the two solutions we have already looked at otherwise. The light we employ for this observation is that obtained by causing a jet of oxygen to pass through the centre of a spirit-lamp flame against a lime cylinder. This light is practically of the same nature as that of the ordinary oxyhydrogen lamp, the main difference being that the required hydrogen is yielded by the spirit flame instead of being derived from a reservoir. For our purpose, it has the important advantage that it affords a spectrum in which the soda line, which nearly corresponds to Frauenhofer's *D* line, can be distinctly seen, and serves as a landmark by which we may judge of the position of the absorption bands we wish to observe.

The observation you have to make is the following:—Placing the diagram before you, study that part of the spectrum which lies to the violet side of the sodium line. When the tube containing oxyhæmoglobin is before the slit, you will see the dark bands in this region separated by a bright interval of yellow-green. Of these bands one is close to the sodium line, the other somewhat further towards the blue. Fix, now, your attention on that part of the spectrum which corresponds to the bright interval, while you substitute the tube containing the reduced solution. You will see that an ill-defined band has obscured the bright interval completely, and that the other two bands have disappeared. Finally, shake the tube with air, and again examine it. The bright interval will reappear, and the two oxyhæmoglobin bands will be reinstated; but, if you continue the observation, the sulphide of ammonium will again deprive the hæmoglobin of its oxygen, and the spectrum again display the characters of reduction.

ORIGINAL COMMUNICATIONS.

CLINICAL NOTES OF THE VARIETIES OF IMPERFECT SPEECH PRODUCED BY BRAIN DISEASE.

By ROBERT DRUITT, M.R.C.P. Lond., etc.

Case 3.—Sudden Aphasia—Right Paralysis and Anæsthesia—Slow Recovery—Letters from the Patient, showing his Condition.

August 2, 1856, at 5 p.m., the Rev. C. G. F. staggered into my study, with unsteady gait, haggard looks, and mouth drawn to one side. He beckoned, and evidently could not speak; so I said, "I see what is the matter; don't be alarmed. When did this come upon you?" He pulled out his watch, and pointed to X. He could say nothing but "yes" and "no," and often misapplied these terms, for he often said "no" when he meant "yes," and *vice versâ*, and corrected himself by gestures. He brought a paper on which he had attempted to write my name and address, thus—"39 Dr. Druuitt" (for I then lived at 39A, Curzon-street). The head hot; pupils equally contracted and sensible; mouth drawn to left; right cheek flabby; tongue (much coated) freely moved; right arm feeble and benumbed, especially the little and ring fingers; right leg at times unsteady; could lift a moderate weight with right arm, but could not hold a pen to write. Made me understand, by taking out his watch, and turning over the leaves of a Court Guide, where he had been in the morning. (I learned afterwards that he went to the Horse-market in St. Martin's-lane; was taken ill as he was coming away; went into a draper's at the corner of New-street, and rested awhile; then managed to find his way into a neighbouring chemist's, who took care of him for some hours; but, as he only spoke gibberish, both the draper and chemist believed him to be mad; at last he hailed a cab, and, after many fruitless efforts to make the man understand him by means of the address he had written, piloted the driver by pointing with his stick through the front cab window, and so got to my house. He was terribly alarmed at the idea that the people in the shops considered him mad, but both the draper and the chemist, whom I called on a few days later, told me they thought he must be mad.)

It so happened that Dr. Semple called on me at the very time Mr. F. was in the house, so I called him into consultation. We gave the patient some sherry and soda-water, and kept him quiet, bathing his head with cold water. In a couple of hours he walked without difficulty, and seemed to have the use of his hand, so I took him home at 7.30. At 10 p.m. the pulse was 80; skin cool; tongue foul; belly tense; and he had recovered the use of all conventional forms of assent and dissent, as "thank you," "much obliged"; yet he could not originate any word he wanted, though he used these terms to express assent or dissent when the right word was found for him. Purgative of calomel and colocynth.

August 3, 9 a.m.—Has had tranquil sleep; when I asked, "Have you been asleep?" he said, "I have been outside." Vesp.—Tranquil; bowels well moved; has dozed all day; pulse 72; tongue less dry; no complaint of uneasiness; head stronger; speech the same; nothing right but words of assent or dissent; said he had had "no tea tea tail"—meaning "tea."

4th.—A comfortable night; pupils a little less contracted, move freely; skin cool; pulse quiet. Came downstairs, against my advice. He was an exceedingly wilful person, and occupied himself in attempts to regain his speech. Tried the *Times* newspaper, but could not pronounce a word; tried to write the word "*Times*," but the word he wrote was "*Fimel.*" Yet later in the day, Mr. Cartwright, the eminent dentist, an intimate friend, who dropped in, wrote on a slip of paper that he ought to make provision for his natural child. He took a pencil, made a ∧, and inserted the word "two" before "child," bursting into tears, intimating that he had two. Carbonate of ammonia; hock and seltzer water; good soup. Vesp.—Dr. Semple in consultation; patient much the same; pulse feeble, and occasionally intermittent.

5th.—A good night; pulse 72, occasionally intermitting; is quite collected and calm; wrote his name with a pencil firmly; came downstairs; arranged various things, but only spoke *yes* and *no*. All this time, the cutaneous anæsthesia of the right side continues. He does not feel the point of a needle passed across his right chest, till it just passes the middle line.

The patient was seen by Dr. Ferguson and Dr. Semple, but no entreaty or persuasion would induce him to stay at home and submit to treatment. So soon as he could go out, he went to sales, which he was very fond of attending; he looked ill, complained of headaches, and was slow in recovering his speech. What came to him first were the names of objects; but the links and connecting words were missing. He left town for Hastings towards the end of August; I saw him at that place in October, and next month he went abroad. After that I saw no more of him for years; only once, and then his speech seemed slow, but otherwise not imperfect. I learned that he died in 1869.

The condition of his speech, during the three months following the attack, will be seen from the following letters which (with others of the same sort) I received from him at their respective dates. The printer of the *Medical Times and Gazette* has endeavoured to give their character, so far as can be done by type—engraving a *fac simile* would be too expensive;—but no type can give a full rendering of the blurred words, the uncertainty in the formation of letters, the uncertain number of pothooks to such a letter as *m* or *n*, the omitted words supplied by interlineation, and the confusion of figures in the dates:—

(No. 1.)

Dear Sir

I thank you t Mr. White and Bonati at 10 *Whitahall*
I amunwell to attend
Place and say‸Bussiness.

I am happy, I am better

Yours sincly

Hastings 8*th Octr* 1856 ——— ———

(No. 2.)

Dear Sir,

Monday I go London, see you &c.

Cannot speechless *Yours sincerely*

Friday Evening, 10*th Octr* 1856. ——— ———

P S 10 *Weeks to* 11*th Octr* 1856.

(No. 3.)

My dear Sir.

I shall be London next week, about 30*th Octr* *Thursday*

I happy to say am I better

Yours truly

Hastings Octr 26. 1856. ——— ———

(No. 4.)

Hotel D'Albian *Rouen*
Nov. 30*th* 1856 *France*

Dear Sir

I am at Rouen, I go South—Heatlh—Hretlh—Health—

no
I am present, under French Physician, but‸power to write, to read or to speak. Every word I find out in the Dictionary—

My mind is good—

My Curate Rev. A. P. S—— always knows where I am—

Wildbad and Gastein (Baths), Paralysis, for it—is good

Right side is stiff—and right arm.

be to in
The Physician says, I shall‸able, in‸speak about‸8 days—
had
I should died I if I been in England—
‸

I found you and wife and Sister Law in D'Albion Hotel Book—

Yours sincerely

——— ———

PS. Being alone, I want a Companion to go South, as I forget
my
French since Illness—
‸

AN INSTANCE OF THE

INTRODUCTION AND PROPAGATION OF SMALL-POX IN A COMMUNITY, AND ITS ERADICATION BY STRINGENT SANITARY MEASURES.

By A. L. ADAMS, M.B.,
Surgeon Major 1st Battalion 22nd Regiment.

At present, the following details appear to me worth recording:—1st, as examples of how small-pox may be conveyed from place to place; and 2nd, the desirability of a rigorous isolation of all doubtful or suspicious cases; 3rd, the importance of noting all deviations from characteristic or typical symptoms of the disease; 4th, the desirability of close supervision of persons who have held intercourse with the infected, even during the period of incubation; 5th, the effects of panic in diffusing contagion; 6th, the imperious necessity of prompt and effectual measures to prevent the spread of the disease from every possible focus of dispersal.

The subjoined data were collected from either the personal observations of the author or those of Mr. F. H. Welch, Assistant-Surgeon 22nd Regiment, and Dr. Armstrong, of Cork, with whom he was associated in what may be called a very successful attempt to stamp out small-pox suddenly introduced into a community ripe for its reception, although for many months exempt from even one case of this frightful pest.

A girl, whom I shall call No. 1 centre of dispersal, attending a day-school in the east of London, in a district where small-pox was prevalent, sickened and became the subject of a vesicular eruption, which the family Physician at first expected might turn out to be scarlatina, whilst subsequently its vesicular aspect led to a belief that the disease was chicken-pox. At this time a gentleman, his wife, and daughter arrived at the house, and within a few days the latter and No. 1 became playmates. Soon afterwards the visitors left for Cork, where no case of small-pox had been recorded for many months. The daughter, No. 2, aged 10, vaccinated in infancy, became feverish on the third day, and had a few spots dispersed over the body, running quickly into vesicles, which disappeared entirely in a few days; so that, on arrival of the family at a hotel in Cork, No. 2, when seen by me, was simply somewhat indisposed from a rough passage from Bristol.

On the seventh day from date of departure from London, the mother, No. 3, was attacked with bilious vomiting, lumbar pains, followed by pronounced pustules of small-pox, mainly on the head, hands, and feet, the majority of the vesicles not being umbilicated, but small and quickly aborting. She had been vaccinated fifteen years previously.

A maid-servant (No. 4) was engaged at Cork on arrival, and attended on the mother and slept with the daughter until the disease was pronounced to be small-pox, when she forthwith decamped to her home, where, in the course of a few days, she became the subject of modified small-pox. Not known whether she had been ever vaccinated. Care was taken to prevent any chance of spreading, so there were no radii from this focus.

But a servant (No. 5) in the hotel volunteered to attend the lady (No. 3), and made her bed several times, and, in a few days, fell ill also, and went to her home in a very crowded and exceedingly filthy lane, where she was tended by a relative until the development of the pustules, when the latter abandoned her, and the case was at once sent to the Fever Hospital, where she lay for weeks with confluent small-pox.

The attendant on No. 5 escaped without any symptoms whatever.

Returning to the main centre of dispersal, No. 3. The above were not all the persons who were brought into close contact with her and No. 2, her daughter. The husband escaped. During the period of incubation in No. 3, and up to the appearance of the pustules, she was often nursed by a lady friend, whilst at the same time the child of the latter was frequently handled by the daughter, No. 2. Let us see what took place. Whether or not the following should be classed as abnormal signs or anomalous varioloid poisonings acting on protected individuals, I shall not assert one way or the other; but the truth was that the child No. 6, 2½ years old, well vaccinated in infancy, became feverish in a few days, followed by a papular eruption over the whole body. The mother, No. 7, previously vaccinated, and the subject of small-pox in childhood, had cold shiverings, followed by malaise, intense bilious vomiting, with a marked hard, irregular, papular eruption on face, coming and going. She stated that on the second day of her attendance on No. 3 she experienced the characteristic smell of the disease. At the recommendations of the Medical attendants in charge of the several cases, most stringent precautions were carried out with reference to isolation, cleansing, drainage of the infected district, whitewashing, fumigation, and destruction of personal clothing, to which measures must be attributed the prevention of the extension of the disease, which fortunately occurred under such vigorous sanitary supervision; whilst had the imported cases taken place among the lower classes, and introduced into the insalubrious quarters of a crowded city, there is no saying what evil results might have taken place before sanitary science could have come to bear on the pest.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS.

Lithotomy (by Mr. Paget)—Removal of Breast for Cancer (by Mr. Holden)—Amputation of Leg (by Mr. Coote)—Resection of Elbow (by Mr. Thomas Smith).

We had the pleasure of seeing the operations at this Hospital on Saturday, January 28, when some interesting cases were brought into the theatre. The first patient was a man, apparently over 60 years old, the subject of old bladder disease, complicated of late by the formation and rapid increase of a stone. Chloroform having been given, and satisfactory evidence of the presence of a large stone being forthcoming on sounding, Mr. Paget performed the ordinary lateral operation, making a free external incision. There was some unusual difficulty in securing the stone after the gush of urine which emptied the bladder, the forceps being changed more than once before the rather large oval calculus could be fairly grasped. Owing, apparently, to the depth of the perineum, further difficulty attended the introduction of the petticoated tube after the removal of the stone, and so the whole proceeding was more protracted than usual. When the man had been removed from the theatre, Mr. Paget addressed the students at some length, dwelling upon the more important features of the case. He pointed out that the stone, though large, might fairly be classed with medium-sized stones, such as might be treated by lithotrity. These present at the consultation upon the case on the preceding Thursday would remember, however, why the cutting operation was preferred—namely, because the man had, for twenty years, suffered from disease of the bladder. Under such circumstances, it was well to adhere to the general rule laid down for stone cases—viz., that small stones are to be crushed, while large ones should be cut out; that either operation is adapted to a medium-sized stone; but that, where there is much disease of the bladder, the cutting operation is to be preferred. Moreover, in this case, with the bladder discharging much pus and phosphates, and with a stone (erroneously judged to be soft by the sounding; but that was no matter) constantly increasing by fresh phosphatic deposits, a better chance was, on the whole, given by running all the risks attending a severe cutting operation in advanced life than by subjecting the man to repeated crushings, in each of which the condition of the bladder would be probably further damaged, whilst now the free incision into the bladder and probable future washings out through that opening might tend greatly to relieve the vesical condition. As this latter affection had lasted for twenty years, whilst the calculus had been present for at most but two or three years, the mere riddance of the stone alone by lithotrity could not have been expected to cure the older disease.

Mr. Holden next operated upon a middle-aged woman with scirrhus of the breast. The tumour occupied the greater part of the right breast, and some glands were enlarged and indurated in the axilla. Chloroform being given, an elliptical incision, including the nipple and much surrounding skin, was made, and the whole breast dissected out. The diseased glands were subsequently dragged down in one mass, a stout thread tied above them, and the whole cut away. Silk ligatures were employed, and before the wound was dressed a little carbolic acid solution was sponged into it. The gap was too large to admit of being sewn up, and the edges were therefore approximated by broad straps, and cotton wool piled over all. Mr. Holden remarked that at the consultation on the case, on the previous Thursday, it was judged to be just one of those instances in which it was necessary to remove the whole breast, the disease being of nine months' duration, very rapid growth, and involving early (in the fourth month) the axillary glands. He had found it necessary to remove with the breast a portion of underlying muscle, to which it was adherent. The manner of removing the lymphatic glands should also be noted. The students had seen that this had been done by making an incision in the fascia bounding the axilla, and then enucleating the glands with the finger, tearing rather than using the knife, and tying firmly above before cutting the mass away.

The next case was one of amputation through the lower third of the leg, for disease of the ankle, by Mr. Holmes Coote. As usual at this Hospital, one of the dressers took advantage of the opportunity, and arrayed himself from head to foot in a large white sheet. The object of this precaution was not very apparent, as the sheet was removed unsoiled, as is generally the case, and the other assistants, who were more exposed to stray jets of blood, did not deem it necessary to be equally careful. Mr. Coote made two equal rectangular flaps, clipping off the sharp edge of tibia before bringing them together with wire sutures. Mr. Coote dwelt upon the reasons which induced him to prefer this operation to any of those through the bones of the ankle, and pointed out that its main advantage consisted in securing a conical stump—*i.e.*, smaller below than above—and therefore better adapted for fitting into the socket of an artificial limb. Mr. Coote then opened the diseased joint, and explained that the condition present, which was usually erroneously termed ulceration of cartilage, was in reality an inflammation of the contiguous bone, with separation of the cartilage, and the formation of a layer of granulations beneath, so that with each movement the loosened cartilage grates upon the diseased bone, and gives rise to great pain.

The last case was one of resection of the elbow, by Mr. T. Smith. The patient was a man who, while racing in a coal mine two or three years before, had struck his elbow against a projecting bit of rock, and suppurative destruction of the joint ensued. Six months ago Mr. Smith resected the elbow, but after a time the disease reappeared. Mr. Smith thought that he had removed too little bone at the first operation, and he would be guided now as to amputation or resection by the amount of bone disease present. The parts were exposed by a single longitudinal incision, the ends of the bones nipped off, some of the diseased and pulpy soft tissues snipped away, and the wound thoroughly sponged out with strong chloride of zinc solution, carbolic acid oil being put over the wound when the limb had been arranged on a rectangular splint.

We noticed that the chloroform was administered by Mr. Bloxam, Chloroformist to the Hospital, after a fashion new to us, and apparently as efficacious as simple. The bottle is graduated so as to show the number of minims withdrawn, whilst the stopper is perforated and drawn out to a fine point. A few shakes of the bottle, pour out a little of the liquid on to a bit of lint laid lightly over the patient's face, and every now and again the lint is reversed as more chloroform is poured out. Mr. Bloxam introduced this mode of administration, and has been well satisfied with its results in some 2000 cases in which he has already employed it. Where a Clover's apparatus cannot be had, this method of Mr. Bloxam's seems likely to prove a very convenient substitute.

ST. GEORGE'S HOSPITAL.

VOMITING OCCURRING AT INTERVALS FOR SEVERAL YEARS.

(Under the care of Dr. OGLE.)

The patient, a girl aged 11, ever since 3 years of age had been subject to attacks of vomiting, lasting from nine to fourteen days, and which had never been absent an entire year. She had never had any fits, but had "cut her teeth with diarrhœa and vomiting." The child had the air and manners of one many years younger, and did not play about like others of her age. Her expression of face was somewhat vacant and unintelligent; the whole of the left side of the face was somewhat on a smaller scale than the right side, as if there had been atrophy in early life [? from interference with the ganglionic nerve]. Pain in the abdomen was complained of, but no enlargement or indication of mesenteric, peritoneal, or other mischief was found. Dr. Ogle inclined to think that there had been some chronic cerebral mischief dating from the period of dentition. Much relief has been gained by aperients and hydrocyanic acid, and now four weeks of freedom from sickness have existed, and the patient is taking cod-liver oil.

TWO CASES, AT FIRST SIGHT NOT UNLIKE SMALL-POX.

(Under the care of Dr. OGLE.)

The first was that of a maid-servant sent into Hospital under suspicion of being one of scarlet fever. There was a rose-coloured, rather patchy rash over a good deal of the surface, which had appeared first on the arms, along with vomiting and shivering. On admission, the skin was cool and pulse quiet, but on the next day the temperature was 103°, and the tongue dirty. On the following day the temperature was only 99°. The rash quite departed, but four days after admission a number of papules, which subsequently developed into vesicles, about the lips and forehead came on, and one also upon the soft palate. Others appeared some hours later, and in two of them the contents were so milky as to be thought by some to be actual pustules. In about two days the vesicles had dried up, and scabbed off. In this case the vesicles, coming on after the scarlet eruption (which kind of eruption, sometimes like that of measles, at others like that of scarlet fever, was often found, as Dr. Ogle said, to anticipate variola), gave a little alarm at first sight, in addition to the vesicle appearing on the soft palate; but the evanescent nature of the vesicles, and their coming on in succession, or in a crop-like way, soon helped to the diagnosis of the case as one of chicken-pox. The patient shortly left the Hospital.

The second case was that of a girl, on whose face, shoulders, and neck were a number of spots looking very like the drying pustules of variola. On the shoulders were several others of a pustular character, with well-marked central depressions. These, however, had no inflamed bases. The patient complained of much pain at the back; this, however, on examination was found to be quite at the lowest part of the sacrum. At first sight the case was suspicious, but as there had been no vomiting, as the eruption was apparently in different stages, and had come on in successive crops, and as, moreover, the thermometer showed that the temperature was not increased (and this was so on several examinations), the conclusion was arrived at that the case was not variola, but a variety of impetigo. The patient was in a low, cachectic condition, but is doing well.

We also saw the following cases under Dr. Ogle's care:—

One of very severe Pneumonia, chiefly confined to the right side. Extensive herpes of the lips on the same (the right) side existed. Under stimulating expectorants, poultices to the chest, and a moderate use of gin (the patient being a coachman), the case recovered, and went out well. He has since been brought into the Hospital with small-pox.

A case of Convulsions in a young boy, due to overloading of the stomach, ceasing under the use of purgatives.

A case of Diphtheria brought into the Hospital, attended by croup-like symptoms. The urine, on the addition of nitric acid, almost entirely coagulated. Death occurred in a few hours.

The case of a woman brought in with Vomiting and Constipation. It was said she had had "fits" of some kind. The urine was found to contain albumen. After being in the Hospital two days she became apathetic, and strabismus occurred from time to time. The pulse kept low and feeble, and the temperature also low. She sank and died, and after death, excepting some vascularity of the kidneys and a very unusually large stomach, no morbid appearances were met with in the body.

We also observed two patients who had had severe Enteric Fever, both now recovered; one a boy, the other a girl, aged respectively 17 and 19. In the boy's case, the lungs had been severely congested, and great dyspnœa caused, and much danger had existed, the pulse at once being exceedingly rapid and feeble—a good example of the "running pulse." Wine and brandy had been freely given, and ammonia, subsequently changed for weak mineral acid. In the girl's case, great deafness on one side had existed. In both cases the evening temperature had been in a very well-marked degree higher than in the morning; but in the boy's case, when convalescence had set in, and castor oil on one occasion required, after its exhibition the temperature, which had been 98·6°, suddenly and unexpectedly rose to 101°. It then subsided, and two days after was only 96°. This patient was on the point of going out when he was attacked by small-pox.

Dr. Ogle showed us four cases of Diabetes Mellitus in one ward, two being under his own care and two under that of his colleagues. Of his own cases, one was dying with very severe lung symptoms. In the other case, the gums have all the appearance as if salivation had been induced by mercury. Dr. Ogle has understood from Mr. Haward, of Halesworth, under whom the patient had been, that this symptom of salivation had come on with the disease, and remained throughout, no mercury having been given. In one of his diabetic patients, Dr. Ogle showed us the uvula diverted to one side, and decided inequality in the anterior arches of the palate. In another diabetic case, he found the same appearances, only the deflection was to the opposite side. He noticed the fact of this deflection of the uvula being observed in two out of the four diabetic patients, alluding to the observations by Dr. Saunders, of Edinburgh, upon vertical hemiplegia of the palate in facial paralysis and in diabetes. He looked upon the fact of two out of four cases of diabetes casually associated presenting divergence of the uvula and inequality in the two palatal arches as something more than accidental. In the fatal case of diabetes, Dr. Ogle has had the medulla oblongata and other parts of the brain reserved for microscopical examination.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 4, 1871.

THE SMALL-POX EPIDEMIC.

It is a sad thing—and, in the country of Jenner, a thing far from creditable to us as a nation—that we should have to write about an epidemic of small-pox such as that from which we are now suffering. When we read about the havoc that small-pox was making among the population of Paris last year, probably there were some who were disposed to hug themselves in the belief that, at any rate, we Londoners had rendered ourselves safe, and that, with our vaccination laws, there was no chance whatever of a similar visitation reaching us. Yet, all the while, it was creeping stealthily on, and only awaiting the appropriate season to fall upon us. The middle of the year 1868 witnessed a sudden arrest of a comparatively mild epidemic. In that year (mostly in the first half of it) 1026 cases were admitted into the Small-pox Hospital at Highgate, and the total of the deaths from small-pox in London was 606. In 1869, only 493 cases were admitted into the Hospital, and no more than 273 deaths occurred in the whole of the metropolis. During the first nine months of 1870 alone, the admissions into the Hospital amounted to 835, and during October 144 cases were admited, while cases were constantly refused on account of the beds being all occupied. The numbers admitted month by month were—

January	79	218	April	83	307	July	113	310	Oct.	144
February	66		May	112		Aug.	89			
March	73		June	112		Sept.	108			

It is remarkable that the quarterly returns of the Registrar-General indicate only 405 deaths from small-pox as having occurred in the whole of England and Wales during the first quarter of 1870, and make no special mention of the disease as being prevalent in the second and third quarters. Nevertheless, the mortality from the disease was steadily rising in London, and now small-pox is widely sown throughout the country. During the first quarter the deaths in London were 99, during the second quarter 118, during the third 157, and during the last quarter 584. It was about the month of October that it began to be evident that we were doomed to an epidemic outbreak, but it was not until November that it began to assume serious proportions. That which is now upon us is an epidemic the like of which for severity has not been witnessed for many years. Commencing from the week ending November 5, the returns to the Poor-law Board of small-pox cases treated by the Poor-law Medical Officers in the metropolis were as follows:

Nov. 5	213	Dec. 3	314	Dec. 31	465
,, 12	176	,, 10	326	Jan. 7	626
,, 19	273	,, 17	383	,, 14	781
,, 26	318	,, 24	371	,, 21	above 800

During the third quarter of the year, the weekly small-pox mortality in London varied from 9 to 15. In the week ending October 1, these deaths amounted to 13. In subsequent weeks they were as follows:—

		Districts.				
Week ending	Deaths.	West.	North.	Central.	East.	South.
Oct. 8, 1870	27	4	12	2	7	2
,, 15 ,,	13	2	4	2	3	2
,, 22 ,,	17	—	4	1	10	2
,, 29 ,,	21	2	5	1	12	1
Nov. 5 ,,	23	1	7	—	13	2
,, 12 ,,	40	1	7	1	22	9
,, 19 ,,	45	1	14	—	26	4
,, 26 ,,	41	2	12	—	23	4
Dec. 3 ,,	60	3	11	3	35	8
,, 10 ,,	61	7	10	4	34	6
,, 17 ,,	64	3	18	—	22	1
,, 24 ,,	82	7	20	9	38	8
,, 31 ,,	110	17	27	5	47	14
Jan. 7, 1871	79	9	16	6	36	12
,, 14 ,,	135	24	39	10	46	16
,, 21 ,,	188	35	45	12	67	29
,, 28 ,,	153	19	35	16	48	35

The formidable characterof the epidemic appears from the fact mentioned by the Registrar-General, that the weekly average mortality during the period of five weeks of highest mortality in 1866 was 40; in 1867, 46; and in 1863, 67. The last number was nearly reached by the second week of December, was exceeded considerably in the fourth week of December, and was nearly trebled by the third week in January. In reading the table given above, so far as the separate districts are concerned, it must be kept in mind that the deaths in the North District include all that occurred at the Small-pox Hospital at Highgate, and from December 3 all that occurred at the temporary Hospital, also, at Hampstead, where, moreover, additional accommodation was provided in the first week in January. Making allowance for this, it is apparent that from the first the disease prevailed most in the east of the metropolis, and it has continued to prevail most there ever since. Distributing the Hospital deaths among the districts the patients came from, it was found that in the third week in January, out of the 188 deaths, 72 were furnished by the East District, 40 by the West, 30 by the North, 29 by the South, and 17 by the Central; the population (1861). in thousands and in the above order, being 571, 458, 618, 773, and 383. The West District was comparatively exempt until towards the beginning of December.

Small-pox is one of those diseases which recur in more or less distinct cyclical periods—its prevalence being capable of being represented by a waved line, in which the summit of each wave is separated from the neighbouring summits by an interval of about four years. The last epidemic wave was observed in 1866-7; it rises now again in 1870-71. Judging, then, by experience, a wave of epidemic prevalence was to have been anticipated; but the question remains unsolved why it should this time have risen so much higher than has recently been customary. It must have a cause: its discovery is the task which scientific Medicine has before it. The epidemic being due in 1870-1, it was further to be anticipated that it would begin to exhibit itself towards the close of the year. Some tables, published by Dr. Ballard in one of the Reports of the Medical Officers of the Privy Council, show that "the rule has been for small-pox to prevail least in the summer, to increase through the autumn and winter, and to prevail most in the spring of the year." He gives the months of March, April, and May as those in which the disease prevails most. If this rule holds good in the present instance, and unless some decided impression be made by protectionary measures upon our population, we have not yet seen the highest point by a good deal which this epidemic is destined to reach. At present there is no sign of early diminution.

Meanwhile, local and central sanitary authorities have plenty of work before them—and it may honestly be said that never before was an epidemic disease met more worthily. Something of this probably is due to general alarm, but more to the fact that the general administration of the sanitary affairs of London, at all events, is such as it has never been before. It is true it might be better. Some of the local boards of guardians and vestries alike have been slow to carry out the power which the Legislature has invested them with; but still there is the law which empowers, and there is the organisation through which it should operate. Probably fear and panic will stir up such as have hitherto been dilatory, and out of a wide-spread evil may arise some permanent good. Let us hope that this will be so. The Poor-law Board and the Medical Department of the Privy Council have both been active, the former through the Metropolitan Asylum Board in providing Hospital accommodation, and the latter in giving good advice to guardians and to vestries, and in urging both to the execution of their several tasks in the suppression of the epidemic.

At the commencement of the epidemic, the only Hospital accommodation provided for London was at the Small-pox Hospital at Highgate, where only about 100 patients could be received. This was full in October, and the surplus of cases which could not be isolated were being treated at home, often in single rooms occupied by a whole family, or in the metropolitan workhouses. The Metropolitan Asylum Board, having somehow lost a good deal of time in the erection of the permanent Hospitals which had been determined on for the poor of London, were not ready with them. To meet the emergency, they re-opened, as a small-pox Hospital, on December 1, the temporary Hospital provided for cases of relapsing fever last winter, providing thus 130 beds. On January 5, additional accommodation for seventy patients was provided on the same site by the erection of an iron shed, removed from the grounds of the London

Fever Hospital. Since that time, further accommodation to the extent of 200 beds has been determined on at the same site, and, as we write, the permanent Hospitals at Homerton and Stockwell have been opened for the reception of patients—and none too soon. The Small-pox Hospital at Homerton will accommodate 100 patients, and, should it prove insufficient for the Eastern and North-Eastern districts, as it probably will, it is determined to devote as much as may be necessary of the fever wards on the same site for the reception of small-pox cases. Similar accommodation is provided at Stockwell for the South London parishes, so that altogether we may estimate the number of beds provided for the poor suffering from small-pox at 700, with an elastic margin of fever beds for use in emergency. But besides this, some of the parishes of the metropolis have undertaken local limited provision for themselves. This has been done to a varying extent by the parishes of St. George's, by the City of London, St. Olave's, Lambeth, Whitechapel, Hackney, Islington, and Shoreditch, and the vestry of Marylebone, acting under its powers conferred by the 37th section of the Sanitary Act. With the exception of the Marylebone Hospital, all these beds, about 180 in number, are provided for pauper cases; but besides pauper cases, there remain a large number for whom the vestries and nuisance authorities ought to provide some means of isolation. We allude to persons—especially young persons—in trade establishments, persons above the pauper class living in confined lodgings, servants, etc., who, when attacked, are likely to spread the disorder to those about them. Although no statistics are available as to the prevalence of the disease among the class above paupers, there is reason to believe that it is by no means inconsiderable. Among the pauper class there are sure to be some who will object to removal from home; but where the safety of the public at large is at stake, considerations of this sort can be permitted little place. The sanitary authority can deal with such persons under the 26th section of the Sanitary Act, which provides for the compulsory removal to a Hospital (anywhere within the metropolitan area) "of any person suffering from any dangerous, contagious, or infectious disorder, being without proper lodging or accommodation, or lodged in a room occupied by more than one family, or being on board any ship or vessel." Some persons have doubted to what extent this section is applicable, and whether under it a person lying ill with small-pox in a room occupied by the other members of the same family could be compulsorily removed. Everything depends upon the meaning of the word "proper"; and in interpreting it, it must be kept in mind that the statute in which the section occurs is not one framed for the benefit of the sick, but for the protection of the public health. Viewed in this light, the word "proper" cannot mean proper for the individual as a sick person whose recovery is sought, but proper for him regarded as one capable of spreading disease to those about him. At any rate, Medical Officers of Health have a right thus to interpret the section until corrected by a competent authority, and it is their duty to insist, until a decision is given against them, on the removal to Hospital of small-pox cases so lodged as to endanger others in the same house.

In connexion with the subject of Hospital accommodation, we must mention the necessary provision for the transmission of patients to and from these establishments. There is no doubt that the 38th section of the Sanitary Act, relating to the use of public vehicles for the conveyance of patients, has been greatly evaded. Street cabs have been largely employed for this purpose, and as it appears to be nobody's business to see that they are subsequently properly disinfected, it is not likely that the drivers give themselves any trouble in a matter which can only result for them in loss of time and money. It is satisfactory under this head to observe that directions have been given to take note of any public cab bringing patients to the Hospitals established by the Asylum Board. Several of the metropolitan parishes now have carriages of one sort or another for the conveyance of their contagious cases. Those which have them not ought at once to provide them. One complaint we have heard made against the Hospital at Highgate relates to the early stage of convalescence at which the patients are discharged, and the danger to the public of such persons spreading the disease on returning from the Hospital, either through the exuviæ from the skin, or through the medium of the clothing. One such person was found the other day riding home in an omnibus from the Hospital. The new asylums will, it is hoped, retain their inmates until all the scabs have fallen off, and until their persons have been thoroughly disinfected by appropriate baths. We are glad to observe that arrangements have been made for the disinfection of the clothing in which they will return to their homes.

POOR-LAW MEDICAL OFFICERS AS ASSISTANT OFFICERS OF HEALTH.

No. II.

It may be gathered, from what we said in our former article upon this subject, that the functions of an assistant Health Officer, were it in contemplation to create such an officer, where a Medical Officer of Health already existed, might be enumerated under three heads:—1. The supply of information as to the presence of preventible diseases, and their supposed origin. 2. The performance of systematic sanitary inspections and the oversight of sanitary works. 3. The private inculcation of domestic sanitary precautions in individual instances of sickness in families.

We have said that we regard it as the duty of good citizens, whether they be Medical men or not, to assist in every way in their power in preventing the spread of disease in their respective neighbourhoods, whether by giving to the sanitary authority notice of its presence, or by the moral support of a good example and good advice to those who are more ignorant than themselves. And in the matter of information as to the presence of diseases—such, for instance, as small-pox or scarlet fever, especially when these newly break out in a locality for a time free from them—none can do the service that can be done by the Medical Profession. And this is in the highest degree true of those whose practice lies among the class of persons most liable to be first and most severely stricken. But we hold that no Practitioners are exempt from the obligation to this duty. It is mainly to its neglect, however—not a wilful neglect, but one arising more from *inertia* and want of consideration of the subject than anything else—that it so often happens that a Medical Officer of Health is in total ignorance of some severe outbreak, until it has made such way as to be beyond any man's control, or until his attention is drawn to it by the mortality it has occasioned. It would be an inestimable advantage if some official *rapport* were established between the Medical Officers of Health and the gentlemen who attend the poor at their homes, under which the latter would be placed under additional and distinctly recognised obligation to supply the early information which is so much required. It would not meet all the necessities of the case, but it would meet them in great part.

Under existent arrangements, systematic sanitary inspections are in part made by the Health Officer himself, and in part by subordinate officers, such as Inspectors of Nuisances, whose rank in life and education are about on a level with those of an intelligent police constable. It is customary, also, for these men—who, after instruction and some experience, come to do the duty tolerably well—to superintend the proper execution of sanitary works, such as house drainage and cleansing, disinfection, and so on. But there is a part of a thorough sanitary inspection for which these men are by education quite unfit, and which, if not done by the Health Officer himself, on whose time and thought there are a variety of other constant demands, is not done at all: we mean the investigation into the health history of families, and an intelligent and well-directed inquiry into the probable causes of depraved health, or of the inroad of contagious sickness. Ordinary Inspectors can work in a groove; but slip them out of it, and they are helpless and useless. It is here that a Medical Officer of Health would be assisted by Inspectors who had received a Medical education. The superintendence of sanitary works, and the ordinary inspections of nuisances on complaint, may well be left to the class of persons who now perform them.

The administration of advice as to domestic sanitary precautions, so far as official action is taken, is at present effected by means of printed papers in many places—these papers being drawn up by the Health Officer, and distributed where they appear to be needed, under his direction. This is not altogether a very satisfactory proceeding; for we fear that in many cases little trouble is taken to master the contents of the circulars, and in many others they are put behind some ornament on the mantel-shelf, and never read at all—at least, that is our experience. We should look for better results could a little instruction be given at the proper nick of time by word of mouth, especially if the person who gave it could do so authoritatively, and see that some attempt were made at its immediate application. Here again is an opportunity for the useful agency of Medical assistants.

It must, then, we think, be admitted that there would be a decided gain to sanitary administration if it were possible for the Medical Officer of Health to obtain the assistance of persons trained to Medical observations and inquiries. We would even go so far as to say that, if it could be in any way compassed, it would be a desirable change to replace the men now acting as Sanitary Inspectors and Inspectors of Nuisances by men who have undergone a Medical education. Such persons would quickly accommodate their minds to the duties of the office, and more readily grasp the principles on which not only the routine work of an inspector is based, but also those on which sanitary amendments of all kinds depend. We are far from undervaluing the services which can be rendered by a shrewd and experienced inspector of the ordinary kind, in whom training and long observation often appear as an almost unerring instinct. That Health Officer is fortunate who can boast of such an assistant. But such instinctive perception is the result of long habit, and is attainable by few. No bad substitute for it is the intelligent induction of a man who has been taught to observe, to store his mind by reading and study, and to think methodically.

Two plans of attaining this object may be suggested. The one is, that Sanitary or Nuisance Inspectors, who are required to devote all their time to the duties of their office, should be men who have received a Medical education. A district under sanitary administration would thus become an admirable school for the practical training of future Health Officers, and we could well believe that it might be worth while for many young men to take the office of Inspector as the first step towards devoting their lives to the practice of preventive Medicine. The tendency of the times is unmistakable. Preventive Medicine is yearly becoming more and more of a speciality, and promises to become a field of labour in which a comfortable competency may be attained. Such a salary as a hundred a-year would be for a young man as good a beginning as the majority of men make as ordinary Medical assistants. But still one of our desiderata would remain unsatisfied —the early information of outbreaks of disease; nor would such a Medical Inspector possess the advantages of the Medical attendant on the sick, in directing, enforcing, and superintending the use of domestic precautions.

The other plan is, to utilise the present Poor-law Medical Officers, and to make them also assistant Officers of Health. There is this objection on the fore-front of the scheme—namely, that already these gentlemen are, for the most part, well occupied, and that it would be impossible for them to undertake the systematic sanitary inspection which the Medical Officer of Health would require them to make. They would be able to devote but little time to such duties, if merely made supplementary to their public and private practice. On the other hand, there would be this advantage—namely, that they would be in a position to give the earliest notice of the outbreak of contagious disease in places where such diseases spread most rapidly, and to enforce the immediate use of the necessary precautions against their extension. Moreover, by associating them officially with the Medical Officer of Health, uniformity of practice might be ensured, and the Health Officer would be saved the annoyance, and sanitary practice the obloquy, arising out of conflicting views in matters of detail. Even now, however, it is not to be forgotten that the Medical attendant on the poor is not absolved from giving advice upon such matters to the best of his ability. But this part of his duty, as the attendant upon the sick, is not taken into account by the public, who look upon his functions merely as curative. They regard him as having duties to the sick poor, but in no respect as standing between the sick poor and themselves, and protecting themselves from the contagious maladies generating in a lower grade of society. Yet this is the real position of a conscientious Poor-law Medical Officer; and it ought to be recognised and made the best of.

To sum up, now, the views we hold upon the whole question. What we think we ought to see is this (at any rate, in London and towns of sufficient size):—A Medical Officer of Health exercising supreme power of direction and control of sanitary administration, and having for the work of systematic inspection and supervision of sanitary work a staff of men educated to the Profession, giving up all their time to their duties, and looking forward to advancement in the practice of preventive Medicine; having, also, in official relation with him, the Medical men appointed to act as the attendants upon the sick poor under the Poor-law system of the country. The sanitary functions of these gentlemen should be: to give immediate notice to the Medical Officer of Health of every case of contagious or preventible disease which comes under their notice; to inquire into its origin; and to take the necessary steps to prevent its spread in accordance with general instructions, or such as naturally suggest themselves as arising out of the individuality of the case. Certain duties of a statistical nature might also be imposed fairly as a part of a general system for the registration of sickness. And all this should be taken into consideration in the salary of the Poor-law Medical Officer. We do not think that it would be at all desirable that his salary from the Poor-law authorities should be supplemented by the sanitary authority. It would be better that the salary for the curative part of his work should be paid by the local authority, as at present, but that, this being determined, the supplementary payment should be made by the central Poor-law authority, whose officer he now is, and whose officer he would still alone continue to be.

SEVENTH ANNUAL REPORT OF THE CORONER FOR THE CENTRAL DISTRICT OF MIDDLESEX, FOR THE YEAR ENDING JULY 31, 1869. BY EDWIN LANKESTER, M.D., F.R.S.

Undeterred by that which would have daunted a less earnest and indefatigable public officer, Dr. Lankester is again in the field, urging upon the Legislature and the public reforms and improvements in the Coroner's Court which every unbiassed person must regard as of the utmost importance to the safety of the public and the proper administration of justice. Dr. Lankester says—

> "Whilst thus again recording my annual experience, I cannot but regret that I have so little evidence to offer of any manifest improvement with regard to those occurrences which, in a civilised community, may be fairly looked upon as preventible. During the seven years to which my reports relate,

I am not aware that in any one instance have measures been adopted for the prevention of acknowledged evils, and which are obviously under the control of local or general legislation."

He then proceeds to show, by tables and other ways, the number, nature, and districts of inquests; the general causes of death; of the inquests held all over England in the years 1869 and 1868, distinguished under the different verdicts; the numbers under each verdict for each of the five years preceding 1868, with the average of the seven years preceding 1863, and the totals; the sexes and the ages of persons on whom inquests were held in each of the years 1869 and 1868; the total costs of such inquests for fourteen years past; and other tables of great interest, both as regards statistics and crime. Upon two points of great importance he enlarges—viz., infanticide and drunkenness.

With respect to the first, he says that the tables at first sight would seem to prove that infanticide was on the decrease; but this he shows, we think conclusively, is erroneous. Thus, he contends that in a vast number of cases in which a verdict of infanticide should have been returned by the jury, the real verdict was in nearly 3000 cases "found dead." This open verdict, Dr. Lankester properly explains, is liable to frustrate the ends of justice. If in most of these instances a verdict of wilful murder had been returned, further inquiries might have been made, with the effect of establishing a criminal charge against offenders. This would not involve the coroner's jury in any responsibility they should not accept, for the supposed criminal before trial would have to be taken before a magistrate, and the circumstances fully investigated. He shows, by a reference to the verdicts arrived at by the juries in central Middlesex of "wilful murder," in cases of newly born infants "found dead" in the streets, that if similar verdicts were given by the juries throughout the country, the cases of infanticide would reach the alarming number of 2000. Dr. Lankester observes—

> "These remarks will, I trust, show the necessity of another column being added to the returns in question (the Judicial Statistics), in order to show the number of exposed newly-born children on whom inquests have been held during any given year."

He then shows, by figures of unquestionable accuracy, the fearful number of inquests held on infants born illegitimately, when compared with those held on children born in wedlock, and how this proportion diminishes in a direct ratio with the age of the children.

The subject is one of the greatest interest and importance, and we trust some legislative enactment will be carried out respecting it.

Dr. Lankester has introduced into his table of causes of death those instances in which it clearly resulted from "excessive drinking;" but he justly observes that if all the cases in which diseases of a fatal character resulting from drink were properly attributed to that cause, then the verdicts of death from excessive drinking would be very numerous. We content ourselves on this occasion by confining ourselves to the two points to which we have referred in Dr. Lankester's able report; but we shall recur to it on a future occasion. It has been said that no railway reform *quoad* for the safety of passengers would be carried out until a bishop had been sacrificed; we may observe that the state of our streets in winter, particularly after a fall of snow, will never cease to be a disgrace to us, and a source of danger to the public, until the County Coroner succeeds in getting a verdict of manslaughter against some recalcitrant householder who has neglected to have the front of his house properly cleared after a snow-fall, and a fatal accident has been the result. The Coroner for Central Middlesex has published his determination to urge upon a jury the righteousness of such a verdict under such circumstances. Should such a verdict ever be returned, Dr. Lankester will become the greatest and most useful "scavenger" of the time.

THE WEEK.

TOPICS OF THE DAY.

There was a meeting of the Sub-committee appointed to arrange the scheme for the Conjoint Examination Board, on Tuesday last. We hear that considerable progress was made in the matter of apportioning the nomination of examiners in the different subjects of examination to the three Medical Corporations. The next meeting of the Committee is to take place on Monday next.

In our law report to-day we publish a report of the examination of the case of a Mr. Gerard, a private teacher of classics and mathematics, who has been committed by the magistrate at Bow-street to take his trial for conspiring with a printer named Reuben Newport to steal from the printer employed by the Apothecaries' Society a proof copy of the questions set in the last preliminary examination. Too much credit cannot be given to the officials of the Apothecaries' Society for the successful manner in which they have brought the offender to justice. The "grinder" was taken by the detective police officer with the stolen paper in his hand, and the printer's man, who had been bribed to obtain the paper, but who most honestly had at once revealed the game that was being played to his employer and to the officers of the Apothecaries' Society, was there with the bribe of £10 in his hand, which the moment before he had received from Gerard. Nothing could be more complete than the proof. There is much reason to believe that the same practices have been carried on for the last two or three years by Gerard in reference to the examination papers of other institutions. There have been rumours that the preliminary examination papers of the College of Surgeons have been obtained for the use of candidates. It is pretty well known that the attempt which led to his arrest was not the first which he had made to get possession of the examination papers of the Apothecaries' Society. To prevent the repetition of such practices, the authorities of the College of Surgeons have already put in practice a system of lithographing which will make them simply impossible. The questions are written by one of the officers of the College on lithographic paper; they are then taken, by the same officer, to the lithographer, where they are printed from a stone in his presence, and the stone is then cleaned. The copies are, therefore, never in the hands of the lithographer, but as they come from the stone they are received, one by one, by the College official. An equivalent plan, we believe, is employed at the University of London, and we have no doubt some such means of prevention will be adopted by all other examining boards.

We are glad to observe that on the motion of Mr. Hepworth Dixon the London School Board have resolved—"That it is highly desirable that means should be provided for physical training exercise and drill in public schools established under the authority of the Board." Unlike some of the members of the Board, we agree with Mr. Hepworth Dixon, that physical training is of the first importance to the rising population, especially of our large towns. The experience of all masters of great public schools has shown that physical training to a high degree is not incompatible with mental culture, but that, on the contrary, the one may be made directly subservient to the other. Germany has set an example in this respect, and given a lesson which we cannot afford to disregard. We are also very glad that the amendment of Mr. Lucraft, which would have omitted the word "drill" from the resolution, was negatived. We do not wish to see the English turned into a nation of soldiers; but the habit of acting under command in combination, which the word drill implies, is in these and in all times a valuable acquisition for a free people.

In reference to the "Direct Representation of the Profession" scheme of the British Medical Association, and the analogy which Dr. E. Waters has attempted to draw between the members of the Medical Profession and the members of the University of Cambridge, a correspondent reminds us that the representative of the University of Cambridge in the General Medical Council is elected by Convocation, but that only those who are present at the meeting of Convocation have a voice in the election. There is, therefore, really not the slightest comparison to be made between the two cases. There is nothing like a direct representation of the great body of the graduates of the University of Cambridge in the Medical Council. Dr. Waters suggests that gentlemen who will pass the conjoint board, which is now being arranged, will be affiliated to no one of the Medical authorities. This is a mistake; they will receive at their option the diploma of one or more of the English Corporations, and, should the representation of the Medical Authorities be put on a broader basis, will have the same electoral rights as any other Medical men holding the same diplomas.

Professor Erasmus Wilson commenced his course of Lectures on Dermatology at the College of Surgeons, on Monday last. In his first lecture he gave some demonstrations of some of the beautiful models and preparations of skin diseases with which he has enriched the Hunterian Museum. The second lecture was on Eczema. The last lecture will be delivered on Friday next.

We are afraid that some of our patients who have sought a refuge on the shores of the Mediterranean from our Siberian winter, have not gained much by their change. A writer in the *Times*, who dates from San Remo, on January 25, thus gives his experience of the sunny South:—

> "San Remo, my present home, is said to be the balmiest, sunniest spot in all the balmy, sunny Riviera. A half-moon of olive-clad hills shelters it from every cold wind, and it is only open to the soft breezes of the blue Mediterranean. Palm trees flourish in the open air, and the orange gardens are yellow with abundant fruit—in fact, it constitutes a very charming *mise en scène*, which only requires to be made perfect by the addition of myself reclining in the sunshine, lulled to lazy sleep by the murmuring splash of the calmest of seas. So far San Remo, in the eternal fitness of things; and such was the glowing picture that consoled me *en route* as I endured the agonies of sea-sickness and all the weariness of travel. Now, let me tell of the realisation. I arrived in drenching rain some six weeks ago. Four horses dragged me and my belongings for two days along the Cornice road from Genoa, over hills and along precipices, in driving mist and rain, with the roads one mass of mud, until I thought the most glorious drive in Europe as great a bore as a crowded street in the heart of the City. For days I only ventured forth when health demanded fresh air, and despair made me endure a vapour bath above and a mud bath below. The day of the great eclipse saw a leaden cloud stretched from horizon to horizon, and sun and sky were alike shut out from view. Then came a brief spell of deceitful sunshine, tempered by bitter winds, and only to be followed by heavy snow. There was a kind of humour in the sight of orange trees heavy with snow as well as yellow fruit, and palm trees looked absolutely ridiculous in their wintry garment of white. This snow melted to make place for fresh, which still whitens the tops of the hills around, and morning after morning I broke the ice on the pools that are dotted about the shore.
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> "This agreeable phase of a southern climate was succeeded last week by another form of bad weather, that had, at any rate, the charm of excitement and novelty. One morning a fresh wind sprang up from the south, and the sea soon ran high. By midday it blew a gale, and by night a storm, and the waves came tumbling into shore with Atlantic force. Great blocks of rock that had been piled at the end of the little breakwater were tumbled about by the sea, and the wind made the raindrops smart on one's cheeks like pellets. The inhabitants stood about on the beach, drenched with the pitiless rain. and gazed in helpless bewilderment at the unexpected phenomenon, the like of which had not been seen here since 1812. Six vessels, which were anchored near the shore, one by one all dragged their anchors, snapped their cables, and were driven to shore. I watched the fate of five myself, and at midnight I was awakened by the church bell calling all inhabitants to come and lend a hand, for the sixth and largest was following the fate of the rest. No lives were lost, the men escaping by ropes to the shore, but two of the ships have since broken up through the violence of the waves. The priests and religious *confrères* of the town came in solemn procession, 'with bell and book and candle,' bearing a huge crucifix, which they planted by the edge of the sea, while they cast the blessed bread into the water, and prayed that the storm should cease. When the procession returned to the church, weeping women crowded to kiss the crucifix, and the priests were accompanied by the people in a kind of solemn monotonous chant, which was very impressive to hear. But the storm raged for the whole of another day.
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> "After the storm came a calm, and with it a sunny warmth that brought content for awhile to my grumbling spirit. But it is now raining again, and a two days' downpour seems only to be the recommencement of the weather programme for the season."

POISONING BY CHLORAL HYDRATE.

A DEATH from an overdose of chloral hydrate is reported from Northamptonshire. The rector of the village of Whittlebury had suffered from sleeplessness, and had adopted the plan of dosing himself with narcotics—a practice we can never sufficiently condemn. Have not men yet read De Quincey's "Opium Eater"? Latterly he had used chloral; he had gone to bed one night in good health and spirits, apparently taken an over-dose of this narcotic, and failed to wake in the morning, having died during the night. The death is put down to hydrate of chloral, but there is no proof that the drug was the immediate cause of his death, especially as the quantity taken is unknown. It is at least possible that the unfortunate man may have been suffocated during his lethargic sleep. We say this, not because we think chloral an innocuous drug—quite the reverse, as we shall prove presently it is a most dangerous one to be in the hands of those unskilled in its use—but because there seems to have been no evidence of the immediate cause of death.

That chloral hydrate is dangerous, may be deduced, among other things, from a report in the *New York Journal of Psychological Medicine* (January, 1871), just come to hand, wherein Dr. Needham records a case of fatal cerebral congestion favoured or induced by repeated doses of hydrate of chloral. The patient was a lady, exceedingly nervous, who had been subjected to a great variety of treatment, apparently unavailingly. At last chloral hydrate was given in cumulative doses—six in all, of thirty grains each. The sleep induced became so prolonged and deep as to alarm her attendants. Every attempt was made to rouse her, but in vain, and she slept to death. The cerebral vessels were enormously congested. The patient had been taking bromide of potassium for some time before.

In one of our metropolitan Hospitals a fatal issue has also followed the exhibition of a large dose of chloral; but as the patient was in an exceedingly exhausted state, the result of a severe operation, the death could not absolutely be laid at the door of the chloral. In Philadelphia, a woman swallowed an enormous quantity of the drug (460 grains, it is believed). The symptoms were very severe, but prompt measures were taken, and she recovered.

In one of our provincial Hospitals we saw a patient who had very nearly died of an overdose of chloral; his tongue fell backwards, and his soft palate was paralysed. He also was well taken care of, and recovered perfectly.

WATER SUPPLY OF THE METROPOLIS.

A DEPUTATION of the Association of Medical Officers of Health had an interview at the Home Office, on Thursday, with Mr. Shaw Lefèvre, Under-Secretary of State, at that gentleman's request, to give him information as to the details of the water supply of London. Dr. Druitt (President of the Association), Drs. Letheby, Vinen, Tripe, Stevenson, Aldis, Lud, and Sutton were amongst the deputation.

SMALL-POX AND PITTING.

There is nothing very particular to be noted with regard to small-pox, beyond a slightly diminished mortality, with an increase of sickness. But there is noticeable a most mischievous activity on the part of the Anti-Vaccination League, the fruits of which are almost daily to be observed in the police reports. On the other hand, we have heard of a proposal to limit the eruption to certain portions of the body, which is at least worthy of attention, the more so that it has been formerly tried with considerable success. Dr. Archer Farr, of the Waterloo-road, has in several cases endeavoured, and to a great extent succeeded, in localising the eruption on the abdomen; the face, which is ordinarily attacked most virulently, escaping almost scot free. The idea is not new, and although we cannot at the spur of the moment recall the name of the author, we would bespeak for him the priority which is his due. The theory is this: a patient suffering from the incipient symptoms of small-pox is subjected to the action of some counter-irritant. Tartar emetic was formerly used; Dr. Farr, we believe, uses turpentine; one of Rigollot's mustard-leaves would be better than either. The site commonly selected for its application is the chest and upper part of the abdomen, and the irritation thus applied has the effect of inducing the appearance of the eruption on that spot at the earliest possible period—that, in fact, in which the face and hands are usually attacked and bear the brunt of the onset. If the eruption is to be mild, instead of spending its force, therefore, on the parts of the body usually exposed, it may be induced to do so on those constantly kept covered, and disfigurement consequently avoided. When, however, the eruption is likely to be confluent, as in unvaccinated persons, we question if it would prove useful. Neither, on the other hand, do we think it would prove injurious if undertaken at the very commencement of the disease. If too late, the practice would be likely to aggravate the eruption at the spot to which the irritant was applied, and might prove dangerous. Anyway, the plan is well worthy of a trial, provided due care be exercised.

CERTIFICATES OF DEATH FROM SMALL-POX.

As considerable difficulty is experienced in London in obtaining reliable information as to the proportion of deaths from small-pox occurring among vaccinated and unvaccinated persons respectively, it is suggested that "Medical men should add to their certificates of the cause of death in cases of small-pox, 'vaccinated' or 'not vaccinated,' as the case might be, so that the returns might be perfect."

LIME-WATER AND ITS DEADLY EFFECTS.

Even the simplest and most harmless remedial agents require to be administered with judgment, and prepared with a certain degree of exactness, to prevent their action being fraught with danger. This has been lamentably illustrated by a case which has just occurred in Birmingham. A patient was recommended by his Physician, amongst other things, to take a certain quantity of lime-water daily, but he was not told, so we are informed, how to get it—whether he was to buy or make it for himself, which is often done upon proper instructions being given. The patient straightway procures some lime, and mixes a lump with water, stirs it, and swallows the thick mixture; in a few hours afterwards, acute symptoms of gastritis come on, and he dies from the effects of the baneful potion, which, at the inquest, was pronounced to be the cause of death. This case certainly points a moral from which we may all learn a useful and practical lesson, and it is this: always take for granted the complete ignorance of patients concerning the nature and properties of drugs, and never recommend them to be their own chemists, but tell them to apply to those whose legitimate business it is to supply them.

PARIS.

The capitulation of Paris presents for consideration three points of supreme importance as regards the health, not only of the inhabitants, but of all with whom they may come in contact—namely, the revictualling of the city, the departure from it of large numbers of the sufferers from the siege, and the prevention of the spread of infectious diseases by the emigrating population of Paris among hitherto healthy communities. The revictualling is by all accounts being carried on with great activity, and as quickly as the broken railways and obstructed roads will admit. The comparative facility of getting live-stock into the city is, of course, being taken advantage of, but we have not seen any allusion to the means of transport for other articles of food, which a herd of oxen or even sheep might supply. We trust that the idea of utilising the live-stock in this way may ere this have occurred to someone on the spot who may have the opportunity of putting it into practice. We shall doubtless shortly hear of large numbers of women, children, and invalids hurrying from the scene of their prolonged sufferings to more peaceful districts. The consequent diminution in the number to be fed will reduce the task of revictualling; but such an exodus raises the question as to the advisability of vigilant precautions being enforced, even by quarantine if necessary, but certainly by disinfection of the persons and clothes of those who may be convalescents from contagious diseases, and the isolation, as far as may be practicable, of persons still suffering from such diseases, so as to prevent their spread in France, or the exportation of fresh centres of contagion for dissemination in this country. One other word of caution we consider appropriate to the occasion, and that is, that nothing but the most urgent necessity should induce anyone to enter Paris during the armistice. Many weeks or months must yet elapse before Paris can be considered a safe place for sightseers. Contagion will lurk in the streets and houses for many a day after the departure of the German invaders. It is highly probable that the projected triumphal entry of the victorious army may be abandoned from sanitary as well as from political reasons.

DISGRACEFUL STATE OF A CEMETERY.

Mr. I. J. Ikin writes to the *Yorkshire Post* of a disgraceful scene at the funeral of an old Crimean sergeant, at the Burmantofts Cemetery, on Wednesday last, in consequence of the offensive and dangerous effluvia from decomposed human remains which filled the air. The cause assigned for this dangerous nuisance was that an adjoining grave had been "accidentally" encroached upon, and the contents of the decomposing matter had escaped into the newly dug grave. Surely there can be no excuse for such a distressing occurrence, alike dangerous to the mourners, spectators, and officials. Such an emanation of poisonous air might bring on attacks of cholera or typhus fever, and there are many cases on record where fever and cholera have been produced and proved fatal from breathing poisonous air at funerals. In fact, the danger is so great that, in order to prevent it, and check carelessness and desecration, the law of the land has appointed inspectors of burial-grounds around the metropolis. Precautionary measures ought at once to be taken to prevent a serious nuisance—or "accident," as it was termed.

MR. WANKLYN'S SPONTANEOUS CHANGES IN MILK.

Mr. Wanklyn continues, in the pages of the *Milk Journal*, to propound his seeming paradox of the spontaneous changes in the specific gravity of milk. He asserts, for example, that newly-drawn milk first undergoes contraction, so that its specific gravity may be raised from 1020 to 1030; but that, during the next few days, it undergoes expansion, so that its specific gravity may fall to below 1000. Mr. Wanklyn is so able an experimenter that he no doubt will soon prove the fact of the change of bulk side by side with the change of weight.

THE FEMALE MEDICAL STUDENTS.

Balked in their endeavours to secure an entrance into the Royal Infirmary at Edinburgh, the female medicals and their supporters have turned their attention to another institution which they think may be made to suit their purpose. A little beyond the new site of the Royal Infirmary is a very neat little Hospital called the Chalmers Hospital. The building is not completely filled, and it would readily admit of expansion. Upon it, therefore, the supporters of women's rights have cast their eyes; and if there is to be such a thing as female Medical education, we do not see much harm in their attendance on the practice of the Hospital, if male students and male patients are to be excluded. Dr. Heron Watson, the Surgeon to the institution, is favourable to the scheme of female education in Medicine, but the Physician, Dr. Halliday Douglas, is opposed to it. We shall see in course of time whether the ladies will be strong enough and pertinacious enough to carry their point.

DR. LETHEBY'S TWENTY-FIRST ANNUAL REPORT ON THE SANITARY CONDITION OF THE CITY OF LONDON.

We have received Dr. Letheby's Annual Report, although too late for extended notice this week. It contains the history of the births, deaths, and marriages, the sickness, and the sanitary work in the city; but the drier statistical details are everywhere mixed with interesting facts and observations of a thoroughly practical stamp. One curious point noticed—and our readers may remember that Dr. Barnes once called attention to it in these columns—is the constancy of the total number of deaths from zymotic disease, though the items vary; "each year has its special epidemic, yet in the aggregate the total mortality from all forms of zymotic disease remains about the same."

GRAND MEDICAL MILITARY FUNERAL AT WOOLWICH.

On Tuesday His Royal Highness Prince Arthur was present at the funeral of Staff Surgeon Alexander McArthur, M.D., of the Herbert Hospital, who died suddenly at Shooter's-hill, and was buried with military honours at Plumstead. The deceased Physician, who was 44 years of age, had retired to rest in good health, and was found dead in bed by his regimental servant next morning. An inquest was subsequently held, the post-mortem showing death to have been caused by disease of the heart. He was much respected, and the tribute paid to his memory by the presence of Prince Arthur at his funeral is gratifying to the whole garrison.

PROFESSOR HALFORD'S CURE OF SNAKE-BITE.

The *Melbourne Argus* of December 5 contains two additional cases illustrating the efficiency of Dr. Halford's remedy for snake-bite. In one case, the patient was a boy, 11 years of age; the other a shepherd. In both instances the effects were immediate and satisfactory, a perfect cure following.

THE REGISTRAR-GENERAL'S QUARTERLY RETURNS.

The Registrar-General says of Brighton—

"Brighton has been unhealthy; the deaths exceeded the average deaths of the place by 52. There were 31 deaths from small-pox, 39 from scarlet fever, and 10 from diphtheria. The practice of families attacked by, or convalescent from, communicable diseases, resorting to the watering-places, is scarcely fair, either to the residents or to people who seek invigoration and refreshment after toil from the sea-breezes. And where the uninfected children of a family are carried to these distant places, if they escape attack in their new lodgings, they are often attacked on their return, and thus protract the disease. Among strangers, too, they are more likely to die, as they rarely get the attention to be counted on at home. So that, by a natural law, the disregard for the safety of the community falls back upon the offenders. When the sanitary condition of a house is irreclaimably bad, its inmates should be removed into more favourable conditions, but not in ordinary cases. The dispersion of scholars propagates infectious diseases, unless due precaution is taken; thus, the registrar of Wells, Norfolk, states that the girls affected at a school in that town were dispersed, and were the means of spreading the epidemic, from which three deaths occurred in the parish of Binham."

FROM ABROAD.—POPULATION OF BELGIUM IN 1869—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

According to the *Annuaire* of the Brussels Observatory, published by M. Quetelet, the population of Belgium at the end of 1869 amounted to 5,021,336 souls; that of the provincial capitals being 637,272, Brussels having 176,706 inhabitants. The urban and rural communes having populations of more than 5000 had a total population of 1,889,488, and those with less than 5000 a total of 3,131,848. The births in 1869, exclusive of stillborn children (7461), amounted to 91,427, and the deaths, excluding the stillborn, were 58,597—being an excess of 32,830 births over the deaths. The marriages amounted to 37,134, and the divorces to 82. The illegitimate births, exclusive of stillborn (786), numbered 11,181. During the year there was 1 birth to 31·6 inhabitants, and 1 death to 45·8. There was 1 female birth to 1·06 male, and 1 death to 1·45. In the towns there was 1 illegitimate birth in 9·4 births, and in the rural districts 1 in 20·9. In 1869 there were living 11 persons born in 1769, and persons born before 1800 amounted to 20,488.

Writing from Frankfort, on his way home, Professor Billroth again touches on the topic of the wooden-shed Hospitals (*Baracken*), having, since the letter we last noticed was written, had opportunities of examining such of these structures as were raised at Carlsruhe, Heidelberg, Darmstadt, and Frankfort. At Carlsruhe there was a "monster" Hospital of this kind at the railway station, having 400 beds with abundant space—the largest structure of the kind raised during the campaign. Imposing as it appeared, its ventilation and warming were difficult and costly operations, and Billroth regards its erection as a mistake. He describes, at some length, the simpler means adopted for the ventilation of the *Baracken* at Mannheim, but even there their warming was found a difficult matter; so that, although the patients by aid of coverings could be kept warm enough, their attendants suffered severely from the cold. This was only the month of September, and there is no proof that such structures could be properly warmed in winter. The *Baracken* erected at the Berlin Charité, Kiel, and Heidelberg are not to the point, for they are really solid wooden houses, the erection of which is tedious and costly, while their superiority to small stone Hospitals is problematical; and in cold winters they cannot be warmed without closing the ventilators and the maintenance of very large fires. The essential thing for a campaigning *Baracke* is, that it can be speedily and cheaply run up, as it is only wanted for a time, and then, or on the breaking out of contagious disease, it can be at once demolished. Some of the *Baracken* at Carlsruhe and Heidelberg were admirable for the completeness of their arrangements, having double walls and floors, together with every convenience and comfort; but their construction was enormously expensive. Professor Billroth has also another word to say about tent Hospitals. These will not bear comparison with the *Baracken*. When rain and storm proof, they are almost dark and unventilated. The small, strong double tents, such as the Dutch brought with them for sleeping in, are, however, warmer than the *Baracken*, but under the influence of the sun's rays they soon become too hot. Professor Billroth is strongly opposed to any further extension of these tent Hospitals, and believes that they have now few defenders. The large one erected by the London Aid Society on a hill near Bingen, was, he says, pronounced as unsuited to the locality by all who visited it; and he regrets that so much money was expended to so little purpose. In allusion to his frequent recurrence to these topics, he says—

"I fancy I hear you grumbling at the length at which I am treating this *Baracken* and tent question; but I am inexorable on this point, returning as I do from the vicinity of the battle-fields with the full conviction that an exact knowledge of these things is far more necessary during a campaign than being able to decide whether a circular or flap amputation should be preferred. Surgeons placed at the head of Hospitals should not regard these matters with indifference, otherwise there is danger of their falling into the hands of mere technalists, who are unable to distinguish the essential from the non-essential."

The diet supplied to the wounded, both at Weissenburg and Mannheim, was abundant. Coffee was given morning and afternoon, some *bouillon* in the forenoon, meat, soup, vegetables at midday, and in the evening bread and soup. From a half to a whole bottle of wine, or one or two bottles of beer, were allowed daily, with tobacco at discretion. Many of the patients will never meet again with fare like that of the Hospitals. Moreover, there were supplied occasionally with sausages and bread and butter (so dear to the Germans), ham, cheese, good port and sherry, and capital sardines. Professor Billroth often breakfasted with his patients on such good cheer.

He feels almost an antipathy to volunteer female nurses; and although many of these came from Weissenburg with the kindest intentions, he superseded their good-natured but injudicious services as rapidly as he could get the aid of regular sisters. At Mannheim, these "wild nurses" were prohibited access to the wounded. Whoever wished to nurse was obliged to apply to the committee, who, in case of her services being needed, put her to definite work under the direction of one of the superintending nurses (*Oberpflegerinnen*). In two of the largest Lazareths, four ladies officiated as *Oberpflegerinnen*, all of them having received instruction in Hospital work, and three of their number having served in the war of 1866. They laboured day and night at their posts with a devotion and circumspection that excited the Professor's wondering admiration, especially as they were not women advanced in years, but good-looking, sprightly, polished ladies of good position, who would have proved highly attractive in any drawing-room.

"Especially was I surprised at the calmness and handiness of these ladies during operations; for not only did they prepare everything for these in the most careful manner, but they had such a knowledge of the instruments required, and so cleverly aided in the operations themselves, that, in truth, no Surgeon need wish for better assistants."

Then, so well did they understand how to manage the soldiers, that they obeyed them like children; and when some unfortunate had to be prepared for the necessity of an operation, a few friendly words from one of them quickly led him to submit.

A committee of gentlemen conducted the correspondence for the wounded soldiers, and brought to light a curious trait—viz., that the indolence of many of these was so great that they never attempted to correspond with their relatives, unless urged to do so. Indeed, it not unfrequently happened that some of them, who, at the request of their friends, had been sought out by the Johanniters, had been daily questioned as to their desire to write home, and refused to do this, although they knew a mother or a wife was grieving at their absence. This occurred even with regard to well-educated men. It is evident from this how little of the sentimentality of which newspaper correspondents give such gushing accounts really prevails in Hospitals. Either the patients are so ill that they are indifferent to everything, and only wish for quietude, or they pass their days in eating and drinking, reading newspapers, and much sleeping.

Professor Billroth has a good word for the unfortunate Turco prisoners—

"Concerning the wounded Turcos many untruths have been spread about. In vain have I sought for facts proving their cruelty, and in vain have I asked the German wounded whether they had been witnesses of any special maliciousness on their parts. Nowhere have I been able to learn anything certain, and many of the tales told of them turned out untrue. At first, they were suspicious and apathetic, and evidently expected that they should be hanged or decapitated, caring, however, very little for death. Gradually they became more trusting, and were induced even to partake of wine and sausages, which, criminal as this might be in a Mussulman, was pardonable enough in a patient. They talked much among themselves, but spoke little French, often declaring, however, that as soon as the Prussians had cured them they would behead them. They seemed to me very like children, and sometimes they were inordinately merry, but soon became sad again. They were frightened at every change, and were delighted with picture-books, and got hold of all the coloured handkerchiefs they could to wind round their heads. They were childishly ignorant of the world. Those of them who were badly wounded were completely resigned, and complained little of their suffering. Some, however, were very sensitive, but others were not so; there being, in fact, the same individual differences as with other men. Nor was there any difference in the healing of their wounds, as compared with Europeans. The French soldiers were, for the most part, very tractable, some of them being truly amiable and grateful. Seldom did they forget to say, after a visit or any service rendered, '*Merci, Monsieur le Major.*' They acknowledged all that was done for them with the greatest thankfulness. Among all the wounded, the Bavarians—the 'blue devils,' as the French christened them—were the most sensitive—at least, as far as the most fearful screams, which nothing could pacify, indicated this. The Prussians, even amidst the greatest suffering, were always quieted by means of a powerful military appeal."

(To be continued.)

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. X.

By J. F. CLARKE, M.R.C.S.,
For nearly forty years on the Editorial Staff of the "Lancet."

A Few Words about Myself—Olney—Bobbin Lace—Nonconformist Celebrities: Andrew Fuller; William Bull; Wm. Carey—The Poet Cowper: Original Anecdotes of him—John Newton—Dr. Kerr, of Northampton—London Fifty Years Since—The Old Family Doctor.

It has always appeared to me that the weary knife-grinder of Canning, who exclaimed "Story! God bless you, I have none to tell, sir!" must have been a knife-grinder of very little soul. No man, whatever his calling, if he have moderate powers of observation and a little common sense, can fail to have some "story" to tell—not necessarily about himself, nor of

"Moving accidents by flood and field,"

but of circumstances which he has witnessed, or of things which he has seen. The most insignificant person may be a spectator of great or interesting events; and his chronicle of them may not be without its amusement to others. The interest we feel in Pepys is on account of his "Diary"; and who cares a fig for Boswell, except in connexion with Johnson? Many of my friends—and some I don't know—have asked me to say a few words about myself. If I acted entirely on my own judgment in the matter I should certainly decline to bring my unimportant career before the Profession; but some, whose judgment I respect, and whose position is of the highest amongst us, have advised me to comply with a request which, they are good enough to say, they "think reasonable." It is not likely that I shall escape criticism for what may be regarded, by some "word-catchers," as egotism and vanity, but I am too old a soldier to be frightened by mere flashes in the pan. Moreover, if I have nothing to say worth saying of myself, I can say something of others with whom I have come more or less in contact during the last forty years. Their names will, at all events, awaken interest. The matter will be sterling, however imperfect the manner in which it is told.

In the valley of the Ouse, about five miles nearly due north from Newport Pagnell, is situated a small town, now only known from the memories attached to it—Olney. It was once very flourishing as the centre of the manufacturing district of British lace. Before Nottingham had made itself famous by its machine-made lace, many thousands of persons in the neighbourhood of Olney earned a good living by the beautiful product of the "pillow and bobbins." My grandfather and father were lace merchants, and employed so many hands that it was one person's work to receive the lace from the women and children who brought it to the different inns in the neighbouring towns and villages at stated times to receive their wages in exchange. The introduction of the Nottingham product had a most disastrous effect on the bobbin lace, and distress to a very severe and painful extent followed in Buckinghamshire. Now the manufacture has dwindled to an extent that is all but a collapse. My grandfather and father felt the crash severely, as did all the other merchants, except those who had made a competence for themselves and retired sufficiently early not to see the labours and struggles of many years ending only with misfortune. I know it is usual with autobiographers to commence with some account of their ancestry, some tracing their line to the Norman conquest, and some going even farther back. I have nothing of this kind to describe—indeed all attempts to go beyond three or four generations have failed. I only know that a coat of arms, when I was a child, was over the door in the hall of the old manor-house at one time occupied by my grandfather. This denoted at some time or other that we belonged to a "fighting family;" but in what fights we took part I could never ascertain. Antiquarians and archæologists have told me that our family had a Saxon origin; but knowing how often these gentlemen make mistakes, I have not attached much importance to their conjectures. On my mother's side, however, I feel proud of my great-grandfather. He was a miller in the immediate neighbourhood (Lavendon), and occasionally preached in barns and conventicles at a time when it was dangerous to do so, Nonconformity at the period being only something short of criminal. But I mention my ancestor because he was the friend of Cowper the poet, and because he must have been, though probably uneducated, a remarkable man, inasmuch as he is mentioned in the most affectionate manner by the poet, whom no one will ever accuse of being a flatterer. Cowper frequently refers to him in his correspondence; and once, when he was suffering from a "bad leg," which threatened to destroy him, and for which he was attended by the celebrated Kerr, of Northampton, Cowper remarks: "If Mr. Perry dies, he will leave few better men behind him." I am contented with having one ancestor I can refer to, who was worthy of such an apostrophe from one of the greatest Englishmen who ever lived. The mill in which the "godly miller" ground corn, and occasionally held forth, is still in the family, my cousin now carrying on the business. The "right of the water" of the Ouse is attached to Lavendon mill for three miles, and in this stream the finest pike are to be caught. Here, too, game of all kinds, though on the river side, was plentiful, and my uncle was one of the best shots in the county; could bring down a wild goose with a rifle, and, as a fisherman, whether in throwing the net or angling, was not surpassed by any gentleman in the neighbourhood. But my native town is not only celebrated as the abiding-place of Cowper for most of his poetical life, and for his giving such a charm to the neighbouring scenery in "The Task," but the Vicar at one time was John Newton, who, whatever were his faults of manner and of judgment, was a man not to be mentioned without feelings of admiration and affection. Olney, shortly before my birth in 1812, and for a long time previously, had been one of the centres of Nonconformist teaching and teachers, and intimately associated with great missionary enterprises, particularly in India. From the "Seminary" of Sutcliffe issued many a young and ardent spirit devoted to the "carrying of glad tidings in the far East"—many never to return; many to die in harness, after a brief struggle; and some—to be counted on the fingers—to return to their "home" after years of labour, often accompanied by privation and generally with broken health. My grandfather's house was, at the time I am speaking, the *rendezvous* of the "giant missionaries" of the time, and those who acted for the giants in their absence. Andrew Fuller, of Kettering, the author of "The Bible its own Witness," was a frequent visitor; so was William Bull—grandfather of the late Dr. Thomas Bull—of Newport Pagnell, one of the most learned and accomplished preachers in the Baptist connexion. He had an inveterate habit of smoking, and was seldom seen without "a yard of clay and 'returns.'" Cowper, whose correspondence with Bull forms a prominent feature in the letters of the "best of all English letter writers" had a great admiration of Bull, and remarks, with some humour but evidently with regret, "No man is perfect; Bull smokes!" Bull, in his preaching, bore some resemblance to the celebrated Rowland Hill, as he was very prone to a joke in the pulpit; but he was a sincere, good man, and, as a scholar, was, I believe, only inferior amongst the Nonconformists to Adam Clarke. The most remarkable man, however, who came occasionally to my grandfather's house was Dr. Carey, the pioneer of missions in the East Indies, whose industry, learning, and self-denial stamp him as one of the most marvellous men that ever existed. He was a working shoemaker at a little village named Mooltan, near Northampton, and from this humble position raised himself, without previous training, without education, and originally without funds, to be the greatest of Eastern missionaries and the most eminent of Eastern scholars. The house is still shown to pilgrims where this great and good man "worked for his daily bread," and the little signboard over his door at Mooltan is still preserved with befitting honour in the Baptist Missionary House in Castle-street, Holborn. One of the workers in this good cause was the father of John Churchill, who has just retired from the firm who publish this journal. I had the honour of the acquaintance of that venerable man, who carried on the Nonconformist ministry at Thames Ditton for upwards of half a century. I dined only last week with another venerable Dissenting minister, now upwards of 80 years of age—the Rev. Mr. Wollacott—who was personally acquainted with all the ministers I have named, and gave me the information respecting Carey's signboard. I have heard my grandmother, when I was a child, speak of Cowper, of whom she had a vivid recollection, as a very shy man, avoiding all persons in his walks, and generally accompanied by his dog, "Beau." When Southey contemplated publishing an addition to his "Life and Works of Cowper," in the shape of a volume to be entitled "Cowperania," I ventured to send him a few scraps that had not been published respecting the poet. Unfortunately, the cloud that eventually became over-darkened soon after completely shadowed his fine intellect, and my little scraps never met the light. I had some time before, at the period of the destruction of the old bridge at Olney,

"That, with its wearisome but needful length, bestrides the wintry flood."

sent a short article, entitled "Cowper's Walks," with a drawing of the bridge, to the late William Hone, which he published in his "Year-Book." In this paper I mentioned having seen, when a boy, the very "post-boy" whose "twanging horn," fifty years before, had been heard by the poet, and whose "coming in" is immortalised in that most delightful of all the books of "The Task"—"The Winter Evening." I published, in Leigh Hunt's *London Journal*, about 30 years since, two papers having reference to the scenes described by Cowper. One of these, entitled "May-Day and Cowsliping," was enriched by a note of considerable length by the amiable and accomplished editor. One anecdote I have heard of Cowper which has never been published, and which is certainly genuine. The chief hair-dresser of the town, Mr. Wilson, whom I well remember, when he had become an old man, as the clerk of the "meeting" house, was in the habit of shaving Cowper. The poet used to sit in the semi-reclined position in a chair, his head thrown back, and his eyes shut. Seldom or never did a word pass between the parties. On one occasion, however, the silence was broken by the following circumstances:—Wilson was shaving away in solemn silence. The poet was that day to dine with Lady Austen at Clifton. Wilson had left home to be punctual to his engagement, and had desired his journeyman to bring Mr. Cowper's best wig after him—the wig had been dressed for the occasion. When Wilson had finished the operation, Cowper suddenly exclaimed—"Oh, Mr. Wilson—my wig!" Wilson, who was a wit—and many were the witticisms that I heard from him in after years—immediately said—

"I came before your wig was done,
But if I well forebode,
It certainly will soon be here;
It is upon the road."

The poet gave one of his melancholy smiles, and said, "Very well applied indeed, Mr. Wilson."

After my father left Olney, I continued to go to school there for some time, and well do I remember our journeys to London. The coach—the old Wellingborough—used to leave that town at six in the morning, reach Olney at eight; then it stopped for breakfast, which usually occupied half an hour. We lunched at Woburn, dined at Dunstable, and remained always an hour at St. Albans to visit the fine old abbey. London was usually reached about seven. We used to walk up all the hills. Well! that was a slow pace, and the times were slow; but a day, particularly if it were fine, might be much less pleasantly spent than in the manner described.

The names of two Medical Practitioners in connexion with Olney occur to me as worthy of mention. One was an old gentleman of the name of Biggs. He was one of the old school of apothecaries; but report made him rich. At all events, he must have had some means. His highest fee for midwifery was half-a-guinea; this, however, he would often pooh, pooh! and refuse to take. Indeed, with poor people, he not only ignored the fee, but always carried with him, on his first visit after delivery, a bottle of good port wine. He died before my time; but I recollect old people speaking of him with reverent affection. The other was the celebrated Kerr—pronounced always Karr—of Northampton. As his name denotes, he was a Scotchman, and had been in the army. He was a rough, shrewd, able, and decided Surgeon, and his reputation as great in Northampton and the surrounding counties as Sir Astley Cooper's was in London. Speaking of Sir Astley Cooper, he, with Abernethy, were the only Surgeons whose names were familiar as household words to every class of society when I was a boy. The most popular names about 1819-20 were the Duke of Wellington and Sir Astley Cooper.

After I left Olney for good, I resided in London and its neighbourhood, and went to school for some time at Gloucester House, Walworth. The house was built on a portion of an estate called Lock's-fields. Dr. Hooper had leased about four acres of the fields, had built a mansion, and laid out the grounds in a remarkably useful and picturesque manner—in fact, everything was done to make the little domain complete, orchard, garden, lawn, moat, grotto, etc. This estate was next to one originally belonging to Sir Matthew Bloxam, the ancestor of the present Dr. Bloxam, and consisted of several acres. So rural was this scene, within a mile and a quarter of the bridges, that you might when in the grounds fancy yourself far in the country. It may surprise the present generation to know that birds'-nesting and even shooting were indulged in with success in this urban solitude. Nothing is more indicative of the vast strides made by the metropolis in the last fifty years than a little circumstance associated with our school. Forty-five years ago, one of the masters, in going through one of the shrubberies, heard an unusual noise, and examining the spot whence it issued, was surprised to find a huge cuckoo in a reed-sparrow's nest, its wings flopping over the sides of the nest, and threatening every minute to capsize it. This unusual circumstance was made into a short paragraph, which went the round of the newspapers under the title of "Rus in Urbe." The result was, the number of my schoolfellows increased two-fold in the course of a single year. A large town now occupies the site of Dr. Hooper's and Sir Matthew Bloxam's grounds; but, at this time, the greater part of Stamford-street and its neighbourhood were luxuriant orchards. On the site of the present South-Western Terminus stood a windmill; opposite, where the church now stands, was an old farm-house. St. George's-fields were "hedges and ditches and ponds of water." The grandfather of Mr. John Forster, of Guy's, occupied a house immediately opposite Maudsley's factory in the Westminster-road. He had built it some years before, and had some acres of land on which he cultivated his taste for botany, long carried on afterwards by his son, my friend, Mr. John Forster. Going west, you had Tothill-fields, Westminster, and the Five-fields of Chelsea, on which Belgravia is now built. On the north and the east, the changes that have taken place have even been more remarkable. A great portion of the City-road on either side was garden ground, cultivated for the supply of the London markets; and Tavistock-square and the neighbourhood were known as the "Long-fields." In one of these was fought the celebrated duel known as the "Forty Footsteps," and a farm-house was in the midst, to which it was the custom of people living in the crowded neighbourhoods of Soho, Covent-garden, and Holborn, to send their children to drink pure milk, and inhale fresh "country" air.

At that time the state of the Profession was very different, particularly in London, to what it is now. Practices were local and localised, and the area of them contracted. The "family Doctor" was usually within easy call. He had not to contend with pseudo-consulting-Practitioners, who take low fees. Specialism was unknown, or confined to bone-setters, corn-cutters, and uneducated dentists. The "wear and the tear" of railway travelling had not then engendered a new class of nervous diseases; life was slower, but more enjoyable; and practice was more pleasant, and as lucrative, if not more so, than now. I have to apologise for the discursive nature of this paper. My next will be more Professional. If I have succeeded in "snatching from oblivion" a few simple facts, I am satisfied. I hope I have not wearied the reader.

PRESIDENTIAL ADDRESS

DELIVERED BEFORE

THE CLINICAL SOCIETY OF LONDON,

JANUARY 27, 1871,

By WILLIAM GULL, M.D., F.R.S.

Gentlemen,—The trust you place in my hands by making me your President, awakens in my mind a deep sense of the responsibility I incur in accepting it. If a life devoted to those objects at which this Society aims could give me confidence in the future, I should receive the honour you confer upon me more cheerfully and hopefully than I can now venture to do; but whoever shall strive to set before himself what has been done in clinical Medicine, and foreshadow in his mind what remains to be done, and the difficulty of doing it, will be apt to be discouraged rather than elated at the prospect. I fancy the Father of Clinical Medicine must have had somewhat similar thoughts when he selected for his first aphorismal utterances, "Life is short—experience is fallacious." I confess, however, that I think these expressions of Hippocrates gives more help than could have been given by any protestations of confidence which he might have made respecting himself or his art. If Hippocrates were with us this evening, he might congratulate himself that however short is the individual life of man, by associations like these it becomes perpetual, and ever young and hopeful—that instead of the occasional activity of one mind, we can, by a society, insure the increasing and varied co-operation of many minds.

It is one of the most striking characteristics of our time, that the individual is less and less, and associated activity more and more. But if the *vita brevis* of the isolated labourer is thus obviated, there arises in place of it the danger of desultory and undirected exertions, which may be fruitful only of the thorns and thistles of contradictory statements, and as barren of true results as are the limited and often prejudiced observations of a single individual. To counteract this it will be my duty to ask your earnest co-operation for extending and perfecting the labours of the Committees of this Society for the investigation of clinical and therapeutical questions. By our present rules, the President has a right to nominate such committees; but it seems to me that it is his duty to invite any member, according to the bent of his inclination, either to initiate some kind of active inquiry or to co-operate with others in it.

By putting positive questions to Nature, we are more likely to find out her secrets than by waiting, however patiently, for her own revelation of them. The more narrowly and positively such questions are framed, the less equivocal must be the reply; and however feeble and dubious the response—inaudible, perhaps, to any single ear, or in characters invisible to any single eye—it may be plain and distinct when repeated over and over again. The aid afforded by such questions and cross-questions, putting Nature as it were upon her trial, and winnowing her replies by the exacted methods of research, mental or mechanical, is, as Bacon says, comparable to the lever and the screw in mechanical operations. "If," says he, "men should enter upon mechanical works with naked hands, without the force and assistance of instruments—as they have not hesitated to enter upon the works of the intellect with the naked forces of the mind—small indeed would have been the things they would have been able to accomplish, however earnest and conjoined their efforts." "And if," he continues, "to dwell a little longer on this instance, and to look into it as into a glass, we should ask, if by chance any sober spectator should see men striving to raise a mighty obelisk without mechanical appliances, would he not say they were demented? But, if so failing, they should be confident of success by increasing their numbers, would he not think they were still more mad? But if they should consult together to make a selection, and to dismiss the weak, and only by the help of the vigorous should expect to accomplish their object, would he not think they were hopelessly insane? But if, further, not content with this, they should establish athletic exercises and summon all thus prepared for the work, would he not cry out, 'These people have gone mad even with reason and prudence'?" And should not we be open to have a similar opprobrium cast upon us if, uniting ourselves into a Clinical Society, we were contented to strive to accomplish the work before us without the assistance of the highest intellectual combinations and methods?

If the existence of this Society, ever recruiting itself, as I trust it will do, with young and devoted labourers, annihilates, as I have said, the first lament of Hippocrates, that life is short, I trust that our work will be so prosecuted that his subsequent statement, "Experience is fallacious," may no longer obtain. It is, perhaps, too much to hope that a growth which is indigenous to our minds, and which has shown so much vitality, should easily be rooted out. Hitherto, from the favouring influence of prejudice and self-love, nothing has equalled the exuberance of this sort of experience: no pernicious practice, no fanciful hypothesis, no unfounded dogma, but has been and is fed and maintained by it.

Experience in Medicine is fallacious, because it is limited and imperfect; limited to the few observations gleaned in some narrow area; limited to some season or short period of time; limited by the prejudice or interest or incapacity of the observer, or by defects in his methods of examination, and imperfect through our ignorance of the natural course of events, which leads us to attribute results to some accidental interference on our part rather than to the essential course of things; imperfect, also, because we are satisfied with that sort of experience which affords satisfaction to ourselves, and supplies some ready explanation to those who are dependent upon us.

It is in the nature of inquiries so complicated as those are with which Medicine has to deal that fallacies should at all points beset our path. Perhaps the sense of doubt arising from the fallacies of experience which weighed upon the mind of Hippocrates should also, like the whisperings of the slave in the conqueror's ear at his triumph, be ever present to us, even when our knowledge seems most assured.

In clinical Medicine, the greatest correction of fallacious experience is a true diagnosis—a diagnosis not only of the anatomical conditions, but such a diagnosis of the forces concerned as shall lay open before us a knowledge of the course events will take. If the momentum and direction of a moving body be known, its course and the results of impediments upon it can be calculated. So, if we would obtain any true experience of therapeutical measures, we must of necessity acquaint ourselves with the exact strength and tendency of the forces against which we operate. What voluminous records are there of cures and means of cure which are as valueless as the rags upon which they are printed. "What pains and expense," says Herschel, "would not the alchemists have been spared by a knowledge of those simple laws of composition and decomposition which now preclude all idea of the attainment of their declared object! What an amount of ingenuity, thrown away on the pursuit of the perpetual motion, might have been turned to better use if the simplest laws of mechanics had been known and attended to by the inventors of innumerable contrivances destined to that end! What tortures inflicted on patients by imaginary cures of incurable diseases might have been dispensed with had a few simple principles of physiology been earlier recognised!" "But," he continues, "if the laws of Nature, on the one hand, are invincible opponents, on the other, they are irresistible auxiliaries: 1. In showing us how to avoid attempting impossibilities; 2. In securing us from important mistakes in attempting what is, in itself, possible, by means either inadequate or actually opposed to the end in view; 3. In enabling us to accomplish our ends in the easiest, shortest, most economical, and most effectual manner; 4. In inducing us to attempt, and enabling us to accomplish, objects which but for such knowledge we should never have thought of undertaking."

It is only through a perfect diagnosis that we can see in what direction therapeutical interference should be attempted. It is true that accident has sometimes aided us where knowledge has failed; but it is obviously unbecoming in intellectual creatures to satisfy themselves with such scattered fruits, when, by due culture, no doubt large harvests might be reaped. If, as Herschel says, knowledge saves us from futile and inglorious effort, it widely opens to us ways of success which are closed to ignorance. In the present imperfect state of Medicine, that success may often be but partial; but even to that degree the amount of human suffering that may be avoided, and the amount of good that may be obtained, is in the total incalculable. It would be impertinent if I should attempt to exhibit before you the successes, partial or otherwise, of therapeutics; but I cannot forbear expressing our obligations to the sister science of Surgery in all its departments. I assert that I have received as lively intellectual satisfaction, and have been as deeply impressed with the feeling that knowledge is power, whilst witnessing the effects of some Surgical operation, as I have in contemplating the highest triumphs of physical or chemical science. It is perhaps to be regretted that Medicine and Surgery have been in any way dissociated. Happily, in this Society they are united. What detriment Surgery has received from the separation, others must say; but Medicine requires constantly quickening by the necessity of that exact anatomical observation which the problems of Surgery amply supply.

The tendency in modern Medicine to increasing perfection in diagnosis is daily lessening the hiatus which has existed between the two branches of study, and pathological anatomy is largely confirming their identity. Clinical Medicine requires ever-increasing exactness in these researches. In the reports with which we shall be favoured from the different members in this session, I feel sure that every effort will be made to give the observations contained in them the highest possible exactness of expression.

This Society has two functions to fulfil: to exhibit the working of the most critical methods of research; to show, in fact, what clinical Medicine should be, and to improve those methods. For myself, I am far from believing that he is the best observer who records the greatest number of facts, but he who has the perception which enables him to separate the chaff from the wheat—what is essential from what is accidental. In the nature of the case, such discrimination must begin somewhere; but *where* must be left to the intellect of the observer, or to the circumstances of his work. Treatises have been written on the laws for the guidance of physical research; but there seems to be but one rule that is universal—namely, that the student should be honest and skilful in the pursuit of truth. Honesty before skill. Then we may hope to go on towards completing the perfection sketched by Shakespeare, who, speaking of the Physician, says—"His skill was almost as great as his honesty; had it stretched so far, would have made nature immortal, and death should have play for lack of work."

This law of skill in research, guided by honesty of purpose, we must work out with the best means at our command, ever striving for better. Where the scalpel will not reach, the microscope may reach; where the microscope will not help us, chemistry may help us; where chemistry fails, the refinements of physics may come in; and, where these fail, that finer power of the mind which enables us to deduce truth from history may lay open before us the workings of forces too fine even for that scientific exercise of the imagination which has lately been so eloquently commended to us, as shown by those hereditary tendencies to disease which as certainly take effect, and produce results as sharply defined, and often as coarsely anatomical, as if their physical causes could be labelled and placed upon the shelves of a museum. But whilst, for the purposes of immediate practice, we must occupy ourselves with, and so far be satisfied in completing and perfecting, what we have already gained, a little, and but a little, reflection will be required to convince us how much more than this suffering humanity requires at our hands.

What unexplored regions are inviting our attention, will be obvious to anyone who will look over the pages of any year-book of facts recording the labours in the different departments of Medical knowledge. The perusal will leave upon the mind the sense how little has anywhere been accomplished, and how far the lines of inquiry radiate and diverge.

To take that commonest of all maladies, phthisis, it may be said to present a great chaotic field, distinct in nothing but its mortality, and all but unexplored by science in respect of those steps and processes whereby the fatal issue is reached. The *Transactions* of this Society already contain some contributions towards a better clinical history of some forms of this disease; and I trust that in each session more may be done towards tracking the earlier history of its different varieties; for if anywhere in physic the principle *principiis obsta* is valuable, it is probably here. I trust, however, I may not be understood as if our records of the coarser phenomena of phthisis were not more than enough. Under the generic term phthisis are included many different maladies; and if the whole object of Medicine were satisfied when these forms had been distinguished and the popular remedies prescribed, there would be no more to say; but clinical science revolts against this conclusion, and requires a still finer discrimination of the morbid processes in question, with information as to how they begin and by what means they may be obviated or hindered. There is something very suggestive in seeing one member of a family left in health and strength to old age, whilst all the members of the same family, coming either before or after, fall victims to this disease or its alliances; or, in seeing exceptions made to its ravages through the intervention of some diverse pathological state, insanity, epilepsy, or rheumatism. Our clinical knowledge ought to show how this is determined, as from such knowledge prevention might be expected to follow.

Or, to turn to another and equally extensive field of research—the large class of vascular degenerations, occurring mainly between the ages of forty and sixty. If the processes, near or remote, which bring about these morbid states of the heart and vessels, were more fully elucidated, some part of the chapters which now treat of the diseases of the brain, of the chronic diseases of the lungs, of the liver, and especially of the kidneys, might have to be rewritten. It seems probable that in a good deal of our clinical pathology we have mistaken the end for the beginning, and, being impressed chiefly by the more prominent or more easily demonstrable lesion, have regarded it as a cause, when it was but part of another and antecedent state.

It is from clinical study alone that we can learn the beginnings of disease. Often, when the gathered clouds of the final storm have filled the atmosphere, it is in vain that we look round to see from what point of the heavens it began.

The apparently trifling ailments of to-day may, when we are able rightly to interpret them, foreshadow the coming of much graver events. For these inquiries, private practice affords the only opportunities. The record of individual cases, illustrative of the early traces of pathological change, would be of great value. Perhaps, as a rule, we have looked too exclusively to the wards of our Hospitals, and to the records of *post-mortem* examinations, to teach us our clinical lessons. This Society seems to afford special means for correcting these defects.

The opportunities of private practice, if carefully utilised, might soon solve for us many obscure problems. Take, for instance, the onset of infectious diseases. By a more accurate study of this stage, which can rarely occur in Hospitals, we might learn through what ways the infection invades the organism, and thus might be enabled, if not to obviate its progress, at least to learn something more of the means for controlling it.

But I may not longer detain you with these details. Suffice it to say that any new fact, however apparently useless and disconnected, is worthy of a record. It may be, to use the language of embryology, the *primitive trace* in the department of a new form of thought and knowledge; or, to alter the simile, its meaning may not appear until the context is discovered. The superstitious worshipper of Islam preserves every scrap of writing, lest by destroying it he might mar a portion of the sacred text; let each one of us, engaged as we are in amassing materials of knowledge, treasure up every stray fact, convinced that it forms part of a precious record, which, if not deciphered now, will become legible by some subsequent addition. As the whole purpose of clinical medicine is the cure or alleviation of disease, the efforts of a clinical society can never with success deviate from the prosecution of those practical and primary objects. The advancement of therapeutics in their entirety is the end we aim at. Happily it is no longer necessary to prove that therapeutics and the administration of drugs are not synonymous. It is an ancient saying in Medicine that "Nature cures diseases;" and we have learned in modern times that both in Medicine and Surgery it may often be our truest aim to secure our patients from interference until a healthy equilibrium is restored. The doctrine of physiological and mechanical rest in the cure of diseases has vindicated and obtained for itself a permanent position in therapeutics. Every contribution to our *Transactions* in illustration and maintenance of the doctrine will be valuable. If it often taxes the ingenuity of the Surgeon to insure mechanical rest for an injured part, how much higher are the demands made upon our therapeutics to obtain physiological rest, or any degree of it, amidst the perturbations of disease!

It seems probable that a large number of acute diseases may be sufficiently treated by only following these indications of rest. Yet the greatest misunderstanding prevails, in our Profession as well as with the public, respecting the objects pointed out, as if they were of so trivial a nature as to require no skill or attention. Yet I might venture to assert that they challenge the exercise of the highest faculties, and still often leave us far from their perfect attainment. I may be excused for saying that the expression "Nature cures diseases" is both a good and a bad expression. It is a good expression if it represent to our minds, however imperfectly, that a principle of compensation prevails throughout a living body, causing the disturbance of the physiological balance in an organ to be corrected by a correlated change in it or in some other part—as, for instance, when the fainting heart feebly supplies the brain, and, this centre of voluntary action failing, the patient falls down, and the circulation is restored. To say that "Nature cures disease" is a bad expression, if it create in our minds a metaphysical conception, as if there were in us some personal *anima* controlling the operations. The former use of the term is that which we, as a Clinical Society, must ever contend for, and our chief object is to encourage amongst ourselves those researches which show how Nature in this sense cures disease, and so have plainly before us the circumstances which should direct and control our therapeutical interference.

Of equal antiquity with the expression I have just quoted, is that more famous one which must ever be remembered in a Clinical Society, that the two special objects of Medicine are, *to do good, or to do no harm.* The latter alternative has, from Galen downwards, been thought a matter of too easy attainment; but doing no harm is not always an easy virtue in Medicine. I desire, on this point, to call the attention of the members of the Society to the present state of our practice in regard to many chronic and acute diseases, that we may by improved records learn what is the value of positive treatment in many of these maladies. As to the doing good by the exhibition of remedies, which is the more popular view of therapeutics, I need not say a word to stimulate exertion in this direction. We are all impressed with the importance of the subject; but it is to be urged that the cases which shall be brought forward to illustrate any treatment, or the effects of any particular drug, shall be so selected as to lead, as far as possible, to positive conclusions.

Gentlemen, I fear I have detained you too long; yet I cannot forbear expressing a feeling, which I am sure is in every mind at this moment—that we ought to be thankful we are enjoying the blessings of peace, which enable us to meet on these occasions to encourage each other in the pursuit of knowledge, which we hope may contribute to the welfare and happiness of mankind. I earnestly trust these blessings may long be continued to us. The sure foundation of such a hope must ever lie in the fulfilment of that sentiment of one of our greatest heroes: "England expects every man to do his duty"—in the arts of peace as well as in the circumstance of war.

DR. JOHNSTON'S STATISTICAL REPORT OF THE ROTUNDA LYING-IN HOSPITAL.

At the meeting of the Dublin Obstetrical Society, held on January 7, Dr. Johnston read a clinical report of the Rotunda Lying-in Hospital for the past year. One thousand and eighty-seven deliveries took place in that period. Of these, 17 ended fatally, from the following causes:—1 from carcinoma and gangrene of the uterus; 1 from rupture of the uterus; 1 exhaustion, the sufferer being cold and pulseless on admission, and death resulting, with post-partum hæmorrhage, in seventeen hours after admission; 1 gangrene of uterus—a hydrocephalic and putrid child delivered by craniotomy; 1 case of sloughing of uterus; 1 woman perished by exhaustion two hours after delivery by the feet, the case being one of placenta prævia; pleuritis and pneumonia proved fatal to 1 mother on the fourth day; 1 fatal case of apoplectic convulsions occurred in thirteen hours after delivery, in a woman of 25 years; placenta prævia, with great exhaustion on admission, characterised a case which ended fatally in two hours after delivery; Cæsarian section was performed in a woman with pleuritic effusion, who was moribund on admission; a woman, of 25 years, died of exhaustion in her second pregnancy, having been brought to Hospital greatly reduced by accidental hæmorrhage. Six cases of a puerperal form of disease terminated fatally, and are thus classified, with brief notices, by Dr. Johnston, in the table of fatal cases:—

		Ward.	Bed.	Age.			
Nov.	11, 1869	3	25	25	1st	pregnancy;	peritonitis.
Jan.	12, 1870	12	116	24	1st	,,	,,
March	13, ,,	4	40	23	1st	,,	pyæmia.
May	15, ,,	12	110	30	1st	,,	,,
Sept.	16, ,,	5	41	24	4th	,,	peritonitis.
Oct.	13, ,,	8	86	20	1st	,,	pyæmia.

The notices are of considerable interest, and, taken in chronological order, are as follow:—1. Fretting greatly; husband at sea; frightened by being brought to Hospital; was told "they were dying in it." 2. Admitted in a feverish state; seduction; remorse; attempted suicide before admission. 3. Most unhappy; drunken husband; child hydrocephalous; very fetid discharge on admission; pyæmia showed itself immediately. 4. Livid patch of inflammation on posterior part of right labia before delivery, which sloughed; patch appeared on middle finger of left hand and back of right ditto. 5. Symptoms appeared immediately; had been in great penury and mental anxiety, her husband being in gaol. 6. A case of seduction; great mental anxiety from time of admission. The limits assigned to us do not admit of any lengthened comments upon the important observations made by Dr. Johnston when speaking of this important class of cases; that the mental state has much to do with puerperal disease is fully borne out by them; that contagion had nothing to do in the matter is also self-evident, paying regard to the date of the several cases; and further, that the Hospital was not the cause is alike evident even to the most prejudiced reader. In fact, in four of the cases at least the disease had shown itself on admission or before delivery. Dr. Johnston has also recorded twenty-eight cases in which recovery took place, as puerperal inflammation, peritonitis, or pyæmia. He also mentioned that many cases came into Hospital from districts where zymotic disease abounded; in at least one case scarlatina existed in the house from which a pregnant woman came to the Hospital, and yet she made a good recovery. He has made it his constant study to avoid every possible cause of illness in the Rotunda by attention to cleanliness and ventilation.

Dr. Churchill highly complimented Dr. Johnston on the report which he had just brought before the Society. He considered it satisfactory, and drew attention to the successful use of the forceps, which had been used in eighty-three cases, while craniotomy had only to be resorted to in two instances. He observed that in Dr. Clarke's Mastership, now several years ago, craniotomy was practised more frequently than the use of the forceps.

Dr. Beatty considered the prevalence of zymotic disease in the districts whence the Rotunda cases came, and their comparative immunity from it when in the Hospital, as eminently satisfactory.

Dr. Atthill considered it a singular fact that all the six fatal cases of zymotic disease should have come from two out of the seven city districts.

Dr. McClintock regarded the report as of great interest in reference to the true value of well-conducted Hospitals. He contrasted the experience in the Great Hospital under consideration, with its 17 deaths in 1087, with that of a country district in Scotland, where everything favoured the result, and yet the average mortality in pregnancy in the latter was 1 in 57; while in the Glasgow Lying-in Hospital, with only 364 deliveries, there were 7 deaths, or 1 in 52 cases. The conclusion at which he arrived was that this report showed that puerperal fever was not endemic in Hospitals. The disease was not contagious when in well-managed Hospitals. He had found the mortality of seduced women always extremely high; in the seven years of his Mastership they perished in the proportion of 1 in 4. He stated that Dr. M. Duncan's observation, that primiparæ were more prone to mortality in the proportion of 1 to 2 of other cases fatal from puerperal diseases, was borne out by Dr. Johnston's report.

Dr. H. Kennedy stated that his experience was opposed to the idea that puerperal fever was due to the Hospital.

Dr. Ringland, who, in common with all the other speakers, expressed his gratification at hearing the able report of Dr. Johnston, stated that all the evidence went to prove that no extension of puerperal disease took place through contagion in the Hospital.

Drs. Sibthorpe and Fitzpatrick made some observations on the value of Hospitals to those classes so much in need of them, and Dr. Denham regarded the present report as highly satisfactory.

Dr. C. F. Moore drew attention to the fact that all the fatal cases of puerperal fever came from the low-lying districts bounded by the sea and the river, stating that, as he found, several of the worst cases of typhus and cerebro-spinal fever, when the latter existed in Dublin, also came from the same localities; he thought the matter deserved at least a passing notice, inasmuch as many eminent men considered that low-lying marine and marshy districts, as well as localities where dwellings existed upon made or reclaimed ground, were liable to prove very unhealthy.

Dr. Johnston, in conclusion, felt much gratified for the kind observations made in reference to his report; he did not attribute the puerperal cases to anything but mental causes. He had used the forceps in eighty-three cases, with fatal results in but five instances.

Ophthalmia is said to be unusually prevalent in China this year, and in one locality the lower orders attribute the visitation to the influence of a new bridge which is being built over the Foochow Creek.

REVIEWS.

On the Present State of Therapeutics; with some Suggestions for placing it upon a more Scientific Basis. By James Rogers, M.D., formerly Physician to the British Legation, and to the Abouchoff Hospital at St. Petersburg. London: J. and A. Churchill. Pp. 232.

This is a book which well deserves study, not only for the decided views, vigorously put, which it contains, but also for the care taken by the author to arrive at sound conclusions, and sound conclusions only. Dr. Rogers, early in his career, was struck with the recoveries which took place under the homœopathic system of treatment. The question arose, how to account for these. Was the homœopathic system right, or were the recoveries entirely due to the tendency to recovery manifested by the system in all ordinary complaints? This, of course, implied an inquiry into the principles and practice of homœopathic writers, which Dr. Rogers has undertaken and thoroughly carried out, the result being one of the most signal overthrows which it is possible for a system to receive. He begins at the root of the matter by putting the doctrine of *similia similibus* to rigid proof, the drugs selected being quinine, sulphur, and mercury. Thus, from his own experience, and that of others, he is able to assert that quinine causes nothing like intermittent fever, sulphur nothing like itch, and mercury nothing at all closely resembling syphilis. These are cardinal instances, and decide the question against the fundamental doctrine of homœopathy. Other of Hahnemann's principles are exploded in like fashion, especially his illustrations of homœopathy drawn from nature, and his denial of spontaneous cures. The modifications deemed necessary by modern homœopathic practitioners are also expounded, and the globule system and dynamisation hypothesis exposed most unmercifully.

The conclusions he comes to are—that, as a system of therapeutics, homœopathy has not a leg to stand on; its medication is no medication—it means letting people alone, and allowing the disease to take its course. Next comes the pertinent inquiry—What are the principles which guide legitimate therapeutics? are they better or worse than those of homœopaths? Of principle he finds none. What are the results of practice? Comparing the statistics of reliable homœopaths engaged in Hospital practice with those of legitimate Practitioners, he finds that in acute articular rheumatism the homœopathic and expectant methods give much the same results. In point of fact, the course of the disease is not greatly modified by interference of any kind. Further, what is not exactly usual, is that homœopaths of position admit that their treatment of acute rheumatism is not a success. The position of homœopathy, with regard to the next form of disease considered, is still worse. In intermittent fevers, we are accustomed to rely upon quinine as a remedy, and its success is undoubted, although it is not unlikely that a considerable number of the cases which get well with it would get well without it if exposed to favourable hygienic conditions. Some homœopaths contend that their remedies for ague are equal to ours, but that the symptoms of the disease must be studied separately in each individual case, and the remedy selected accordingly. This complicates the matter so much that Wurmb and Caspar in seventy-seven cases made seventy-seven mistakes in the remedy first selected! Others, on the other hand, candidly admit that their remedies will not cure ague, but that quinine will, and this they give in massive doses, finding globules of no use. Those cases that do recover when treated homœopathically, probably correspond in point of number with those which would get well without any medicinal treatment at all.

Next, as to typhus. Here we think Dr. Rogers, generally exceedingly careful, has overlooked one most important factor—epidemicity. The mortality of typhus is very much greater when the disease is rampant than when it occurs sporadically. The difficulty, again, of comparing the results of British practice with the only reliable homœopathic statistics necessitates the use of foreign tables, where typhus and typhoid fever are invariably confounded. The conclusion, therefore, that the success of the Glasgow and London Fever Hospitals is less than that of the homœopathic institutions in Vienna, is hardly borne out. Besides, the old statistics and the new are different, expectant treatment being now the rule in all fevers. Something of the same objection as to typhus, epidemic and non-epidemic, appertains to cholera. We think it undoubted that, in time of cholera, attacks which at other times would be classified very differently are habitually referred to the more dangerous disease;

and this would naturally be taken advantage of by any contending party to prove the superiority of their mode of treatment. The expectant method is now generally used in this malady also, and its results correspond closely with those of the homœopaths. Pneumonia is the last malady discussed; it has been treated in all manner of ways; the best results are given by the restorative mode, next by the expectant and homœopathic plans, the success of which are nearly equal; the least successful series being those treated on the old system of depletion. The conclusions drawn by Dr. Rogers are—1st, that in the diseases examined, with the exception of intermittent fever, the results of homœopathic treatment in Hospitals have been about equal to the most satisfactory non-homœopathic; 2nd, that the results of homœopathic and non-homœopathic treatment, in which little or no medicine was employed, have been nearly the same—or, in other words, that drugs in the doses usually administered by homœopathic practitioners have not appeared to exercise any decided influence on the progress of disease." Next he says, "In short, the sad conclusion is inevitably forced upon us, that the Materia Medica of the old school, the result of the accumulated experience of ages, is a worthless—nay, more, as it has been hitherto frequently employed, a noxious—mass of what were once regarded as health-restoring drugs."

How best to remedy the state of things is the next inquiry, to which, however, Dr. Rogers devotes but a brief space. He would draw his exact knowledge of therapeutics chiefly from two sources. He would look to chemistry for something, but he would seek his information mostly from exact observations on the natural course of disease, and from the exact proving of remedies.

"If we," Dr. Rogers would say, "knew the exact course a disease was wont to pursue, we could appreciate the exact effects of remedies exhibited during its progress; not knowing that the reputed effects of the remedies must be mere guesswork." It is quite plain that to attain to such a knowledge of maladies is no easy task. Disease is no abstraction, but a concrete whole, made up of the specific malady and the constitution of him attacked; and this must ever be a difficulty in the way of those who would strive to attain to what lawyers call "case knowledge." Whether the difficulty is surmountable or not remains to be seen. Of the practice of testing remedies in the living subject, provided the trials be carried out fairly and sensibly, we have nothing to say but good. Some people think the practice is part and parcel of homœopathy; it is nothing of the kind. And it is extremely questionable if their repertories contain a single proving into which the imaginative faculties do not largely enter. Baron Stoerck was the first to introduce this mode of ascertaining the action of remedies, and from him Hahnemann borrowed it. There is no reason why we should not resume the practice.

Finally, Dr. Rogers contends for a more scientific use of the imagination of the patient in the treatment of disease. This must at all times be difficult, and of it we shall say nothing. Thus concludes a very remarkable book, which we very strongly commend to our readers.

Abstracts of English and Colonial Patent Specifications relating to the Preservation of Food, etc. Compiled by William Henry Archer, Registrar-General of Victoria. Melbourne. 1870.

The object of this useful pamphlet is "to afford the public an opportunity of seeing, without the trouble of inspecting the specifications themselves, what has hitherto been done in the direction of discovering some really efficient method of preventing the decay of organic bodies, especially those used for food;" and considering the numerous attempts that are being now made to import preserved meat into Great Britain from Australia and South America, its appearance at the present time is singularly opportune.

The titles of the patents are classified in accordance with the principal features on which they are based, under the following headings:—

A. Reduction of Temperature.
B. Deprivation of Moisture.
C. Salting.
D. Exclusion of Air; and
E. Antiseptic Agents.

Each of these is again further divided. The antiseptic agents are subdivided into (1) sulphurous and nitrous acids, sulphites and nitrites, sodium, and other substances described as having an affinity for oxygen; and (2) various substances used for preserving, including some used in connexion with, or as substitutes for, salts, spices, etc.

We have often heard that patentees are likely to end their days in a lunatic asylum, and we should think that many of the gentlemen whose discoveries are recorded in these pages are in danger of such a fate. Thus—I. Leys "impregnates cheese with rum, immerses in bath of salt and saltpetre for ten minutes, dries, covers with boiled linseed oil, and coats with tinfoil;" E. Slack "treats potatoes for preserving with acids and alkalies, as also with diastase and other saccharine matters;" while J. Avery "kneads butter with alchohol (*sic*), wraps in paper dipped in alchohol, and, for long sea voyages, packs in air-tight cases."

FOREIGN CORRESPONDENCE.

FRANCE.

THE QUESTION OF RESECTION AND AMPUTATION.

(*From our own Correspondent.*)

Versailles, January 21.

After having made several efforts in vain to get permission to visit the different ambulances of Versailles (which, not being here in any official capacity, I perhaps had no right to ask), and after having been sent from pillar to post about the matter, I at last addressed myself, armed with an excellent letter of introduction, to General Arzt—Dr. Stromeyer, the Consulting-Surgeon of the Château Ambulance, hoping that he might assist me in my demand.

Unlike to the treatment which I had thus far met with, this gentleman received me with the greatest kindness. The day for calling was rather an opportune one: the great Surgeon had just received from the hands of the Emperor of Germany the Iron Cross of the first class.

Speaking of gunshot wounds of the joints of the lower extremities, I learnt that out of the number (?) of hip-resections so far practised around Paris, only one is doing well. For the same injuries of the knee-joint, Stromeyer advocates primary amputation. He is not in favour of resections, nor a friend of Professor Langenbeck's system in these cases—viz., non-interference. In gunshot wounds of the tibio-tarsal articulation, Stromeyer, on the contrary, recommends the expectant treatment, by means of which several cases have been saved after Sedan and also here. He is opposed to the resection of this joint as well—a method which thus far in this war has given bad results.

Stromeyer's plan for treating gunshot wounds of the ankle-joint, is simply to keep the parts perfectly immovable, and extract the pieces of splintered bone as they become detached. He is of opinion that a chassepôt ball, being exceedingly slender, may traverse the joint from one malleolus to the other—passing, so to say, through the ankle—and force out with it the portions of cartilage or bone struck. With the old minié ball, such a state of things would be less likely to take place.

Upon being asked my own views on the matter, I stated that I had always considered penetrating wounds of the tibio-tarsal articulation demanding amputation in nearly every instance, and I thought a cure without Surgical interference must be looked upon rather as an exception than the rule. However, in proof of the success from the expectant treatment, I am able to cite the two cases here annexed, one under my own care, the other here in a convalescent ambulance.

It will be some time yet, I imagine, before Surgeons can lay down any rule as to the steps to be taken in gunshot wounds of the articulations of the lower extremities, and such wounds will ever remain the most interesting in military Surgery. While this point is now pretty well decided in favour of resection for the joints of the upper extremities, most army Surgeons reject that operation for the lower members, and the great point of discussion here existing seems to be between amputation and non-interference.

The two great Continental Surgeons, Stromeyer and von Langenbeck, hold views opposed to each other. In Stromeyer's pamphlet on this subject, made up from material of the war of 1866, he advocates the opinion which I have just quoted; whereas, von Langenbeck, in another pamphlet written on the same subject two years later, in 1868, and based upon cases collected in the same war, recommends non-intervention in gunshot wounds of the knee, and, of course, speaks in favour of his own operation, the resection of the ankle-joint. I remember, when perusing these two works for the first time, some two years ago, I could not help thinking Berlin wrote as though it had a slight *pique* against Hanover.

As regards the ankle-joint, I will now briefly give the two cases which have come under my own observation; both go to support Stromeyer's views on the matter.

Case 1.—R., volunteer in the 90th regiment of the line (French), wounded at the battle of Gravelotte, August 16, in the right foot while in the act of firing—that is to say, with inner border of right foot turned towards the enemy; ball entered at base of internal malleolus, traversing the tibio-tarsal articulation in a transverse direction, passed out an inch above external malleolus with fracture of the fibula, seven centimetres higher up, about the lower third. Whether this fracture was due to the projectile itself, or brought about by the subsequent fall of the body and a turning of the foot outwards, I could never clearly make out, inasmuch as the man had been struck by another ball in the occipital region, which felled him to the ground senseless. Amputation having been refused, I simply placed the limb, slightly elevated, in a wire gutter, and applied cold water dressings. A few bits of bone and cartilage came away after suppuration had set in. The limb became enormously swollen, and I was obliged to enlarge the opening on the outer surface. An immovable apparatus was applied the twelfth day, and renewed four times during the course of the treatment. This apparatus consisted of nothing more than an anterior and posterior splint made up of twelve folds of tarlatan, cut to fit the surfaces, dipped in plaster of Paris, and extending from the toes to the knee, well moulded to the parts. These splints were united by a band over the foot and leg, leaving quite exposed both lateral surfaces of the joint. I gave this patient over into the hands of the military authorities in Metz, on November 2, two months and a half after his entry into my tent ambulance. Suppuration was at that time very scanty, both wounds nearly closed, and I have every reason to believe that the cure is to-day complete, with anchylosis of the articulation.

Case 2.—H., soldier in the 42nd regiment of the line (French), wounded at Choisy-le-Roi in the sortie from Paris on September 30, the ball having traversed the left ankle-joint, in a perfectly straight line, from the external to the internal malleolus; was treated in a Prussian ambulance at Villeneuve-le-Roi by an immediate application of plaster of Paris apparatus, which was removed the third day, reapplied, and again removed the third day. From this time on, the limb was put into a wire gutter. The patient was transported to Versailles by the International Society on December 25, since which period the case has come under my observation. The ball, in traversing the joint from side to side, seems to have bored through as though it had been done by the trepan. Both wounds are almost completely healed up; the deformity of the ankle is very moderate, and flexion and extension of the foot are possible to the extent of 8° or 10°. Indeed, this is the most remarkable cure I have ever met with. Alcohol and water were used as dressing in the first, carbolic acid in the second patient.

GENERAL CORRESPONDENCE.

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ARMY MEDICAL PRACTITIONERS.

Letter from Dr. J. Hughes Bennett.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me to say you have been misinformed as to what I stated at the Medico-Chirurgical Society of this city. I never alluded to Army Medical Practitioners, or made any charge against them whatever. I detailed the particulars of a case of abscess of the liver, which had been salivated in India and again in this country, and pointed out the inutility and injury such practice produced. My allusion to thousands of soldiers so treated (and I might have added of civilians also) referred to the almost universal practice which formerly prevailed, as is well known to anyone acquainted with the literature of the Profession. Dr. Rutherford, in his communication, tried to show that the man had never taken mercury in India; that the violent salivation and stomatitis produced in Jhansi, in 1862, was mysterious (!); that his treatment by mercury after his return to England was trifling; and that his skin disease was a purely venereal one. In this argument he signally failed, as will be apparent when the full particulars of the case are published.

I regret that, since seeing your last number, I have not been able to find time to answer your remarks at greater length, the more so as I have written an abstract of the case to another journal. I would beg your readers, therefore, to suspend their judgment on the matter until they see my communication. In the meantime, I utterly deny the imputations and allegations of Dr. Rutherford, which are founded on a complete misapprehension of what I stated.

I am, &c., J. Hughes Bennett.

1, Glenfinlas-street, Edinburgh, January 30.

REPORTS OF SOCIETIES.

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OBSTETRICAL SOCIETY OF LONDON.

Annual Meeting.

Wednesday, January 4.

Dr. Graily Hewitt, President, in the Chair.

The following gentlemen were elected Fellows of the Society:—Fletcher Beach, M.R.C.S.; George Eastes, M.B., F.R.C.S.; G. D. M'Callum, M.D. (Montreal); Edward Malins, M.D. (Cradley Heath); David Mathias, M.R.C.S. (Cardigan); G. H. Pedler, M.R.C.S.; James Perrigo, M.D. (Montreal); Arthur Roberts (M.R.C.S.), Kensington; and John Tanner, M.D.

Dr. Cleveland exhibited a Fœtus, of about the fifth month, with the cord curiously knotted round the neck, which had apparently caused its death.

Dr. Playfair exhibited a Pessary, the invention of a patient, which ingeniously combined the advantages of the stem and Zwanke's pessary, with a contrivance for easily opening the leaves.

Dr. C. Kidd read a paper "On Chloral Hydrate and Chloroform in General Obstetric Practice, especially in Labour Cases."

Dr. Phillips had no experience of chloral in natural cases, but, during the past nine months, had used it extensively in the puerperal state, especially in five cases of puerperal mania, and two of puerperal convulsions. In four of the five cases of mania its action had been very beneficial, while in the fifth it failed to produce sleep, though given in full doses. In one case of mania the patient had no sleep for three days, though opium had been given, but within five minutes of taking half a drachm of hydrate of chloral she fell asleep for four hours, and again for five hours more. In another case, on the fourth day it was given in full doses, and the next day the patient was quite rational. The chloral hydrate was very suitable in the restless, sleepless condition not uncommon after delivery. A drachm dose produced no effect in one case of convulsions, while in another, in which the paroxysms were severe and frequently repeated, the action of the chloral was very marked. It was very satisfactory, such a favourable account of chloroform in obstetric practice from one so accustomed to its use as Dr. Kidd was. He (Dr. Phillips) had seen it used extensively in abnormal labours without untoward effects, and this notwithstanding that he had had it used continuously for twelve consecutive hours in puerperal convulsions.

Dr. Wiltshire asked for information about the change of chloral into chloroform in the blood. He believed that statement had been called in question.

Dr. Heywood Smith also took a favourable view of the action of chloral in puerperal affections. He narrated a case of puerperal peritonitis with vomiting, in which he had given sixty grains, repeated in three hours with the best effect.

Dr. Playfair said he had found chloral of the greatest value, both in natural and abnormal labour, but thought that it was somewhat unsafe to give it in such large doses as sixty grains, repeated in three hours. He mentioned a case of puerperal convulsions, in which it had acted admirably, but in which the patient eventually sank; and said he was unable to divest himself of the fear that the chloral, which had been given freely, might have had something to do with the fatal result.

Dr. Kidd said that Liebreich's theory was now pretty generally received. In labour cases the chloral seemed to be specially useful in the first stage—relieving restlessness, etc.—without stopping uterine action. Dr. Kidd insisted on a simple apparatus for giving chloroform, objecting to balloons, tubes, etc., as likely to frighten the patients.

PRESIDENT'S ADDRESS.

The President congratulated the Society on having reached the end of twelve years' uninterrupted prosperity. During the past year thirty-nine new Fellows had been elected, and as Honorary Fellows, Drs. West and Arthur Farre. The Society had to lament the deaths of Dr. Fenton (Gateshead), Mr. Robinson, Dr. Chowne, Dr. Ewell, Dr. Uvedale West, and Sir

James Simpson, the latter an Honorary Fellow. Sir James Simpson, who had done so much for Obstetric Medicine, was endowed with an intellect of extraordinary power—wide, deep, limitless, inexhaustible; possessed of a frame of wonderful strength, capable of sustaining him through great physical labours, enabling him almost to dispense with rest; a disposition kindly and humane, almost beyond conception; a largeness of heart only equalled by the greatness of his intellect; a manner winning and captivating to an extreme degree. His great character was his many-sidedness. The extent and range of his works precluded any attempt on this occasion to summarise them. His chief discoveries were then enumerated.

The question of amalgamation with other societies had occupied much attention during the past year. The President believed that the Society was to be congratulated on the result. Other societies besides the Obstetrical had found the scheme unpalatable, and the idea was finally abandoned. He was glad to be able to transmit the possessions and powers of the Society to his successor unimpaired, the Society being still free, unfettered, and able to develope its resources.

Review of the Twelve Years' Work of the Society.

The President deemed this a fitting occasion for passing in review the work of the last twelve years. He premised that the judgment given as to progress in particular subjects was his individual judgment only, but craved indulgence in his attempt to show how or in what the Society had advanced obstetric science.

Many valuable statistics had been collected as to the practice of midwifery in Great Britain, and curious information regarding practice in India. The essay "On Obstructed Labour," by Dr. Hicks, would convey much information as to how and when to give assistance. The external pressure treatment of the third stage of labour, advocated by the late Dr. Eastlake, was a valuable improvement. From the papers of Mr. Ellis, Dr. Kidd, and Dr. Sansom, much had been learnt as to the use of chloroform in midwifery. The general result of discussions was that chloroform should not be given to the full extent in ordinary cases; that it should be diluted, and that, when given fully, extra precautions against hæmorrhage were needed. A new form of pelvic deformity, "spondylolithesis," had been added to our list, and Dr. Barnes had contributed an able paper on the subject.

Concerning the great conservative instrument, the forceps, the Society had done much to further its usefulness. In an able paper by Dr. Tyler Smith, the sentiments of which were endorsed by the Society, the old maxim to wait some hours when the head is on the perineum, to be able to feel the ears, to wait for the full dilatation of the os, to avoid entrance of the blades into the uterus, to avoid all compression of the head, were repudiated. These maxims injuriously interfered with the operation. Mr. Harper had urged the matter in like manner, but the Society had still work to do in urging a further use of the instrument. The form of the forceps had been considered, and the use of sufficiently long-bladed forceps with powerful handles had been insisted on. The new operation by Dr. Hicks of bi-manual version was then eulogised.

The great question of Turning *versus* Forceps had been admirably elucidated by Dr. McClintock. Regarding craniotomy, Dr. Hicks had revived most advantageously the knowledge of a fact alluded to by Osborne and Burns—that the fœtal head passed more readily when the face was presented to the narrowed aperture of the pelvis, the cranial bones being first removed. Dr. Barnes had suggested a new method of cutting the head into pieces by a strong écraseur wire. Cephalotripsy had now become, mainly through workers in this Society, a British operation. The instrument had been greatly improved and lightened by Dr. Hicks, and the operation required greater attention in certain cases.

The Cæsarian section had been often discussed; improvements in craniotomy had made the operation less necessary, but it was not to be avoided in certain cases, and valuable facts had been collected. The valuable contributions of Barnes and Lazarevitch to the question of the induction of premature labour were next described; the best method was, perhaps, not quite decided. Injection of water to the fundus uteri gave good results in Lazarevitch's hands; the dilatation of the cervix method gave command as regards time. Some still thought very highly of simple puncture of the membrane, himself included. Concerning normal puerperal temperatures, Mr. Squire had given valuable data. Dr. Oldham had attacked the low-diet system in the lying-in room in a manner entirely in sympathy with his own (the President's) views. Under the name "concealed accidental hæmorrhage," Dr. Hicks had defined and described a dangerous and important complication, before unrecognised. Dr. Greenhalgh had, for the first time, urged the propriety of bringing on premature labour in cases recognised as placenta prævia. Regarding the treatment, the Society had expressed itself in favour of an eclectic method, on the whole, rupture of the membrane and turning being in favour. For otherwise intractable post-partum hæmorrhages, Dr. Barnes had suggested a new remedy—the injection of perchloride of iron into the uterus; this remedy must still be considered as on its trial. Transfusion had been discussed by Dr. Waller, Dr. Aveling, and others. Peritoneal adhesions of the uterus had been shown to be an occasional cause of post-partum hæmorrhage.

Rupture of the uterus had been shown to be largely attributable to a rather narrow pelvis, in a paper by Dr. Radford. On inversion of the uterus and retroversion of the gravid uterus, Dr. Tyler Smith had attributed new facts; the retroflexion exists before the pregnancy. From Drs. Barnes, Wade, and Playfair, we have had valuable papers on embolism, thrombosis, and sudden death during and after labour—a new field of pathology; generous support of the patient as a preventive seems to be the inference. Dr. Tilbury Fox's three valuable papers on phlegmasia dolens were next described. On puerperal fever much had been done: the connexion between it and erysipelas shown by Dr. Tilbury Fox; its frequent association with scarlet fever, by Dr. Beck, Mr. Mitchell, and the President; Dr. Tyler Smith's case, in which injection of ammonia into the blood was performed. He believed that the good effects of large doses of stimulants in these cases had been shown. Dr. Hall Davis's paper on puerperal convulsions and Dr. Hicks's on convulsions preceding albuminuria were next mentioned.

Eighteen cases of extra-uterine fœtation had been described; as yet, the proposed operation for some of these cases had not been performed. Dr. Priestley had shown the importance of removing the secundines in cases of abortion as soon as possible.

In the department of the diseases of women, much progress had been made. The question of the relation between flexions, inflammation of the uterus, irritable uterus, and the relief of dysmenorrhœa had been frequently discussed. Dr. Marion Sims, Dr. Greenhalgh, Dr. Tilt, Dr. Barnes, Dr. Meadows, Dr. Savage, and others had contributed to the elucidation of these subjects. Personally he would refrain from stating positive conclusions arrived at, but he thought all were agreed as to the necessity of considering the important relations of flexions to uterine disease. Ovariotomy had mainly grown into existence since the formation of the Society, and twenty-three contributions on the subject had been offered. The present success of the operation was a proof of the great energy of the British mind when it was once induced to take up a subject. On fibroid tumour of the uterus, and polypi, many papers had been read. Cancer of the uterus had been apparently advantageously treated by bromine, by Drs. Routh and Wynn Williams.

On the subject of the diseases of children, the Society had done some good work. Dr. Little's paper on the connexion between difficult labour and alterations of muscular power was a most valuable one. Mr. Squire had investigated the temperature of infants. Dr. Tilbury Fox had started a possibly very important theory as to the cause of rickets. Of malformation, upwards of fifty cases had been recorded in the *Transactions*.

Lastly, the important and long-continued action of the Infant Mortality Committee, appointed at the suggestion of Dr. Farre, had come to an end; and the recommendations as to the rearing of infants, now just about to be issued by the Society, as to the necessity for improvements in penal enactments, as to the necessity for the registration and better education of midwives, which had been carefully matured by the Committee and by the Council, will, it is to be hoped, bear good fruit in the future.

In conclusion, the President, in taking leave of the Society, thanked them for so kindly assisting him in the performance of his duties during his two years of office.

THE PATHOLOGICAL SOCIETY.

TUESDAY, JANUARY 17, 1871.

Mr. HILTON, F.R.C.S., President, in the Chair.

AFTER a few words from the new President,

Mr. FAIRLIE CLARKE proceeded to show a Fractured Skull. The patient had been a coachman, and, by a collision, was precipitated from his coach, and struck the right side of his head violently. When brought to the Hospital he was bleeding from the ears, but there was no external lesion; he gradually improved; all at once, however, he got worse; rigors came on, coma supervened, and he died. It was then found that the petrous portion of the temporal bone was extensively comminuted, and there was a little extravasated blood which had begun to soften, but there were no signs of meningitis.

Mr. James Adams showed a specimen of Fracture of the Head of the Radius alone. The man died from the results of a fall from a great height, whereby he had suffered many important injuries. The capsular ligament of the elbow-joint was torn, and the outer third of the head of the radius separated, and that again was divided into two parts. There was no injury to the humerus or ulna. As far as he knew, no similar case was on record.

Dr. E. Crisp showed a specimen of Ulcer of the Stomach, giving rise to fatal hæmorrhage, in a woman, aged 62. She had been dyspeptic, but one night brought up a quart of blood. This recurred twice, and she died. There was a very small ulcer at the lower part of the stomach, on its posterior wall, and an opening into a small artery was visible in the ulcer. Was there any special disease of the arteries in these cases, as other patients frequently lost much blood, and yet recovered?

Mr. Curling said that in perforating ulcers of the duodenum the arteries were often pierced.

Dr. Murchison said his cases were brought before the Society on account of the exceedingly small size of the fatal ulcers. A man might often suffer from duodenal ulcer and yet die from some other cause, as tubercle. The vessels in the ulcer were frequently plugged.

Dr. Douglas Powell said vessels exposed on one side might give way from pressure. They were often plugged in passing through cavities in the lungs.

Dr. Crisp exhibited a specimen of Cancer of the Tongue. The patient had suffered from bronchitis and sore-throat. She disappeared for a time. When she again came, she had swelling at the angles of the jaw; there was great pain, and she was able to take fluids only. After a time she could swallow nothing. The tongue was hard, contracted, and ulcerated at the base, and the trachea was forced on one side. There was a kind of valvular stricture in the œsophagus, and ulceration of the epiglottis. (Referred to Committee.)

Mr. Wagstaffe exhibited a specimen of Cystic Sarcoma of the Lower Jaw, removed from a patient in St. Thomas's Hospital by Mr. Le Gros Clark. The tumour involved the left angle of the jaw, and distended the bone from just below the condyle to near the symphysis. It formed a tumour about the size of a large egg. The structure was cystic, with a firm sarcomatous matrix. The features of chief interest were the existence of numerous small endogenous cysts in the interior of the larger cysts, the endogenous cysts taking origin in the epithelial lining, and being readily isolable; and the arrangement of the sarcomatous growth as cylinders or acini, running tortuously through a fibro-nucleated matrix. (Referred to Committee.)

There was also exhibited for Dr. Whitehead, of Manchester, a specimen of peculiar Sputum from a woman, aged 24. She had a voracious appetite, no cough, and the chest-sounds were normal. The expectorated matter was raised involuntarily by hawking. The pieces varied in size, most frequently being of the diameter of a cedar pencil. He concluded it was a case of mucous disease, like that described by Dr. Andrew Clarke as occurring in the colon, especially as similar masses were passed by the bowel. Dr. Powell reported of the specimen that it consisted almost entirely of stratified epithelium bound together by mucus. It probably came from the pharynx or œsophagus.

Dr. Crisp thought it curious the pieces should be hawked up. Girls, he said, played strange tricks. One, he remembered, gave rise to much discussion from a habit of swallowing snails and bringing up again the indigestible portions.

Mr. Arnott thought there could be no doubt of the nature of these.

Dr. Payne exhibited specimens from two cases of Pyæmia. The first of these cases was that of a man, aged 31, admitted into St. Mary's Hospital, under Dr. Sibson's care, with high febrile symptoms, brown tongue, offensive breath, etc. There was a tense and painful swelling of one knee-joint, and a peculiar ulcerative affection of the face, depending on purulent infiltration of the skin, such as is occasionally met with in pyæmia. The case was regarded as one of pyæmia, and terminated fatally. At the autopsy, the lungs showed a few inconsiderable nodules of lobular pneumonia, partly softened, as the only pyæmic lesion; but the knee-joint was found to contain pus. The only discoverable source of blood-poisoning was shown in the specimen exhibited, and consisted in a communication between the right innominate vein and an obsolete scrofulous abscess. The opening was very distinct; but from the sheltered situation of the abscess, and the small amount of pressure which could have been exerted upon it during life, it seemed probable that only a very small amount of material could have passed into the veins. The contents exhibited no pus cells or other formed elements, but had simply the ordinary appearance of degenerated scrofulous material. The second case was clinically very similar. The patient was a youth of 18, who came into Hospital with fixed inflammation of several joints, and subsequently had ulcerative affection of the face similar to that seen in the first case. There were also febrile and other symptoms, which led Dr. Sibson to regard it as a case of pyæmia. At the autopsy, the lungs were found to have entirely escaped pyæmic infection, but several joints contained pus. The only lesion which could possibly be regarded as the source of blood-poisoning, was an adherent, softened thrombus, partly filling the longitudinal sinus of the dura mater, and continuous with a similar thrombus in a small vein coming from the brain, which was distended, evidently by inflammation of the contained clot. There was also the somewhat rare affection, inflammatory lymph on the inner surface of the dura mater without participation of the true arachnoid or pia mater. There was no disease of the brain or cranial bones, and some pathologists might have been disposed to regard these lesions as the consequence rather than the cause of pyæmia; but it was plain that, when once established, they must have been a potent source of blood infection. The interest of the two cases lay in their bearing on the causation of pyæmia. Though not directly supporting, they were nevertheless not inconsistent with the views of those who regard capillary embolism as a main factor in the production of local lesions in pyæmia, whatever may be the cause of the general febrile state—for experiment has shown that solid particles may be of such a fineness as to pass through the pulmonary capillaries without producing any effect, and yet become arrested in the systemic capillaries; and this might especially be the case with a fine embolism, such as that of scrofulous material.

In reply to Mr. Spencer Wells, it was stated that in the second case the affection of the face appeared after the other symptoms. The first patient thought he had knocked his knee first of all.

Mr. Barwell thought the abscess must have been emptied long before the onset of the symptoms, and he could not see why its contents had escaped the lung, or why one knee-joint only was affected.

Dr. Murchison thought no pathologist of the present day would contend that pyæmia was due to pus as pus, as Mr. Barwell had supposed. The pyæmia following on the opening of this abscess, which had no external opening, had a certain bearing on the germ-theory.

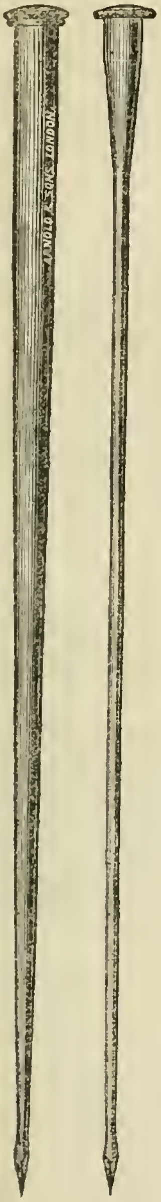
Dr. Payne said Wagner had shown that particles might pass through the lung and yet be arrested elsewhere. In this so-called abscess the matter was exceedingly fine.

Dr. Payne also exhibited some specimens of Cysts from the Peritoneum, containing air. The surface of great part of the ileum was found beset with bunches of air cysts, or pendulous bubbles, with occasional hæmorrhage. The composition of the air was found to agree with that of the gases sometimes contained in the stomach, being essentially atmospheric air, with an excess of carbonic acid, and a diminution of oxygen. There was no communication with the intestines, and the case might have suggested a revival of the theory of pneumatosis, or secretion of air, held by the older pathologists. A possible way of entrance was, however, found in a deep ulcer of the pylorus, which, from the distension of the stomach observed during life, must have been commonly exposed to the gastric air, and might have given rise to a peritoneal emphysema, and the vascular dilatations of the serous coat thus produced might have been gradually converted into pedunculated bladders, cysts of any kind being practically unknown in the peritoneum. A somewhat similar case of emphysema of the diaphragm had been brought before the Society some years before by Mr. De Morgan.

Dr. Broadbent showed some specimens of Purpura, probably scarlatinal. The skin was affected in both cases, also the intestines, pharynx, and heart. The condition had been unusually frequent of late at the Fever Hospital. It began about the fourth day. If life lasted two days longer, there was a discharge of blood from the mouth and bowels. A similar condition was said to prevail with small-pox just now.

Eng, one of the Siamese Twins, is reported to be dying.

NEW INVENTIONS.



IMPROVED BLOWPIPE FOR ANATOMISTS.

By H. A. A. Nicholls.

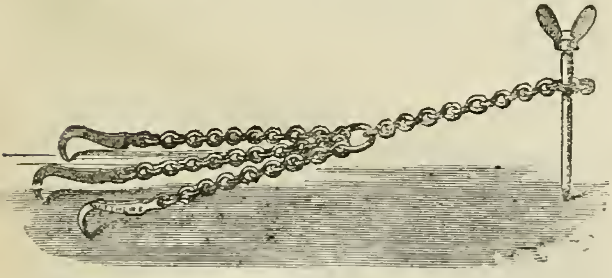
(*Manufactured by Arnold and Sons, 35 and 36, West Smithfield.*)

This blowpipe possesses many advantages over the ordinary dissection one. It consists of a blowpipe, with the addition of a steel stillette, at the end of which is a trocar-point. The blowpipe now in use is continually getting blocked up, in consequence of the necessity of having to thrust it through animal tissues, and it thus becomes for the time useless to the student. It is obvious the new instrument overcomes this difficulty. For instance, in inflating the abdomen, the blowpipe, by means of the trocar-point which projects beyond the end of the blowpipe, may be thrust through the umbilicus, and the stillette having been withdrawn, there will be found no difficulty in blowing in air, and its egress is easily prevented by securing the hole, which is necessarily very small. The blowpipe may also be used as a trocar and canula in the many small operations in which that instrument is used.

The annexed figures represent—one the canula or blowpipe, with the trocar or needle inserted, and projecting at the extremity; the other, the stillette withdrawn.

NEW DISSECTING "PEG" AND DISSECTING CASE.

Mr. Perrin, of King's College, has brought to our notice a new peg to be used in connexion with the ordinary dissecting hooks. The advantages gained by the use of the peg to the dissector are: 1st, the peg can be screwed readily by its gimlet end into a block, or any soft piece of wood, and the chain hooks appended to it. 2nd. If tension of a nerve, artery, muscle, or any other tissue is required, it can easily be effected by a few turns of the peg, which will wind the chain up without the position of the hooks being altered. In maintaining a limb in a given position steadily, the peg will prove more serviceable than the hooks alone now in use.



Matthews Brothers, the makers of the new peg, have also brought to our notice an admirable dissecting case. It is made of japanned tin, like the little boxes used by artists to carry their colours in. It is a model of cleanliness, compactness, and durability, to say nothing of its cheapness. It will stand for years the dissecting-room wear, and only requires washing to make it almost as good as new. Of its superiority over the old wooden case there can be no question. A fall from the dissecting-room table is fatal to the integrity of the wooden case, whereas it is not the slightest detriment to the new one above mentioned.

LEGAL INTELLIGENCE.

At Bow-street, Charles Gerard, described as a teacher, of 50a, Lincoln's-inn-fields, and Reuben Newport, a printer, were charged with having incited Epaphroditus Eatley to steal a copy of one of the examination papers of the Apothecaries' Company, and with having received the same, etc. Mr. Mullens conducted the prosecution, and Mr. G. Lewis, of Ely-place, defended the prisoner Gerard. Mr. Abrahams appeared for Newport. Mr. Mullens explained the nature of the alleged offence, observing that tho object for which the paper was sought was to enable the defendant Gerard to "coach" one of his pupils prior to the day fixed for the examination of the students. E. Eatley deposed that he was a proof-puller in the employ of Messrs. Gilbert and Rivington (printers to the Apothecaries' Company), St. John's-square, Clerkenwell. Rather more than two years ago the prisoner Newport sent a message to him by a boy to meet him at the Coach and Horses public-house, in the neighbourhood of the printing office. Witness had never seen him before, but found that he was in the printing trade also. Newport told him that he wanted to say something very private and confidential, and then produced from his pocket a copy of one of the printed examination papers of the Apothecaries' Hall. He asked witness if he could get copies for the next examination, if he were paid well for his trouble, adding that it would never be known. He offered £5 for a copy. Witness said he would think it over, and appointed to meet him again. In the meantime he reported the interview to his employers, and with their sanction he kept the second appointment, when he was taken by Newport to the chambers of the other prisoner, Gerard, in Lincoln's-inn-fields, on the top floor. Newport introduced him to Gerard as the person who wanted the examination papers. Witness said he had never done anything disgraceful yet, and declined their proposals. They seemed surprised, and begged him to keep the affair quiet, but he reported this interview to his employers. About seven months after this Newport met him again accidentally, and alluded to the subject, saying it was a pity witness did not procure the paper for Gerard, as it would have been a good thing for him. In September last, when witness was spending an evening at the Eagle Tavern, Newport came up to him, and again pressed him to oblige Mr. Gerard, promising him £10 if he would get a copy of the next examination paper in January. Witness reported all these interviews to Messrs. Gilbert and Rivington, his employers, and eventually, with their sanction and with the connivance of the police, he went on January 11 with Newport to the chambers of Gerard, and delivered a copy of the paper required, on receiving £10 in gold from the prisoners. This transaction was reported to Inspector Mulvany and Sergeant Butcher, and the prisoners were taken into custody. Mr. Rivington was next called, and stated that the last witness, who was in his employ, made frequent communications to him respecting the interviews with the prisoners. Witness had acted upon the advice of the police in "arranging" this case. Inspector Mulvany deposed that he was a detective, and watched the parties during the frequent interviews. He proceeded to Gerard's residence during his last interview with Eatley, who was searched before leaving home, and was intrusted with two examination papers to sell to Gerard. Witness surprised Gerard, and caught him with the papers in his hand, and Eatley produced the £10 which he had received from Gerard, and which was marked in presence of both the prisoners. Witness told them who he was, and, with the assistance of Sergeant Butcher, took them both into custody. One of the officers of the Apothecaries' Company alleged that he always received the examination papers from the printers, and took every precaution to let none of the students have them until the day of the examination. For the defence of Gerard, Mr. Lewis, in an elaborate speech, said he did not deny that the prisoner had been guilty of gross impropriety, but he contended that the charge did not amount to a felony. His client was a most respectable and well-educated man. He had incited (very improperly, it must be admitted) Eatley to procure certain information, but not to steal. One of Gerard's pupils had failed to pass the preliminary examination, and his father declared that, if he failed again, he would assist him no further. Gerard was, therefore, most anxious to be able to assist his pupil to translate certain sentences which were considered necessary in Medical examinations. He hoped Mr. Flowers would deal with the case summarily. Mr. Abrahams contended, on behalf of Newport, that he was working innocently for Mr. Gerard. Mr. Flowers determined to commit both prisoners to the Old Bailey to take their trial. Mr. Flowers consented to take bail—two sureties in £50 for each of the prisoners.

OBITUARY.

STAFF SURGEON-MAJOR McARTHUR.

We regret to record the death of Staff Surgeon-Major Alexander McArthur, M.D., formerly in the Military Train, but latterly on duty at Woolwich. Dr. McArthur was under orders for the West Indies, and his death was quite unexpected. He had been ailing slightly for the last few weeks without presenting any alarming symptoms, and having retired to rest at an early hour on the evening of January 25, was found dead in his bed on the next morning. The cause of death was found to have been degeneration of the heart. He entered the service in April, 1849, and obtained his promotion to Surgeon in May, 1855. He served with the 7th Fusileers in the Crimea, from September, 1854, till May, 1855, and was present at the capture of Balaklava, the battles of Alma and Inkerman, the siege of Sebastopol, and the sortie of October 26. He received the Crimean medal with three clasps, and the Turkish medal. He afterwards served in India during the mutiny in 1857 and 1858, being attached to the 9th Lancers throughout the operations resulting in the relief of Lucknow by Lord Clyde, aad was wounded on November 14, 1857. For these services he obtained the Indian medal with clasp, and a year's service for Lucknow.

He was a general favourite among his brother officers, among whom his sudden death has created a saddening blank. He was interred, with military honours, at Plumstead, on Tuesday, the 31st ult., the funeral being attended by many of the officers of the Garrison, including His Royal Highness Prince Arthur.

MEDICAL NEWS.

Royal College of Physicians of London.—At the ordinary quarterly meeting of the College on Thursday, January 26, the following gentlemen, having passed the required examinations, were admitted as Members :—

Garstang, Walter, M.D. St. Andrews, Blackburn.
Stocker, James Reginald, M.B. Lond., Guy's Hospital.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners, on the 26th inst., viz. :

Bradley, Richard Briddon, L.R.C.P. Edin., Stockport, of the Manchester School.
Butler, Charles, L.S.A., Sutton Benger, near Chippenham, of St. Bartholomew's Hospital.
Cook, Thomas, M.D. Paris, New-cross.
Harvey, Thomas, L.S.A., Stonehouse, Devon, of the Westminster Hospital.
Kynaston, Albert Edward, L.R.C.P. Edin., and L.S.A., Billingborough, of Guy's Hospital.
Newington, Frank Enifer, L.S.A., Tenterden, Kent, of Guy's Hospital.
Osborn, Samuel, L.S.A., Brixtoo, of St. Thomas's Hospital.
Wilkins, George, M.D. Toronto, Montreal, of St. Thomas's Hospital.
Wood, Robert Arthur Henry, L.S.A., Liverpool.

Apothecaries' Hall. — The following gentleman passed his Examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, January 26, 1871 :—

Renton, William, Knaresborough, Yorkshire.

The following gentleman also on the same day passed his First Professional Examination :—

Elphinstone, George Kidson, London Hospital.

At the Preliminary Examination in Arts, held at the Hall of the Society on January 27 and 28, fifty-one candidates presented themselves, of whom twenty were rejected, and the following thirty-one passed, and received Certificates of Proficiency in General Education, viz. :—

In the First Class, in Order of Merit.

1st. Harry Welchman.
2nd. Bernard Faraday Giles, Herbert Sloman, and James Taylor.

In the Second Class, in Alphabetical Order.

Annersley, Wm. Oliver Tyndall.
Bateman, A. G.
Blackmore, George H.
Bringloe, Capel W.
Collier, Herbert.
Cotton, Herbert.
Creed, Charles Philip.
Crowther, Arthur B.
Donnan, John Eustace.
Fabling, Robert.
Gilbert, Robert.
Goodsall, F. W. W.
Grimwood, Harry C.
Gunn, John J.
Hancock, Charles James.
Jones, M. L. Bowen.
Keeling, George R.
MacArthur, C E. A.
Mair, Frederick.
Milne, F. Linder.
Moxon, William.
Oakley, Harry Callander.
Rowland, Albert M.
Savidge, Arthur.
Shadwell, St. Clair B.
Watson, Thomas Davis.
White, Octavius.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Allingham, J. H., M.R.C.S. and L.D.S.—Associate Dental Surgeon to the Chester General Infirmary.

Andrew, Edwyn, M.D., F.R.C.S., Assistant-Surgeon 1st Administrative Battalion Shropshire R.V., to be Surgeon, *vice* W. J. Clement, M.P., deceased.

BIRTHS.

Grant.—On January 20, at Cairo, Egypt, the wife of J. A. S. Grant, M.D., Egyptian Government Medical Service, and Resident Physician, Cairo, of a son.

Woods.—On January 24, at Chatham, the wife of Henry Charles Woods, M.D., Royal Navy, of a son.

Woods.—On January 27, at Wilton House, Shooter's-hill-road, the wife of Surgeon D. Woods, Royal Artillery, of a son.

Young.—On January 21, the wife of George Edmund Young, M.D., of a daughter.

MARRIAGES.

Brett—Harvey.—On December 1, 1870, at the Church of the Holy Trinity, Hamilton, Bermuda, William Freeland Brett, Brevet-Colonel 61st Regt. to Mary Harvey, eldest daughter of the late Adolphus J. Harvey, M.D.

Denniston—Davies.—On December 23, at Allahabad, J. L. Denniston, Esq., C.S., N.W.P., to Laura Mary, daughter of the late T. Davies, M.R.C.S., and niece of the late W. Nichols, Esq., County Court Judge, Birmingham, of 2, South-villas, Campden-hill.

Rooke—Powney.—On January 23, at St. George's, Hanover-square, Clement G. T. Rooke (late Capt. 80th Regt.), eldest son of P. B. Rooke, M.D., Honorary Physician to the Queen, to Melissa R. C., youngest daughter of the late J. Powney, Esq., R.N., K.H., and granddaughter of the late Portlock Powney, Esq., M.P., and Ranger of Home-park, Windsor.

Tacon—Patterson.—On January 31, at Holy Trinity Church, Hounslow, Gude Wallace Tacon, M.R.C.S. Eng., to Henrietta Caroline, second daughter of the late Capt. F. F. Patterson, of H.M.'s 60th Royal Rifles.

Wray—Beggs.—On February 1, at All Souls' Church, Langham-place, George, son of the late Rev. Cecil D. Wray, Canon of Manchester, to Jane White, widow of the late John Beggs, M.D., of Reedsmouth, Northumberland.

DEATHS.

Harris, Captain Charles, late of the Hon. E.I.C. Bengal Horse Artillery, and eldest son of the late Henry Harris, M.D., at 21, Pembridge-square, on January 30, aged 83.

Hatton, John, M.D., of Belvedere, Kent, formerly of Manchester, on January 26.

John, Walter, Army Staff Assistant-Surgeon, third son of the late George Dennis John, Esq., of Penzance, on board H.M.S. *Tamar*, at sea, after a long illness, on January 23.

Macfarlane, Margaret Harriett, the second daughter of the late James Macfarlane, M.D., Perth, N.B., at 24, Green-street, Grosvenor-square, on January 31.

Pritchard, Elizabeth Rosalie, the beloved wife of Mr. Wm. Pritchard, of the Royal Veterinary College, at 11, Oakley-square, St. Pancras, on January 31, of cancer of the breast.

Shaw, Bernard John, B.A. and M.R.C.S., late of Caius College, Cambridge, son of the late John Shaw, Esq., of Attercliffe, on January 30, aged 24.

Smith, John, Surgeon, at Blackheath-road, Greenwich, on January 28, aged 72.

Tyler, Edwin, M.R.C.S., at Old Elvet, Durham, on January 22, aged 62.

Wright, Edward Seymour, M.R.C.S.E., at March, Isle of Ely, suddenly, on January 25, aged 27.

Young, Jane, second daughter of the late John Young, Surgeon, of Hull, at Edinburgh, at an advanced age, on January 21.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Devon and Exeter Hospital.—House-Surgeon. Applications and testimonials to E. Force, Esq., at the Hospital.

Dursley Union.—Medical Officer for District No. 3. Candidates must be duly qualified in accordance with the General Orders of the Poor-law Board. Applications and testimonials to Mr. George Wenden, Clerk to the Guardians, on or before February 15. Election on the 16th.

Hospital for Women, Soho-square, W.—Physician ; must be a Graduate in Medicine of some recognised University, and be a Member of the Royal College of Physicians of London. Applications and testimonials to H. B. Ingram, Esq., Secretary, on or before February 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

St. Mary's Hospital and Dispensary for Women and Children, Quay-street, Manchester.—Visiting Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to John Barber, Esq., Secretary, 41, John Dalton-street, Manchester, on or before February 17.

St. Thomas's Hospital.—Assistant-Surgeon; must be a Fellow of the Royal College of Surgeons of England. Applications and testimonials to be sent, under cover to the Treasurer, to the Office, 13, St. Thomas's-street, S.E., on or before February 14. Election on March 9.

St. Thomas's Hospital.—Resident Assistant-Surgeon; must be a Fellow of the Royal College of Surgeons of England. Applications and testimonials to be sent, under cover to the Treasurer, to the Office, 13, St. Thomas's-street, S.E., on or before February 14. Election on Feb. 28.

University College Hospital.—Assistant Obstetric Physician. Applications and testimonials to John Robson, B.A., Secretary to the Council, on or before February 22.

Windsor Royal Infirmary and Dispensary.—House-Surgeon. Applications and testimonials to the Secretary on or before February 7.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Thame Union.—The Great Milton District is vacant; area, 5695; population, 1423; salary, £45 per annum. The Little Milton District is vacant; area, 4750; population, 1000; salary, £36 per annum.

APPOINTMENTS.

Andover Union.—Thelwell Pike, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Fourth District. Francis R. Bernard, B.M. and M.C. Univ. Aber., to the Fifth District.

Bramley Union.—John Long, M.R.C.S. Eng., L.S.A., to the Farnley District.

Holborn Union.—John E. Gowland, L.R.C.P., L.S.A., to the First District.

Mansfield Union.—James Coutts, M.D., Kings Coll., Aber., M.R.C.S. Eng., to the Third District.

West Ward Union.—Thomas J. E. Brown, M.R.C.S. Eng., L.S.A., to the Morland District.

Williton Union.—John William Norman, L.R.C.P. Edin., L.R.C.S. Edin., to the Dunster District.

At the annual meeting of the Torbay Infirmary, held last week, on the motion of Dr. Black, seconded by Mr. Spragge, a donation of twenty guineas was awarded to Dr. Powell "for the very efficient manner in which he had discharged his increased duties during the year."

According to returns furnished by the Engineer of the Metropolitan Board of Works, the daily average quantity of sewage pumped into the River Thames at Crossness was 339,155 cubic metres, and at Barking 275,019 cubic metres, equivalent to about as many tons by weight.

On Monday, the 30th ult., the Metropolitan District Asylums Board opened the new Small-pox and Fever Hospitals at Stockwell. They are situated about midway between the Brixton and Clapton Stations of the London, Chatham, and Dover Railway.

A public meeting has been held at Swindon, at which it was unanimously resolved to establish a Cottage Infirmary for that town and the neighbourhood, and an influential committee was appointed for the purpose of carrying out the resolution.

The sum of £737 4s. 6d. has been already subscribed towards the intended Infirmary at Devizes; but it is now proposed to erect a building which will provide accommodation for the Devizes Dispensary, as well as an isolated ward for infectious cases, and the estimate, therefore, considerably exceeds the sum which was at first deemed sufficient for a simple "Cottage" Infirmary.

Vaccination Visitors.—A correspondent of the *Record* complains thus:—"The person going about to issue vaccination notices would do well to be more on his guard respecting his conduct in the houses he has to visit. Whilst the writer was looking for the Registrar's certificate he coolly sat down and ate the soup which had been placed for my dinner. There are other complaints in the neighbourhood."

The Fourth Annual Report of the Driffield Cottage Hospital states—"The number of patients admitted in 1870 is very much greater than in any previous year, and five out of the six beds have been almost constantly occupied. During the past year 45 in-patients have been admitted, of whom 22 have been discharged cured, 18 relieved, 1 not benefited, 2 have died, and 2 remain in the Hospital. Fifty-nine out-patients have been on the books, and of these 35 have been cured, 17 have been relieved, 4 have not improved, and 3 are still under treatment." The total expenditure of every kind was £135 6s. 3d.

Donations in Kind.—In the Annual Report of the Rules of the Village Hospital, Hambrook, the following donations in kind are acknowledged:—Cocoa, eggs, jam, milk, vegetables, clothes-posts, old linen, table-bell for board-room, patchwork quilt, knitted quilt.

Princely Munificence.—Mr. Humphrey Nicholls, of Manchester, presented to Mr. Robert Gladstone, the Treasurer of St. Mary's Hospital, the sum of £9000 to be applied to the funds of that institution, and an additional sum of £9000 for the Barnes's Convalescent Home at Cheadle-Hulme. These donations, with others previously given, make a total of £20,000 given by Mr. Humphrey Nicholls.

The Hunterian Society.—On Wednesday next will be held the anniversary meeting of one of our oldest Medical societies—the Hunterian. The orator for the year is Mr. T. B. Crosby, and a large attendance is, we believe, expected. The Society meets in the theatre of the London Hospital, and thus possesses excellent accommodation for a large meeting. After the oration, which will commence at 8 o'clock, there will be a *conversazione*, and an exhibition of instruments, casts, drawings, and other objects of Professional interest. All members of the Profession will be admitted on presentation of card.

Small-pox in St. Pancras.—Yesterday, Dr. Radcliffe, one of her Majesty's Inspectors of the Privy Council, attended a meeting of the St. Pancras vestry. His object was to inform them of the number of cases of small-pox in the parish, amounting in all to about 110, and to suggest some mode of action. He considered that there were upwards of forty-eight centres of infection already in the district, and 2500 instances in which vaccination had not been attended to. Accommodation ought to be prepared for 200 persons, together with a disinfecting chamber, and fifty beds should be provided at once. To this latter suggestion the vestry, after a stormy discussion, agreed.

Public Health.—The quarterly returns of the Registrar-General, ending the year 1870, have been issued. The mortality of the country was still higher than the average of the ten previous autumn quarters. Scarlet fever and small-pox had carried off their victims, and diphtheria had also been at work. The mortality in the fifty large town districts was at the rate of 23·0 in 1000. Northampton maintains its sad pre-eminence, the rate in that town being 34. Carlisle stands lowest of all—namely, only 16. The death-rate of the quarter for the whole kingdom was 22·5 per 1000, the birth-rate 34·1, and the marriage-rate for the previous quarter 14·9.

A Fever Den.—An inquest was held yesterday, by Dr. Hardwicke, on the body of a child named John Sperganni, about 3 months old. The child was found dead on Friday morning last at a house in Fleet-row, Eyre-street-hill, Holborn, which was stated to be occupied by several families of the poorest class, and to be so overcrowded as to render the air most noxious and dangerous to the unfortunate occupants. The mother of the child, a Neapolitan girl in her 17th year, had been deserted by her husband, and was living at the above house with a man and a woman named Gregarri, who kept her in return for her earnings as a street musician. Dr. Cole said that the body was fairly nourished, and that death had been caused by suffocation from want of fresh air. Dr. Norton stated that in one house in that locality there were fifty people, and that he had seen sixteen persons huddled together in one room. The jury returned a verdict of "Death by suffocation from want of fresh air," and drew up a requisition to the parochial authorities, calling attention to the disgraceful state of the house in question. The jury further requested the Medical Officer of Health (Dr. Gibbons) and the Inspector of Nuisances to take legal means to abate such overcrowding.

Hooping-cough and Scarlet Fever.—Dr. Conway Evans, in his annual report of the sanitary condition of the Strand District, London, says—"During the year, hooping-cough destroyed 44 lives in the district, the annual average of the previous ten years being 41. Of the 44 deaths from this disease, 17 occurred in the sub-district of St. Anne Soho, 19 in that of St. Clement Danes, and 8 in that of St. Mary-le-Strand—numbers which are not without relation to the density of population in these sub-districts. Far less dreaded than scarlatina, and not unfrequently, indeed, contemplated almost with indifference, of the two diseases, hooping-cough proves in this district decidedly the more destructive to life when regarded over a series of years. Thus, during the last fourteen years, the mortality from hooping-cough in this district has amounted to 563, that from scarlatina to 509. *Mortality of Infants and Young Children.*—The deaths of infants and young children constituted, as usual, a large proportion of the entire mortality of the year, those of children of the age of 5 years and under forming no less, indeed, than 43 per cent. This proportion was lowest in the sub-district of St. Mary-le-Strand, where it reached 38 per cent.; highest in that of St. Anne Soho, where it reached 48 per cent."

Conviction under the Contagious Diseases Act.—Greenwich: Emma Wright, 25, was charged, on Monday, with neglecting to submit herself to a Medical examination in accordance with the provisions of the Contagious Diseases Act. Mr. Pook, solicitor, who prosecuted on behalf of the Commissioner of Police, said, that in consequence of the difficulty experienced in getting persons, after signing the necessary papers, to appear before the Medical officer, the police authorities had determined in all cases to put the law in force. In regard to the present case, he had to ask for a conviction. Inspector Crouch gave evidence, and stated, as a reason for a warrant having been granted for the prisoner's apprehension, that she had been summoned, and had been allowed to leave the court on promising to comply with the Act, but she had altogether failed to do so. Mr. Maude told the prisoner that while the Act of Parliament was in existence the law would have to be complied with. Had she kept the promise made on her last appearance he should not have had to order her committal to prison. The defendant was then committed to Maidstone Gaol for fourteen days.

Collegiate Examinations.—At the last examination for the diploma of Membership of the Royal College of Surgeons, eighty candidates presented themselves, and perhaps the following statistics may be interesting to some of the readers of the *Medical Times and Gazette*:—Of the above number there were L.S.A. Lond., 16; L.R.C.P. Edin. and L.S.A. Lond., 2; M.B. Cantab., L.R.C.P. and L.R.C.S. Edin., 1; M.D. Queen's University, Ireland, 1; L.R.C.P. Edin., 1; M.D. and M.B. Toronto, 2; and M.D. Paris, 1. There were 42 who passed in Surgery and Medicine, or, having previously obtained a Medical licence, were admitted Members of the College; 13 passed in Surgery, having to qualify in Medicine before admission as Members; 8 were rejected in Surgery; 5 were rejected in Medicine and Surgery; 3 were rejected in Medicine; 1 was rejected in Surgery, but passed in Medicine; 2 were rejected in Medicine, but passed in Surgery; and 6 were rejected in Surgery who had obtained Medical licences. The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery; candidates were required to answer four out of the six questions:—1. Describe the common varieties of ulcers (non-specific); state the causes by which they are produced, and their appropriate treatment. 2. State what is meant by "*reduction en bloc*" or "*en masse*" of a strangulated hernia; describe the position of the sac and its contents where this complication has occurred, the symptoms attending it, and the treatment to be followed. 3. Give the signs of fracture of the ribs, the various complications with which it may be attended, and the proper mode of treatment in each case. 4. Describe the appearances, progress, and consequences (if unchecked) of *tinea tarsi*, its pathology and treatment. 5. Mention the parts that would be divided in the case of a wound down to the bone extending across the cheek from the lower border of the ala nasi to the lobe of the ear. 6. Carbuncle: its symptoms, pathology, and treatment. The following were the questions on the Principles and Practice of Medicine:—1. What are the various animal parasites which may infest the human body; state the modes in which they are supposed to enter the system, and the symptoms which they produce? 2. Mention the different remedies, external and internal, which are ordinarily used for the expulsion or destruction of each parasite, and state the doses and modes in which you would employ them. 3. Enumerate the preparations of iron, quinine, and opium contained in the British Pharmacopœia; state the purposes for which you would severally employ them, and the doses in which they should be used. The authorities of the College have now adopted the plan pursued elsewhere of lithographing, by a confidential officer of the institution, the questions to be submitted to the candidates—a proceeding which the recent disclosures at Bow-street Police-court respecting another institution appear to have rendered necessary.

At Stourbridge County Court an action was brought by John Green, of Mill-street, to recover £5 for injuries alleged to have been sustained through being knocked down by Mr. E. S. Pearse, Surgeon, of Round Oak. Mr. Homer appeared for the plaintiff, and Mr. Waldron for the defence. Mr. Homer, in stating the case, said that the plaintiff, on November 12 last, was going down Milk-street, Brierly-hill, and the defendant was passing at the same time in a gig, driving in a very careless and reckless manner, when he knocked down the plaintiff; the plaintiff was 70 years of age, and blind. The singular part of the case transpired in course of the cross-examination of the plaintiff—he said he received parish relief, and he had never been to a Surgeon. Mr. Waldron: Then how is this £5 made up?—Witness: What £5? Mr. Waldron: Why, for which you have brought this action.—Witness: I have brought no action. Mr. Waldron: Have you not brought this action against Mr. Pearse?—Witness: I don't know what you mean. Mr. Waldron: Why, you have brought an action for £5 against Mr. Pearse.—Witness: I have not. (Laughter.) Mr. Waldron: Then what brings you here?—Witness: Why, Mr. Homer's clerk told me I was to be here to-day. Mr. Waldron: And didn't you give instructions for this action?—Witness: No; I never did. (Laughter.) Mr. Homer: Are you aware that you are in Stourbridge County Court?—Witness: Yes. Mr. Homer: You say you gave my clerk instructions about putting Mr. Pearse in the Court for damages for injuries which have been done to you?—Witness: Yes, sir; I told him I was agreeable. (Laughter.) Mr. Homer then said he would withdraw the case, as he had not seen the plantiff, and knew very little about it. His Honour then non-suited the plaintiff, without costs.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Toujours Prêt.—The smaller book will be the more useful to you.

A.—The address of the manufacturers of disinfecting ovens is Fraser Bros., 10, Commercial-road East, London, E.

Dr. Campbell, L.R.C.P.E.—He has no right to call himself Surgeon, even although the Act entitles him to practise as such. He may call himself a qualified Medical Practitioner.

C. D.—No receipt is required or expected. It is an *honorarium*, and as such should be treated.

J. C. (Ormskirk).—The statements made by Mr. Craven, at the Board of Health meeting, are rather too unqualified. Still, they are of value, and should be read with attention.

N., Malvern.—There are many practical suggestions and much common sense in the leading article in the *Malvern News.* It is to be hoped the inhabitants will profit by them.

Alfred Hospital at Melbourne.—The Honorary Medical Officers are—Medical Staff: Dr. Bird. Surgical Staff: Mr. M'Millan and Mr. Barrett, Mr. Blair, Mr. Girdlestone, and Mr. Rawkin. For Out-patients (Medical side): Drs. Robertson and Fulton; (Surgical side) Messrs. Wigg and Wilkins.

In General Practice.—The statement in a letter in the last number of the *Pharmaceutical Journal*, that the dispensing arrangements of properly qualified Medical Practitioners are so much less complete and precautionary than those of properly qualified chemists is of doubtful authenticity. Whence came the cases of poisoning—by swallowing or by dispensing the wrong medicine?

Dispensing Alliances.—The subject is one surrounded with more difficulty than at first sight presents itself. The Surgeon in general practice has many reasons for wishing the medicines he prescribes to be dispensed under his own superintendence. Leaving the commercial element out of the question, the policy and the convenience are, under the present state of the law, in favour of dispensing at home.

Corrigenda.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the list of gentlemen who passed the diploma examination at the College of Surgeons in the week ending Saturday, January 28, my name was entered in your journal as Alb*ert* instead of Alban H. G. Doran.

I am, &c.

St. Bartholomew's Hospital, January 31. Alban Doran.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—You will see from the paper which I send you that my name was unfortunately substituted for that of Mr. Darby, who died here a few days since; and I am sorry to say that the mistake has not been confined to Manchester, but has found its way into many papers, including your own. If you will kindly insert the correction in your next edition, I shall feel extremely obliged.

I am, &c.

A. W. Sutcliffe, Junior House-Surgeon.

Royal Infirmary, Manchester. Jan. 21.

COMMUNICATIONS have been received from—

Mr. Sutcliffe; Mr. H. W. Hunt; Dr. Althaus; Mr. T. E. Giaa; Dr. R. H. Barewell; Mr. C. A. Fox; Dr. Fayrer; Dr. P. J. Hayes; Dr. R. McDonnell; Toujours Pret; Mr. A. L. Aoams; Mrs. Jackson; Mr. W. J. Nixon; Dr. A. E. Sansom; Mr. W. W. Reeves; Mr. C. F. Maunoer; Dr. D. Campbell, New Zealand; Dr. J. Hughes Bennett; Student; Mr. Alban Doran; Quionunc; Dr. H. C. Andrews; Mr. T. C. Marsh; Dr. Henry; Mr. J. Hotchinson: Mr. J. H. Allinoham; Dr. B. W. Richardson; Dr. Moxon; Mr. T. Spencer Wells; Dr. J. Burdon-Sanderson; Mr. H. Arnott; Mr. J. Chatto; Dr. Ballaro; Dr. Day; Mr. J. Netten Radcliffe.

BOOKS RECEIVED—

Fourteenth Annual Report of the Sanitary Condition of the Strand District, London, by Conway Evans, M.D.—Atlas of Portraits of Diseases of the Skin, issued by the Sydenham Society, Tenth Fasciculus—A Short Essay on Practical Experimental Philosophy, its Use and Abuse, by the Wife of Robert Willis, M.A., F.R.S., etc.—Tenth Annual Report of Registration of Births, Marriages, and Deaths in Queensland, 1870—Medical and Surgical Reports of the Boston City Hospital—Dr. Le Pileur on the Wonders of the Human Body, translated from the French—The Australian Handbook and Almanac for 1871.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Ormskirk Advertiser—The Manchester Daily Examiner—The Pharmaceutical Journal—The Malvern News—The Yorkshire Post—The Torquay Times—The Melbourne Argus—Hardwicke's Science Gossip, Feb., 1871—Nature—Quarterly Journal of Psychological Medicine and Medical Jurisprudence—New York Medical Gazette—Monthly Microscopical Journal, February—The Philadelphia Medical Times—Lincoln Journal—The Melbourne Daily Telegraph—The Essex Independent.

APPOINTMENTS FOR THE WEEK.

February 4. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Rev. W. H. Channing, "Laws of Life Revealed in History."

6. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. F. J. Gant, F.R.C.S.—Lettsomian Lectures: "Excisional Surgery of the Joints; The Conditions appropriate for Excision; The Operations; After-Treatment and Results" (illustrated by a series of original specimens, drawings, and apparatus). Lecture III. The Elbow-, Shoulder-, and Wrist-joints.

Royal Institution, 2 p.m. General Monthly Meeting.

7. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Mr. Spencer Watson, "Ivory Exostosis growing from the Sclerotic Coat of the Eye." Mr. Hulke, "Preparations and Drawings from Two Cases of Rodent Ulcer; Polypus of Rectum." Mr. H. Arnott, "Blood-tumour of Scrotum of Doubtful Origin." Dr. M. Mackenzie, "Constrictions of the Trachea, with Syphilitic Deposits in the Liver; Growth in the Larynx of a Dog." Dr. Clifford Allbutt, "Sections of the Spinal Cord from Cases of Tetanus." Dr. Moxon, "General Primary Colloid Cancer of the Skeleton; Syphilitic Inflammation of the Lung; Change of Grey to Yellow Tubercle in Lung." Mr. Campbell De Morgan, "Tumour of Lower Jaw; Tumour from Axilla." Mr. Wagstaffe, "Fibrous Tumour of Heart."

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

12, Hinde-street, W., 5 p.m. Lectures on Experimental and Practical Medicine, by Dr. B. W. Richardson, F.R.S.

8. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Adjourned Discussion on Dr. Christie's Paper, "On Cholera in East Africa."

Royal Microscopical Society, 8 p.m. Anniversary. Election of Officers and Council.

Society of Arts, 8 p.m. Meeting.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

10. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Dr. Handfield Jones, "On Puncture in Anasarca; Two Cases of Chorea." Dr. Broadbent, "On Paralysis of the Soft Palate resembling Diphtheritic Paralysis." Mr. Gant, "On the Process of Occlusion in Arteries after Acupressure."

Royal Institution, 9 p.m. Mr. E. J. Reed, C.B., "On some Fallacies connected with Ships and Guns."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 28, 1870.

BIRTHS.

Births of Boys, 1183; Girls, 1135; Total, 2318.
Average of 10 corresponding weeks, 1860-69, 2119·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	824	808	1632
Average of the ten years 1860-69 . . .	818·4	807·8	1626·2
Average corrected to increased population .	...	...	1789
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	19	4	5	...	7	1	...	1	1
North ...	618210	35	2	21	3	11	4	4	1	4
Central ...	383321	16	2	9	1	4	...	2	...	1
East	571158	48	2	9	1	15	5	4	2	2
South... ...	773175	35	2	21	3	10	...	4	1	2
Total	2803989	153	12	65	8	47	10	14	5	10

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·817 in.
Mean temperature	32·4°
Highest point of thermometer	46·0°
Lowest point of thermometer	25·0°
Mean dew-point temperature	28·2°
General direction of wind	N.E. & N.N.E.
Whole amount of rain in the week	0·54 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, January 28, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Jan. 28.	Deaths Registered during the week ending Jan. 28.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2318	1632	46·0	25·0	32·4	0·22	0·54	1·37
Portsmouth ...	125464	13·2	78	51	44·2	22 8	34·2	1·22	0·08	0·20
Norwich	81787	10·9	51	32	40·5	22·0	32·0	0·00	0·43	1·09
Bristol	173364	37·0	117	98	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	48	36	36·2	19·2	29·8	−1·22	0·00	0·00
Birmingham ...	378574	48·3	227	186	37·4	22·7	31·4	−0·34	0·16	0·41
Leicester	101367	31·7	91	63	36·7	23·7	31·2	−0·45	0·04	0·10
Nottingham ...	90480	45·3	58	52	36·6	22·0	31·2	−0·45	0·08	0·20
Liverpool	520225	103·0	397	464	38·0	22·8	30·7	−0·72	0·00	0·00
Manchester ...	379140	84·5	289	208	...	...	...	...	...	...
Salford	123851	23·9	121	75	38·2	18·9	30·7	−0·72	0·02	0·05
Bradford	148030	22·5	109	76	38·5	21·4	31·2	−0·45	0·06	0·15
Leeds	266108	12·3	245	122	37·0	24·0	33·4	0·78	0·17	0·43
Sheffield	255247	11·2	193	134	36·5	24·2	31·7	−0·17	0·10	0·25
Hull	135195	38·0	81	52	...	...	...	...	...	...
Sunderland ...	103037	31·2	71	62	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	62	53	38·0	21·0	31·2	−0·45	0·00	0·00
Edinburgh	179944	40·6	140	107	35·7	25·0	30·8	−0·67	0·00	0·00
Glasgow	477627	94·3	362	362	36·3	21·8	28·8	−1·78	0·13	0·33
Dublin (City, etc.†)	322321	33·1	156	206	41·5	25·8	34·3	1·28	...	...
Total of 20 Towns in United Kingd'm	7336941	34·4	5214	4071	46 0	18·9	31·6	−0·22	0·12	0·30
Paris—Week ending Jan. 28	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Jan. 14 ...	622087	68	...	359	...	...	19·4	7·00	...	...
Berlin—Week ending Jan. 28 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·82 in. The highest was 03·08 in. on Friday, and the lowest was 29·40 in. on Sunday, 22nd ult.

The general direction of the wind was N.E. and N.N.E.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

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(Manufactured only in France.)

ANNUAL CONSUMPTION EXCEEDS 5,000,000 lb.

The healthiest, best, and most delicious Aliment for Breakfast known since 1825; defies all honest competition, unadulterated, highly nutritious, and pure.

Sold in Half-pound Packets.

Wholesale, MENIER, 23, Henrietta-street, Strand, London.

Retail by all respectable Houses.

HUBBUCK'S PURE OXIDE OF ZINC.

See Pharmaceutical Journal of May 1, 1856.

Sold in Stamped Boxes of 14 lbs. each, by the following Wholesale Druggists:—

Messrs. Baiss Brothers & Co.
„ Barron, Harveys, & Co.
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„ Burgoyne, Burbidges, & Co.
„ Cox, Gould, & Co.
Messrs. Geo. Curling & Co.
„ Drew, Barron, & Co.
„ Evans, Lescher, & Evans.
„ Evans, Sons, & Co.
„ Samuel Foulger & Son.
Messrs. Hearon, Squire, & Francis.
„ Herrings & Co.
„ Hodgkinsons, Stead, & Treacher
„ Langtons, Scott, & Edden.
Messrs. Preston & Sons.
„ Southall, Son, & Dymond.
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Messrs. Wright, W. V., & Co.
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PEPSINA PORCI.

Messrs. BULLOCK & REYNOLDS

Beg to direct the attention of the Profession to the experiments upon Medicinal Pepsin by Professor Tuson, recorded in the "Lancet," Aug. 13th, 1870, which incontestably prove the very great superiority of their preparation in point of digestive power over every other Pepsin, British or Foreign. Dose—Two to four grains.

Messrs. BULLOCK and REYNOLDS will be happy to forward a Reprint of Professor Tuson's Paper on application.

3, HANOVER-STREET, HANOVER-SQUARE, W.

SOLUTION OF BIMECONATE OF MORPHIA.

(*VIDE "LANCET," MARCH* 4, 1839.)

This preparation has been used by the leading Physicians and Surgeons for the last thirty years.

Dr. MACLEOD stated that it rarely produced headache, and has repeatedly answered where opium has disagreed, and succeeded in cases where the other salts of Morphia had failed to give relief.

Dr. A. T. THOMSON said it possessed anodyne properties superior to any of the salts of Morphia in ordinary use.

Dr. ROOTS states that he had taken every other preparation of Opium, but from none of them had obtained the same degree of quiet rest that he enjoyed from this Bimeconate of Morphia.

P. AND P. W. SQUIRE, 277, OXFORD-STREET, LONDON, W.

FOX'S

"PALATABLE" COD-LIVER OIL, "PALATABLE" CASTOR OIL, AND "PALATABLE" COD-LIVER OIL WITH QUININE

ARE THE FINEST OILS,

So prepared as to be really pleasant to the taste, whilst their medicinal properties are not in the least impaired.

From the MEDICAL TIMES AND GAZETTE, June 4th, 1870.

"In these preparations the Patentees have succeeded in making the Oils not only palatable, but easily retained upon the stomach without rising. We have tried them in several cases with marked benefit, and in some instances in which the Oil in its natural state could not be retained. The mode of preparation is such that the medicinal properties of the Oil are unimpaired. To children in particular the Oils as prepared by Fox and Co. will be highly advantageous."

From the LANCET, June 18th, 1870.

"Our attention has been called to the preparations named (by Messrs. Fox and Co., of Manchester) Palatable Cod-liver Oil and Palatable Castor Oil. We have made ourselves acquainted with the means employed to render these Oils 'palatable,' in place of being, as they are to so many persons in their natural state, nauseous and disagreeable to the palate, and calculated to derange—especially cod-liver oil—the stomach and the organs of digestion. These means are simple and unobjectionable, and they have the effect of removing certain impediments to the free and general use of these Oils, and, in the case of Cod-liver Oil, of endowing it with mildly tonic properties. The idea of rendering Cod-liver and Castor Oils palatable is an exceedingly good one, and no doubt there will be a large demand for, and consumption of, the Oils thus prepared."

JOHN LANG, Esq., M.D., M.R.C.S.E., L.S.A.,

Physician to the Convalescent Hospital, Southport, formerly Surgeon to the Children's Hospital and Dispensary, Manchester, House-Surgeon to the Manchester Royal Infirmary, and House-Surgeon to the University College Hospital, London, says:—

"The 'Palatable' Cod-liver Oil was given to several phthisical patients in this Hospital. To most it was agreeable, some tolerated it who had not been able previously to bear Oil, and in only one instance could it not be borne. I regard the combination as an improvement on all previously known methods of administering Cod-liver Oil."

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MANUFACTORY, CITY-ROAD, MANCHESTER; and through all leading Wholesale and Retail Chemists.

Palatable Cod-liver Oil, 1s., 2s., 3s. 9d.; with Quinine, 2s. 6d., 4s. 9d. Palatable Castor Oil, 6d., 1s.

ORIGINAL LECTURES.

LECTURES ON
THE CLINICAL OBSERVATION OF DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture II.

(*Concluded from page* 93.)

Of speech-palsy, or so-called aphasia, there are various forms, differing radically from each other. The child learns to speak, and then to write, as laboriously as it learns to walk, the result being such changes in the hemispheres as correspond in office in speech to the "guiding sensations" of the muscles of the back and limbs in walking. The acts they regulate are at last so purely automatic that a person who cannot spell a word orally will write it correctly. Sometimes these verbal acts are so jumbled, in consequence of the disorder of the brain changes on which they depend, that the primary sounds and letters are re-arranged in unintelligible confusion, constituting a kind of aphasic chorea. I believe no explanation has been attempted of this latter kind, but the pathology can be understood if we remember that the two halves of the brain have each independent action, and require to be co-ordinated in speech as well as in other acts of unity.

Another kind, which I described long ago (long before the word aphasia was invented) as speech-palsy, is of the anæsthetic kind. I pointed out that often persons deprived, by a fit, of speech, and of voluntary power over the muscles of expression of the face, can utter exclamations and laugh audibly and naturally. I then thought, as others think now, that there are two lines of ideational activity—one voluntary, the other involuntary; but I now think the difference is not anatomical, but dynamical. In states of feeling and emotion there is greater evolution of energy (*vis nervosa*), and so greater manifestation than under simple volition. Hence, both kinds of expression of ideas and feelings may be wanting, provided there be complete anæsthesia as to both.

An instructive example of this kind was admitted into Ward 10 of the Infirmary, under my care, some years ago. He was a man about 40 years old, believed to be mentally affected. At first visit he spoke freely enough, but had head-symptoms of an obscure kind pointing to fever. At visit two days after, he would answer no questions, and looked as if he heard nothing. Yet that he did hear was certain, because he put out his tongue, held out his hand, turned himself, and did other things as soon as asked. With all this he neither spoke nor gave any emotional sign of distress that he could not speak, as is usual in aphasia — his countenance being quite stolid and motionless. The nurse said he had acted in the same way in another ward only a few days previously, and that he had been dismissed for wilful obstinacy in consequence. I recognised, however, the signs of a serious lesion in the frontal lobes, phrenologically in the organ of language (for such cases have been recorded by phrenologists), and predicted a fatal termination. He never spoke again, and died shortly. Dr. Haldane, then the pathologist to the Infirmary, found on post-mortem examination a small tumour, the size of a bean, occupying the interior margin of the *left corpus striatum*, with yellow softening of the contiguous left frontal lobe.

At that date the coincidence of aphasia with lesions in the left hemisphere had not been noted. The question naturally arises, How it was that lesion, apparently limited to one side, should solely and wholly abolish both the function of speech and of emotional expression? The explanation follows upon the facts I have already stated. The hemispheres are just as duplicate in function as the nervous apparatus of the eyes, ears, nostrils, hands; and consequently, for that unity of action of the two which coincides with the unity of consciousness termed the "ego," there must be decussating fibrils and centres which can combine the two hemispheres into one organ, just as the two eyes act together as one in vision. We must conclude, therefore, that the structural disease in this case interfered directly, not with this unity of consciousness (which was not disturbed, and which cannot be restricted to one half), but with the function of the one hemisphere; then, by morbid action along the decussating fibrils or line of physiological activity, it also impaired the functions of the other hemisphere. In such a condition a slight additional morbid change would serve to abolish the latter wholly, and thus a complete aphasic anæsthesia would result. We should have analogous conditions if a patient who was amaurotically blind of one eye, without knowing it, became totally blind when disease affected the other eye used in vision. In such a case, did we not know that vision could be perfect with one eye, and were ignorant that the other eye was diseased, we should attribute vision to one eye.

The fact that the two hemispheres can and do act as independently in thought as the two eyes in vision, without manifestly impairing the unity of consciousness, enables us to explain the phenomena of dreams, somnambulism, hallucination, and all the puzzling phenomena of insanity, including double and triple consciousness, and to reconcile numerous discordant facts. Many cases of injury, and even destruction of one side of the brain, have been recorded, in which there was no apparent affection of the understanding. I have seen such repeatedly; but the proper conclusion from such cases is, not that brains are not necessary to mind, but that one half will suffice provided it be sound. I have said "no apparent affection of the understanding," but I must warn you that this is often due to a defect in the accuracy of observation. Many persons have vague ideas of mental capacity. These and other important questions in mental pathology are discussed in my summer course of lectures "On Medical Psychology and Mental Diseases," and I therefore do not dwell on them more fully now; but I cannot omit reminding you how these facts illustrate the inseparable connexion of mental with cerebral disorders. This anæsthetic aphasia, for example, has its simpler form in that loss of memory of names which is experienced as age advances, or in the young as a sign of brain-fatigue. Suddenly, when speaking, the brain-change which corresponds to the name of a thing fails to take place. We then fail to utter the *sounds* which are its sign, and must describe the *thing*. Here the change is defective as a guiding change to vocalisation only, but it may be defective as a guiding change to thought, as association of ideas. When this happens in aphasia, the patient is not only unable to utter the right words, but does not know that he utters the wrong ones. Such a state of things is not uncommon in senile dementia. The subject, however, would well occupy a lecture, as it includes the whole physiology and pathology of memory and of association of ideas. You will find it discussed in my psychological text-book.(b)

You will, perhaps, expect me to reconcile these views with the well-established fact that aphasia is so very commonly associated with lesion of the left hemisphere that the organ of language has been placed there. Now, the lesion is not invariably there. Still more cogent is the fact that the functional disorder of the right hemisphere, which follows upon structural disease of the left, cannot, perhaps, be discovered after death, and certainly has not been looked for by pathological anatomists. The explanation rests, in truth, upon an explanation of the general fact that *structural* disease is not only more visible, but is more commonly induced in the left hemisphere than in the right. When we apply the Wallerian law of degeneration to the solution of this problem, we find that we must include the whole cerebro-spinal centres in our inquiry. From this point of view, the causes of the frequency of left lesions in aphasia are very various:—1. Greater use, both motor and sensory, is one very common cause; but motor use alone cannot influence tongue-speech unilaterally in the same way as it influences hand-speech, because the muscles on both sides must be used in tongue-speech, and we can only infer, therefore, that the left side is more used mentally; but this is at least not proven. It is different in hand-speech, in which one arm and hand is much more commonly used than the other to express emotionally and volitionally all ideas and feelings. The greater motor use of the right arm probably predisposes the left half to degeneration as to its motor structures, while the mental—*i.e.*, sensorial—use to this end will also, in like manner, predispose to more ready degeneration of the orbital lobes. Such degeneration would involve, also, the sensorial structures (orbital lobes) subservient to tongue-speech; but these two kinds can and do occur separately. 2. The nutrition of the convolutions depends greatly upon the supply of blood through the middle cerebral artery; and as the left common carotid comes directly from the arch of the aorta, it is more directly liable to take in fibrin-plugs than the right, and hence embolism of the left middle cerebral artery, with consequent right hemiplegia and aphasia, is more common than of the left. 3. Reflex causes of defective nutrition are also more common on the left than the right half of the axis. Thus, the heart and large vessels act more commonly in this way on the left half than the liver on the right. 4. The kidneys, ovaria, and testes exercise, when diseased, an important diastaltic influence on the nutrition of the brain and cord; and, as the left kidney and testicle are more predisposed to disease than the right, because their veins are more liable to pressure, the left half of the cerebro-spinal axis is more likely to suffer than the right. This is true, even although their action be decussative as regards the cerebellum, for disease of that organ is decussative as regards the cerebrum; so that a trophesy of the *right* half of the cerebellum from disease of the *left* testicle would react on the *left* hemisphere. For these and other reasons, deep down in development, it happens that nerve-centres and organs on the left side are more frequently affected from diastaltic action of these organs than on the right. I pointed out these and numerous other clinical facts of a similar character more than thirty years ago.(c)

(b) "Mind and Brain." Second edition, vol. i., p. 396, and vol. ii., p. 455.

Amongst the symptoms and signs of encephalic and spinal diseases, I shall only notice those shown in the iris and retina, heat and redness of the head and face, headaches, and eruptions on the scalp. The ophthalmoscope enables the Physician to detect changes in the retina which, for practical purposes, may be held to represent like changes in the brain-tissue, if used with such regard to fallacies as must always be had. Most of the diseases of the membranes of the brain and spinal cord are accompanied by optic neuritis, neuro-retinitis, papillary atrophy, and inflammation of the choroideal membrane—one or more of these. Papillary and retinal hyperæmia are seen in congestions of the brain and spinal cord. If optic neuritis be most marked in one eye, then the corresponding hemisphere is most seriously altered. If the intellect be disordered, or if there be motor or sensory palsy, then the optic neuritis indicates that the cause is structural. Neuro-retinitis and optic neuritis have been observed in acute and chronic myelitis and meningitis, in contusions and compressions of the brain, in cerebral abscesses, hæmorrhages, and tumours, and chronic hydrocephalus, in locomotor ataxy, and in cases of epilepsy, chorea, and convulsions associated with structural disease. The early diagnosis of Bright's disease is possible from ophthalmoscopy of the retina, showing how intimately the renal disease is associated with encephalic changes. I must warn you, however, that the ophthalmoscope, like other instrumental aids, is more adapted to Hospital research than to the exigencies of Professional work generally, and that you should use them all chiefly as means for giving you exact knowledge of changes not cognisable by the unaided senses. If you enter upon active practice relying upon any of these instruments for quickness and accuracy of diagnosis, and not upon your trained senses, you will soon discover that even your watch and stethoscope are sometimes unavailable, and that you are thus placed in a difficulty.

Changes in the appearance of the pupil are common signs of cerebral and spinal disease. To understand their practical value you must bear in mind certain sources of fallacy not commonly recognised in books:—1. The iris is a typical example of a quality common to all contractile tissues—such, for example, as the bloodvessels and muscles. It is influenced by the will at one extremity of the chain of causation, and by "physical agents"—*i.e.*, molecular forces—at the other. If the eye be removed from the body, and even if the iris be separated from the eye, light and changes of temperature—as from heat to cold or cold to heat—will cause it to contract. Then there are persons who can contract and dilate the iris at will. The iris of frogs will remain motionless for several minutes on exposure to vivid light, showing the animal has an inhibiting power. 2. The special function of the nerves of the iris is to regulate the amount of light admitted, but other sensory impressions influence its movements. Claude Bernard found that when any branches of a sensitive nerve, from the sciatic to the fifth, were pinched in an animal, the moment that pain is thus caused the eyelids open and the pupil dilates. 3. The iris has important physiological relations with a certain tract of the spinal cord—hence termed "cilio-spinal" by Budge and Waller, and "oculo-spinal" by Claude Bernard. The former found that the filaments of the cervical sympathetic undergo centrifugal (excentric) degeneration, and consequently, according to the Wallerian law, they are thus proved to be motor. By experiments it was found that they come off with the second pair of dorsal nerves, their function being to dilate the iris. Hence contraction of the pupil means palsy. Claude Bernard's oculo-spinal region is more extensive; he ascertained that the last cervical and the first and second dorsal nerves direct the innervation of the tissues of the eyes upon which protrusion of the eyeball—as exophthalmos—depends. Now, this region is a most important region clinically, both as to neurotic, functional, and structural diseases of the heart, such as nervous palpitation and angina pectoris, and as to dropsies of the thorax, neck, and arms.

It is from this wider view of facts that we understand how there may be palsied—*i.e.*, contracted—pupil on one side, just as there may be pain, in cases of aortic and cerebral disease; and how both pupils may be palsied—*i.e.*, contracted—in certain palsies in which the spinal, motor, and sensory tracts are involved, as in locomotor ataxy and general paresis. Facts in therapeutics become more intelligible, too—such, for example, as the antagonistic action of opium and belladonna, and the kinds of delirium which are relieved or increased by their use, especially the common kinds of delirium in which the blood-vessels are specially involved—namely, delirium tremens and delirium of fever. If we suppose the iris to be structurally analogous to a section of an artery, we see at once how doubtful is the theory—as can be shown, also, by other considerations which I shall lay before you—that dilatation of the vessels, and consequent vascular congestion, under certain circumstances, are due to vaso-motor palsy; we should rather consider contraction of them paralytic.

Redness and congestion of the face, including the conjunctivæ, have long been associated diagnostically with cerebral disease, but more especially as indicating, with a short neck, the so-called apoplectic habit. In these cases the signs are often those of the neuro-vascular diathesis, intensified by existing disease of the heart. A fat face and a florid complexion, with the lobes of the ears soldered to the cheeks, and an arcus senilis, indicate the athermatous diathesis, and a tendency, at least, to a like degeneration of the cerebral vessels. In patients of this kind, with serious disease impending, there is often at the same time morbid heat of the cheeks, and this acts as an excitant of the circulation, so that these persons are often told how well they look, and their complaints believed to be "imaginary," because of their high colour and fat face. The whole head and neck is a vaso-motor area, under the influence of the oculo-spinal cord, and of the cervical sympathetic ganglia, which have intricate relations with both the cardiac and pneumogastric systems, and the whole circulation of the base of the brain; so that there are numerous causes of redness and apparent congestion of the head and face of no value in cerebral diagnosis. To these I shall revert when discussing reflex heat and vascular fulness.

The significance of headaches varies as widely as their causes, and as the tissues involved. Some are due to extra-cranial causes, as osteosis of the cranium and dura mater, syphilitic periostitis of the cranium, disease of the internal ear, tumours of the dura mater, neuralgic and rheumatic affections of the scalp. In these cases, the pain, as headache, is usually localised, or at the most is hemi-cranial. On the other hand, cerebral or brain-aches are more general; yet these affect regions. You will find it useful to inquire whether the headache of this kind be frontal, coronal, occipital, or general. Frontal headaches, except when associated with signs of hemiplegia, aphasia, and similar palsies, are for the most part symptomatic. They are very common in gastric and hepatic disorders, in almost all exanthematic, epidemic, and endemic fevers, and in fever generally. Coronal headaches have their seat in the vertex, are often conjoined with increased heat of the part and a falling of the hair, and commonly indicate a neurosis. They are experienced in hysteria, nervousness, and low spirits, melancholia, paroxysmal and other kinds of insanity. In one case of paroxysmal mania that came under my notice in consultation, there was found after death an adhesion of the dura mater to the cranium and pia mater at the point of the vertex to which pain was referred. Occipital headache is of two kinds: one kind, associated with pain extending down the nape, and either with a tendency to throw the head back, or with actual spasmodic contraction of the cervical muscles, is one of the most pathognomonic signs of cerebral meningitis of the base, extending down the cord. It is, as such, a common initiatory symptom of that cerebro-spinal meningitis which has been observed of late in Ireland, and in which the occurrence of a neurotic purpura in certain cases, the result of the spinal lesion, has caused it to be named the "black fever" or the "purples." The other kind of occipital headache is wholly different. It is usually a sign of chronic disease of the cerebellum, or of the dura mater over it; but it is also a neurosis, like the coronal headache.

(c) *Edinburgh Medical and Surgical Journal*, October, 1838, p. 335; and my "Treatise on the Nervous Diseases of Women," 1840, p. 199—a chapter "On the Relations of Nervous Diseases to the Lateral Halves of the Nervous System."

Both general and local headaches may arise from local causes. Diseases of the nostrils, teeth, or jaws, especially if the upper jaw be involved, not only cause general headache, but various mental and other head affections. Localised disease in the brain is often associated with a deep-seated local pain and a general headache. Sometimes a local pulsation is felt within the head; in one case, I had reason to conclude, it was due to an aneurism. Small aneurisms, or, at least, aneurismal dilatations are not uncommon, and may be numerous.

The brain itself is devoid of sensibility, so that the question arises—In what tissue has the pain of cerebral headache its origin? I think it must be referred to the vascular system, and chiefly to the pia mater. In the so-called sick-headache, the vessels are the seat of painful throbbings; in various kinds of fever a like sensation is experienced. I have known patients complain of headache, preceded by a feeling as of blood rushing through the head, on awaking in the morning, and, I think, rightly describing the condition; for we know from experiments repeatedly made that the circulation through the brain is slowed during sleep. That the arteries may become most painfully sensitive is certain.

In certain head affections, chiefly neuroses, the patient complains of painful sensations, which are illusive, or, as some would say, imaginary, and of which the seat is in the muscle-sensory tract at the base of the brain. Often with coronal headache there is a feeling of pressure at the vertex; in others, the head feels as if a hoop were fixed round it, resembling a like sensation round the trunk, experienced in certain kinds of paraplegia. These and others, of burning, boring, tearing, etc., belong to a group of corporeal illusive sensations, referred to the bones, limbs, and viscera, which the patient cannot easily describe, but which are very common in sexual hypochondriasis, delirium tremens, and insanity. The "splitting" headache of fevers belongs to this class.

Eruptions on the scalp have sometimes a practical significance; if without pain, they may indicate a trophic nervous debility: such are apt to accompany incontinence of urine, feebleness of intellect, and other results of defective brain nutrition in children, and require for their cure suitable tonics, as the iodides and chlorides of iron. Headaches, with eruptions or inflammations of the scalp, vary in significance with the causes. Rheumatic and erysipelatous inflammation are apt to be metastatic—that is, to disappear with the development of brain symptoms. The theory of metastasis as commonly current and applied practically is, as I have already shown to you, both doubtful and' fallacious. When we discuss rheumatism and gout, I shall point out how the nervous system influences these so-called metastases of serum, lactic acid, uric acid, and febrile poisons, and the more easily because we are now better prepared to discuss neurotic diseases of tissues.

LECTURES ON ANALYTICAL PATHOLOGY.

DELIVERED AT

Guy's Hospital.

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Lecture XIII.

ON OLD AND CURRENT VIEWS REGARDING TUBERCLE, ON FALSE TUBERCLE, AND ON SO-CALLED FIBROID.

Hitherto, in speaking of tubercle, I have assumed that there is such a thing, and that it has a nature defined enough to make it a subject of consideration and discourse. And in doing so I have been determined by this conviction, which I have never seen reason to let go—namely, that the unity which prevails throughout the vast mass of cases that make up what has been, since the time of Laennec, called phthisis, is far greater than the variety among the cases, so that they make a natural group. And, further, that the kind of morbid product which is produced in these cases differs from all that is found under other conditions; while, with due allowance for intensity, and for the changes that time brings in all long-lasting active disease, this product is essentially alike in all those cases.

I know this proposition would be in many places received as contrary to modern discovery, and as a retrograde step into a confusion out of which the most esteemed and distinguished labourers in this field of inquiry have striven to raise it. And yet I am so convinced that *all phthisis is essentially tuberculous*, and that the denial of this belief arises out of a useless and indefensible and untrue narrowing of the scope of the nature of tubercle, that I shall discuss the subject with this as the positive view to be kept before you with recommendation.

I have endeavoured to show you that those who make pneumonia an alternative to tubercle in phthisis, confuse phenomena with material. And in future we shall see that those others who would take a part of the phthisis cases and call them "fibroid," proceed in disregard of the effects of prolonged duration in these cases, and, indeed, are like translators who make no account of the tenses of their verbs, and have no conception beyond the present indicative. If you read or hear cases in which the question whether tubercle is present is discussed, you will, I am sure, be struck with this, that everyone sets himself to show that his particular tubercle is not a true tubercle; and scarcely ever do you find anyone, when on this inquiry, showing a particular knot to be a tubercle. When tubercles are allowed to exist, it is generally in cases where the little knot-like bodies are in the lungs of people who had other complaints that directed chief attention elsewhere, so that there is no particular question about the tubercles themselves.

Writers seem to enjoy a sort of republican satisfaction in taking away the domains of tubercle, whilst they treat it with remote respect, as though it were a real power, and hence we have so many false or reclaimed tubercles that true tubercle is almost becoming an unpractical, if not a doubtful rarity, and it has culminated in this, that Niemeyer, whose excellent work on Medicine is getting very generally used, has declared it to be his opinion "*that persons who have phthisis are liable to tubercle.*" I think one cannot hear such a statement as this without feeling a strong suspicion that the import of it is really not more than verbal, and that it is got at by slipping the meaning of the word about on the substance of what older people meant by tubercle, and not by any better knowledge of the substance of tubercle itself.

We will consider, if you please, what are the real grounds of fact on which variations of views of tubercle rest, and will endeavour to distinguish between additions to our knowledge, such as the proof that tubercle is at first an active cellular growth differing from others only in the speedy death which overtakes the cellular growth, and such matter, on the other hand, as that got at by carefully microscoping and renaming by the title "fibroid" the scar-tissue of a chronic phthisis. We are not really advancing our knowledge of it, but at best only making it more elaborate, and as it were facing it with fretwork by this kind of minuteness; and if on account of details of only local value we raise up what we have so overscrutinised into a new sort of thing, we do, on a large scale, an injury, and we only do a very minute microscopical and uninteresting service in the way of recompense.

I must ask your forgiveness, because of the tedious and somewhat intricate involvement of the mazes we must traverse in order to know what we should know of the position of these doctrines. I do not mean that you should forgive *me*, because it is not my fault, but forgive those who, by intensifying partial and limited views, or views of parts only, of the whole inquiry—disregarding the bearing of these parts on other parts equally real and equally forcible, when equally vividly apprehended—have taken away the organisation, unity, and simplicity which prevail in the facts of tuberculosis, out of its history, and made it, in an amœboid sort of way, shuffle in many directions at once; who settle on the old stream at some point where they find room for a little clearing, and then rename the stream and claim it, not carrying on their clearings to see that its waters are the same as were known and named by those who had so abused their priority upstream.

I cannot give you a history of all the views that have been held about tubercle, and I only wish to speak of what can help us to a clear view of the position of tubercle in the pathology of this our own time. I do not exactly know how the idea of tubercle which those had who used it either for cancer or anything else that had the shape of a little knot—speaking of tuberculum scrofulosum, scirrhosum, and so on—came to be refined down, until now you see the most expert pathologist hesitating to use the modern idea of the term over the little clustered knots in the lung that characterise phthisis, and hesitating, indeed, the more in proportion as he is expert and learned; and my suspicion is that no one can know exactly how this change has come about, simply because there was no exactness in the proceeding.

We should first remark that it is not to be expected that, at a time when the knowledge of the animal kingdom was such as prevailed before Cuvier, great strictness of description and thought would prevail on matters so difficult of realisation, and so much necessarily dependent on inference, as the subject of our present consideration. If we want to realise vividly the state which was at that time general in every one, it will suffice that we take as example the state of belief and view which prevails at the present time in nine out of ten. We are able to observe at the present time that what makes the views of people shady on pathological matters is, that they do not think pathology so important a thing as to give it a close and constant attention, but very practically and sensibly consider the chief use of post-mortem knowledge is to elucidate the individual case and its symptoms—a view which is very good, and whose only fault is that of being partial and insufficient. And no doubt, at the time we are speaking of, this low opinion of general or, as we are calling it, analytical pathology—which low view is even now so prevalent in our essentially clinical Profession—was nearly universal, so that the few who gave their minds in any degree to the subject were prevented, by the width and vagueness of definition which truly characterise it, from arriving at any conclusions that are more than curious to us now.

When the first attempts were made to gain for pathological products a definite recognition, by means of accurate descriptions by which they might be compared, and ideas formed of their general nature and relations, then the notion of tubercle began to take shape, and we meet definitions of it. It will be useful in the course of our inquiry that we should note some steps in the history of tubercle, which will serve to set forward and date important opinions. Bayle (about 1809) places tubercle, in regard to phthisis, as determining one of the varieties of phthisis, of which varieties he made six—tuberculous, ulcerous, granulous, calculous, melanose, and cancerous. One finds that he, in his three kinds of ulcerous, tuberculous, and granulous, recognises in his way the three kinds of phthisis which we now most usually distinguish—namely, the phthisis with excavations or ulcers in old-indurated lungs; phthisis with large or small caseous masses of tubercle; and phthisis with miliary granulations. But he makes these as separate from each other as each is from cancer. Laennec, and Louis after him, putting apart cancer as quite a different kind, and calculous and melanose as rare or special, treat those kinds of ulcerous, tuberculous, and granulous phthisis, which were by Bayle regarded as distinct from each other, as all alike the result of tubercle, which they take as having a variety of modes of appearance from the grey granulation, through the yellow granulation, up to the tubercular infiltration of cheesy matter and consequent excavation.

If we treat the question in temporary disregard of weight of authority, we may state it in this way: that the attention of these early sytematic pathologists was drawn to a kind of morbid product which was of comparatively slow production, and not accompanied by the severe and acute symptoms which fatal inflammatory disease has with it; yet which did not show the presence of bloodvessels in it such as other slowly developed growths contained. This material, having a peculiar potato-like colour and a tendency to soften down and form cavities in the part it affected, made a kind of diseased material, which was at first, and has ever since been, recognised as showing a *primâ facie* claim to be admitted as having a distinct nature, which was denoted by the term tubercle.

And the describers of the period which preceded the cellular theory and Mr. Bowman's beautiful discoveries and descriptions —preceded, that is, all accurate knowledge of the constructive nature of the elements of the body, and of the processes of disease—these describers had no very definite or certain reason to doubt that such peculiarities of appearance did signify a proper nature in the substance. And, in fact, the question which arose as between Laennec and Broussais was rather whether these tubercle-masses were or were not the result of inflammation? From what we have already seen in former lectures, you now know that this was only a setting of the physiological process inflammation, against the anatomical product tubercle, but it was not seen as being of that nature. Indeed, if you can conceive for a moment your minds divested of that accurate knowledge of all the tissues which now you possess, and conceive yourselves viewing tissue as flesh containing blood, and flesh as anything not bone nor fat, you will see that your ideas of a patch of yellowish matter in such flesh would not be such attractive ground for argument as other better stores of knowledge you would doubtless have within your reach.

Now, for so long a time as the superficially-known yellowish matter of tubercle was a recognised thing, but while as yet the intrinsic nature of tissue-change was undiscovered, for just so long a time must or would the superficially-known matter of tubercle be held as a true and proper kind, and the conviction be becoming fashionable and general in the minds of the Medical Profession that this yellowish matter was the cause or product, or at least the sign, of a definite disease.

But when the microscope came to be employed, and when with the use of the microscope a much more minute and instructed study of the nature of the visible yet small details of tissue was being carried out, then would naturally arise a time of trial for this definite identified disease, such as would probably tend to show that its coarse, naked-eye-seen identity was but the cloak over a real variety. Among the things that were called tumours, the microscope did, indeed, discover a great variety of structures, both as to the plan and the elements of the fabrics.

Now, did the microscope discover such a variety in tubercle? I think it is cause for surprise, that with all the scrutiny that this matter has been subjected to, there has been so very little found in it that can be held to subdivide it into different kinds. Rather is it not true that the microscope has practically shown the same structure in all these things, various as is their size and seat, and enormously frequent as is their occurrence?

Shortly stated, the general result of inquiry into the microscopic structure of the caseous matter which was termed tubercle by the older observers is this: that some caseous patches which occur in the midst of growths of cancer or tumour are found to be degenerations of the elements of these tumours. This is a very simple and comprehensible fact, and one over which there is no occasion to dwell long. Any of you can see the truth of it, either in these drawings or for yourselves in the case of most of the cancers which are removed in the operating theatre. And secondly, that a certain kind of caseous tissue has, by observations directed to the causation of the disease, been recognised beyond a doubt as produced by syphilitic infection; and hence, although its elements are often not characteristically distinct from the remainder of tubercles, it is etiologically and in every way "practically" separated from other tubercles. Now, I need scarcely say that such a severance on account of mode of origin by no means touches any anatomical identity that might exist between the structure of syphilitic formation and tubercle. Things are not divided by the ways they are reached, more than the Bank is made many banks by being got at down a multiplicity of streets. Yet for all this, in point of fact, the superficial characters of syphilitic formations are quite distinct enough from common tubercle to enable you to distinguish it as a *different sort of anatomical thing*, as well as being *differently caused.*

But when these caseous portions of cancers and caseous syphilomata are eliminated, there remain a large number of caseous productions which were of old grouped as tubercle, on account of their general resemblance to each other: these occurring in many parts of the body—nay, nearly in all parts— and, of course, taking certain differences, at least in their new and spreading edges, where as yet the nature of the tissue is not effaced, however identical they appear to be in their caseous older central part. Now, in reference to these, a very wide range of literature prevails, although I think it is not difficult to show that the variety of opinion is not capable of being at all proportionally large. There is no room for much variety of opinion.

We cannot, of course, go into the tubercles of all different tissues and regions; and this is less important for our purpose, as the battle-field for the questions of tubercle is limited practically to the lung chiefly, with occasional reference to the serous membranes and the brain. I have already endeavoured to draw your attention to the relation in which the vague notion of scrofula stands to tubercle, and have endeavoured to convince you that it is only by limiting scrofula to its old signification as a disease of the cervical glands, or at most of the lymphatic glands generally, that we can tame the word to any orderly use. I do not deny, of course, that the disease of the lymphatic glands is probably secondary to alterations in the field from which the lymph came to the glands, but the reason why the glands show these enlargements is probably in the glands themselves, and not in their supply-fields, for these parts are often to all tests healthy when the glands are diseased. Now, before going into the question of the relation of tubercle to phthisis, which I am about to discuss, I would like to point out to you the relation of scrofula to tubercle from the tubercle point of view, as we have before seen this relation from the point of view scrofula affords. This is it. Scrofula is chronic, inflammatory (this means only active), caseous degeneration of the cervical glands, and tubercle is a chronic, inflammatory, caseous degeneration of whatever it is a tubercle of—caseous degeneration of lung when in lung, of kidney when in kidney, and so on, and, finally, of gland when in gland; so that the chronic caseous degeneration of a gland that is a scrofula is also tubercle. Ah! but, you say, you just now allowed a distinction between caseous degenerations in cancer and tubercle. All caseous degenerations, then, are not tubercle. Well, I allow your objection for the present, merely remarking that the cancer change is passive, not active; but it happens to give singular strength to my position in this instance. And this is why. In the case of glands, we have to thank Virchow himself, if we accept what he offers, for a quite conclusive criterion by which to show that scrofulous gland is of necessity the type itself of tubercle. For Virchow says this—"But if you compare the cells which are—or, at least, I must assume to be—the cause and real constituents of the granule (tubercle) with normal tissues of the body, you will remark *the most complete correspondence between them and the corpuscles of lymphatic glands*." In short, he says that the tubercle is an origin of lymph-gland tissue degenerating quickly into caseous matter; and so say many distinguished followers of his in this country. *But if so, lymph-gland tissue itself degenerating into such caseous matter is the very type of tubercle; it is the typical change in the typical tissue itself*, the type of tubercle typically degenerating the very home-purity of tubercle. Virchow, in his distinctions of scrofula and tubercle, does not seem to have sufficiently realised this point, nor have his followers in this country, but rather have been content to have asserted the *identity of tubercle and gland* (which, I must say, I never can see, except when the likeness is carried to a vanishing-point by the reduction of the characters of both to a simple lymph cell, surrounded by nothing particular), without seeing that this asserts also the *identity of gland and tubercle*, unless we are going on the principle "Cæsar and Pompey bery much 'like, 'specially Pompey."

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

ON THE MORTALITY FROM SMALL-POX IN THE METROPOLIS.

By C. A. FOX.

The prevalence of small-pox just now, and the natural alarm which it has created in the public mind, has led me to collect the facts regarding it recorded in the metropolis since the registration of deaths commenced. We have them for each week from the beginning of 1840—a period of thirty-one years—sufficiently long for us to draw safe inferences and somewhat to trace the course of the disease.

I have before me a table containing the mortality from small-pox in London for each quarter of the last thirty-one years—using "mortality" in its correct meaning of ratio of deaths to population. Those acquainted with statistics will understand when I say that the mortalities have been carefully calculated, with the usual corrections for deaths from causes unspecified, for reducing the quarter to a uniform length, and for taking the population at the middle of each quarter. Also, that the population since the census of 1861 has been estimated on the usual supposition of its having increased in the same ratio as in the previous decade. In the annual mortality, attention has been also given to the unequal length of years.

1. On the average of thirty-one years, 333 die per annum out of every million of the population; but this number is not equally distributed throughout the year. In the first quarter the number is 92; in the second, 82; in the third, 73; and in the fourth, 86. We thus see that in the first quarter the mortality is, on the average, greatest, whilst in the third it is least. The difference between these two quarters—the first and third—is 19. The average quarterly mortality, taking one quarter with another, is 84, so that this fluctuation is less than a fourth part of it. Hence we may infer that although cold increases to a very perceptible degree the mortality of variola, it has not by any means the same influence upon it as it has upon other diseases—*e.g.*, bronchitis and pneumonia.

If, instead of taking the mortality in quarters, we add together the deaths registered in the corresponding week of all the years, we obtain a table showing the prevalence throughout the year—*i.e.*, of one part as compared with another. This may be taken as a check on the inferences which we have obtained from the quarterly mortalities, and it discloses the interesting fact that while the greatest mortality is at the very beginning of the year, there is a subsequent maximum, to a less degree, occurring in the latter end of May. The minima are about the end of March and close of September. Throughout that time we may also note about fifteen weeks in which no deaths occurred from variola.

In London the mortality was 655 in 1840, and 293 in 1870, to every million of the population. In England and Wales it was, in 1838, at the rate of 917, and, in 1868, at that of 95—these dates being not only the limits of our inquiry, but each nearly contemporary with the reign of an epidemic.

2. Although the average mortality of each quarter is, as before stated, 92, 82, 73, and 86 respectively, yet the actual mortality in any year is very different from these numbers. Thus, in the fourth quarter of 1840 and first of 1841 it reached 373 and 319; while in the second and fourth quarters of 1857 it was as low as 10. These have been the highest and lowest of any quarterly mortality in the thirty-one years.

Between these points there is, of course, almost every degree of variation; but the amount of range or difference between the highest and lowest of any quarter is greatest in the autumn of the year and least in the summer.

Amongst the conclusions that might be drawn on this head are the following:—

Comparing the fluctuation with that seen in the mortality from the same cause in England and Wales, we find that the greater the area of space or time the less is the fluctuation.

The fluctuation is consequently much greater in a quarter than in a year.

The maximum mortality is attained in England and Wales before it is in London.

3. If we divide the thirty-one years into two periods of fifteen and sixteen years respectively, we shall be enabled to compare the more recent half with the earlier. In the earlier period, from 1840 to 1854 inclusive, the mortality was considerably larger than in the succeeding. It was 398 per million in the year, while from 1855-70 it was only 271, showing a saving of 127 lives per million to the population from small-pox alone. It is not too much to claim this striking amelioration as a result of Medical and sanitary science, and, above all, the gradual spread of vaccination.

It is worthy of remark, in comparing the two periods, that, whilst in the earlier the maximum mortality was in the fourth quarter of the year, in the latter it passed to the first.

4. On dividing the thirty years into three decades, it is instructive to compare the three results with those given by Dr. Guy, in his valuable lectures on Public Health, delivered at King's College, for the decades ending 1719, 1749, and 1799; the first of which periods represents small-pox in its natural force, the second under the influence of inoculation, and the third after the introduction of vaccination. The mortality to the standard of the million was 3141 in 1710-19, 2828 in 1740-49, and 2286 in 1790-99 inclusive. In the decade ending 1849, the numbers were 445, and in those ending 1859 and 1869, not more than 271 and 278 respectively, owing to the improvements of modern times in regard to this disease.

5. But if we look through the table of the quarterly mortality for the thirty-one years, to see if there is any order in its increase and decrease, we soon find that it goes through periods with some approach to regularity. When 1840 began, the mortality was rising; it reached its maximum in the autumn quarter of the same year, whence it decreased to the spring of 1842, again increasing to the autumn of 1844, decreasing to the autumn of 1846, again increasing to the summer of 1848, decreasing to the winter of 1850, increasing to the spring of 1852, decreasing to the summer of 1853, increasing again to the spring of 1855, and decreasing to the fall of 1857. This was the minimum point in its history; but it soon gradually increased to the winter of 1860, followed by a rapid minimum in the same season of 1862. The next maximum was in the spring of 1863, and its consequent minimum in that quarter of the succeeding year. After this there was a maximum in the winter of 1867, and then a minimum in the spring of 1869, from which point it has steadily increased to its present height.

If we now arrange in order the dates at which the death-rate reached a maximum, we shall find that it has done so eight times in the third of a century over which we have glanced:—

1st. Fourth quarter of 1840
2nd. „ „ 1844
3rd. Third „ 1848
4th. Second „ 1852
5th. Second quarter of 1855
6th. First „ 1860
7th. Second „ 1863
8th. First „ 1867

If the reader observe the distances between these exacerbations of the fever, he will see that the following numbers of quarters intervene successively:—16, 15, 15, 12, 19, 13, 15, the average of which numbers is 15; whence it is evident that the law of small-pox is, that it recurs at intervals of fifteen quarters (three and three-quarter years), and that epidemics of the disease may be expected with considerable precision, whatever means be adopted for their prevention or arrest.

Comparing the periods of recurrence in London with those in England and Wales collectively, it is found that they roughly correspond; but it must be remembered that this is a criterion of much less value than that deduced from the mortality of a town or province, inasmuch as in that of a whole country, the rise of deaths in one part may be balanced by the low rate in another. As before said, the range is less in England and Wales than in the metropolis—*i.e.*, the maximum is not so great, and the minimum is not so small. The striking minimum of 1857 before alluded to, was at the rate of 59 deaths to the million of population in London, while for that year in England and Wales it was 208. In 1856 it had been as low as 121, and thus the year of minimum throughout the country preceded the minimum in the metropolis, which has been the invariable rule of the maxima.

The slight differences witnessed in the length of the cycles or phases of the visitation of variola may be due to the meteorological and other conditions of the time, as may possibly the comparative length and severity of their durations.

6. The conclusions to be drawn from the statistics of small-pox are safer than those regarding many other diseases. Principal amongst the causes of this is the fact that its nature is less prone to be mistaken and its phenomena overlooked; thus removing the frequent fallacies occasioned by the contested character and similarity of so many other affections.

From analogy, it is highly probable that the present epidemic has not yet attained its climax, and, if so, there is but little likelihood of our curbing its career. At least, it is a satisfaction to observe that a malady, of whose nature we stand in awe with all the refinements of our art, should illustrate the operation of regular and independent laws of progression, whilst it enables us to exonerate from the charge of uselessness vaccination and sanitary reform.

London Hospital.

CLINICAL REMARKS

ON A CASE OF NEGLECTED TRAUMATIC URETHRAL STRICTURE,

IN WHICH REPEATED RETENTION OF URINE, ULTIMATE EXTRAVASATION AND FISTULÆ LED TO (1) PUNCTURE OF THE BLADDER PER RECTUM, (2) PERINEAL SECTION, (3) URETHROPLASTIC AND HOLT'S OPERATIONS.

By JOHN D. HILL, F.R.C.S.,
Surgeon to the Royal Free Hospital; Assistant-Surgeon to the Royal Orthopædic Hospital.

A TRAUMATIC stricture of the urethra is probably the most severe variety of that disease—and when we consider that lesions of the kind generally follow such violence as falling (astride) upon a joist, beam, or pommel of a saddle, it is not surprising that the soft parts from without inwards, as far as the pubic arch, should be more or less injured; but the severity of these cases, according to my experience, chiefly consists in the extent of implication of the urethra, and its relation with the plastic tissue subsequently deposited. Thus, closure of the canal may arise from (1) abundant contractile fibrine, encircling or compressing, without actually being incorporated with, the urethra—the result of circumferential injury; (2) dense plastic tissue, surrounding and being incorporated with the urethra, produced by circumferential and urethral injury; and (3) fibrinous deposit, within and around the urethra, the result of circumferential injury and urethral rupture; and in practice we meet with various modifications of these several conditions. It is, therefore, obvious that such cases are more difficult to treat. and more liable to recur rapidly after dilatation, than those which arise from other causes, and in this respect our case is a typical one; we have also here a good example of the complications which result from neglect, and the treatment which such neglect may render necessary in the several stages of traumatic stricture. Let us now examine the record of the case.

Thomas B., aged 35, a man of dull aspect and spare habit of body, married, but without issue, a joiner by trade, and residing at Wood-green, was admitted into the Royal Free Hospital (Calthorpe Ward) on July 14, 1869.

About twenty years ago he fell across a joist, and after a long illness and much suffering he soon observed a gradually-increasing difficulty in making water—but was never troubled with actual retention until October 13, 1862, the date of his first admission into this Hospital. On that occasion I found a dense stricture in the spongy and membranous portions of the urethra, quite impervious to catheters. Other means also failing, I punctured his bladder per rectum, and gave exit to three pints of urine; the canula was then retained forty-eight hours, when a No. 2 silver catheter was passed through the stricture and secured with tapes. Fifty hours subsequently the latter was removed, and a No. 3 catheter inserted, which also was fixed during forty-eight hours, and so the process of dilatation was carefully pursued until the urethra admitted a No. 12 bougie. This was accomplished after seven weeks' residence in the Hospital, and he was then discharged, with instructions to attend as an out-patient. On examining the rectum at that time, the only trace of the puncture was a small depression in the mesian line, just above the prostate (quarter of an inch).

He now went to reside in the country, and about three months subsequently retention again occurred; extravasation of urine in the perineum and scrotum followed; but he sought no advice until April 29, 1863 (the date of his next appearance at the Hospital). He was then suffering from a distended bladder and three urinary fistulæ; one in front of the scrotum, another in the scrotum, and a third in the perineum. Failing to pass a catheter, I again punctured his bladder per rectum, and drew off nearly three pints of urine. The canula was retained forty-eight hours, when (after some difficulty) a No. 1 silver catheter was introduced. The stricture by this time had so considerably increased in thickness and density, that it could be felt externally to extend from the perineum to the anterior fistula—a distance of one inch and a half—and the scrotum was brawny, tense, and infiltrated.

After three days, the catheter was withdrawn, but I failed to pass a size larger, and the attempt was followed by rigors, and such severe constitutional disturbance, that I gave up all hope of further dilatation.

In the course of a week, these symptoms having subsided, I introduced a catheter as far as the strictured part, and, cutting down upon its point, carried my incision through the stricture into the urethra behind, and completed the operation by passing the instrument into the bladder, and securing it with tapes.

The wound healed in twelve weeks, by which time the perineal and scrotal fistulæ had also closed; but the anterior one was more troublesome; its edges were pared, and brought together, and a catheter retained during the healing process. After two operations, little more than a pinhole remained. On exploring the rectum, a slight depression immediately above the prostate marked the site of puncture.

He now left the Hospital, promising faithfully to attend (for catheterism) twice a week; but he failed in this, and was not again seen for six years.

During the ensuing twelve months the stream became smaller, the fistulæ opened up, and urine flowed through them on micturition, which even then was painfully frequent.

As years passed on, the bladder became contracted, the difficulty in making water increased, and latterly it flowed entirely through the perineum. In this miserable condition he existed, until finally the last outlet closed twenty-four hours before his last admission, and he was brought to the Hospital with retention. He was then much emaciated, with an anxious countenance, an expression of suffering, loss of appetite, and a feeble pulse. In the hypogastric region was a fluctuating and circumscribed tumour, about the size of a pigeon's egg. This could be partially emptied, and conveyed a slightly emphysematous impression to the touch, an indirect impulse on coughing, and a tympanitic note on percussion. Its centre was extremely thin, and consisted of little more than skin, and the distended bladder behind felt like a cricket-ball. The stricture, now commencing at the anterior, and terminating at the posterior fistula, had increased in size and density since the previous examination. This felt about an inch in diameter from side to side, and was impervious to catheters, which failed to pass beyond the front (patent) fistula.

I next examined the posterior fistula, which had closed up, but the smallest probe could not be insinuated even within its orifice. Considering that he had passed no water for twenty-six hours, and was suffering acutely from distension, I immediately punctured his bladder per rectum, and removed ten ounces of high-coloured ammoniacal urine, and retained the canula until a communication with the bladder could be established through the perineum. This was accomplished in seventy-four hours (July 17), when the perineal fistula had yielded sufficiently to admit a small probe, which being taken as a guide, I opened the perineum, and passed a No. 12 gum elastic catheter through the wound into the bladder. The canula was then withdrawn, and the catheter cut short and secured with tapes.

The patient was now placed on a good diet, consisting of chops, eggs, slices from joints, and ten ounces of wine daily. The abdominal tumour was poulticed with linseed meal, and one ounce of the mist. quinæ co. prescribed thrice a day.

July 19.—Urine flows through perineal catheter. Wound looks healthy; bowels act daily; appetite is improved; pain in hypogastric region is troublesome; swelling less prominent; motions and urine are free from pus; catheter was taken out, cleansed, and re-introduced.

22nd.—Complains of pain and throbbing in tumour, and the skin over it is very red, and beginning to vesicate. Let out by incision a considerable quantity of dirty-brown offensive pus. Ordered linseed meal poultices; catheter cleansed. Six hours afterwards the second poultice was stained with pus and fæces, and later in the day liquid motion passed through the wound.

23rd.—Is free from pain; wound discharges pus and motion. Ordered charcoal to be freely mixed with the linseed meal.

25th.—Diarrhœa is troublesome, and the entire motion discharges through the abdominal walls. Ordered mist. cretæ co. ℥jss. every four hours, and equal parts of powdered starch and charcoal to the wound, which is to be covered up with tow and oiled silk, and the abdomen encircled with a broad roller; catheter cleansed.

28th.—Bowels have acted but once a day since the fourth dose of medicine; abdominal wound is much smaller; perineal wound is healing; catheter removed. Mist. cretæ co. to be suspended.

August 4.—Abdominal wound is still discharging pus and fæces, but less in quantity; general health is much improved; bowels act (daily) per rectum; catheter changed twice since last report.

19th.—Abdominal wound is nearly healed; perineal wound is healed around catheter, which, when withdrawn for cleansing, was with difficulty re-introduced.

September 4.—Abdominal wound is cicatrised; not a drop of urine has passed through the recto-vesical wound since the removal of the canula, and the mark of puncture seems to correspond with the situation of the second operation.

11th.—Holt's instrument was now introduced; the stricture split, and a No. 10 catheter passed into the bladder through the meatus. The latter instrument was then drawn out, so that the point rested just in front of the perineal opening, while the handle was placed flatwise upon the abdominal wall. Being so held by an assistant, with the penis made tense upon it, I dissected flaps of skin from the margins of the anterior fistula (which was about three-quarters of an inch long, and the diameter of the urethra in width), and closed them in with a fold of scrotum; thus, the raw surfaces were brought in contact, retained with a continuous suture, and, lastly, covered with collodion. The silver catheter was then removed, and the perineal catheter introduced.

13th.—The wound is in part healed by first intention. Penis to be well strapped to scrotum, to prevent traction on incised edges; suture removed; catheter to be cleansed twice a week.

16th.—Wound is suppurating.

20th.—Healthy granulations are now spread over the wound.

25th.—Wound is smaller; granulations between upper and lower surfaces are uniting; is much improved in health.

30th.—Without difficulty passed a No. 8 catheter through strictured part.

October 30.—Wound is now cicatrised around the opening, where urethra is absent; this is about one-half its original size. Now performed a similar operation to the last, but took flaps chiefly from the upper and lower margins of the fistula.

November 2.—Wound is suppurating; sutures removed.

5th.—Granulations have formed.

8th.—Wound is healing.

18th.—Wound is less; perineal opening contracted around catheter, which, when removed, could not be re-introduced, and was therefore substituted by one of smaller size.

28th.—Wound is no larger than a good-sized shot.

December 8.—Wound is nearly healed. Owing to domestic trouble, has taken his discharge to-day, regardless of consequences. The three portions of the urethra which have been described are in the following condition:—1st. The fistula in the spongy portion is nearly healed. 2nd. The stricture situated in the spongy and membranous portions is thoroughly dilated. 3rd. The perineal opening has a direct tendency to close up. A No. 8 catheter traversed the whole canal without difficulty, and when the perineal catheter was withdrawn for a few minutes some difficulty was found in replacing it. For obvious reasons it is desirable that this should not close at present. His conduct, however, leads me to believe that he will pursue his former negligent career.

January 3.—Has not been seen or heard of since his discharge.

Now let me direct your attention to the chief points in this case. When quite a youth, the patient injured his perineum; and, although it is difficult to affirm the precise nature and extent of injury, we may fairly infer that the urethra was seriously damaged by laceration or rupture, and that this became incorporated with the abundant fibrinous deposit which by gradual contraction eventually closed the canal.

Nearly seven years ago he first came under my observation with retention of urine; catheterism failing, the bladder was punctured per rectum. Here we had a twofold benefit—(1) the discharge of urine; (2) the diversion of that fluid from an irritated and congested stricture. The mechanical and physiological rest thus induced led to yielding of the contracted canal in forty-eight hours, and a catheter was introduced and retained. The canula was then withdrawn, and the satisfactory dilatation of the stricture accomplished in seven weeks; and, but for absolute neglect on the part of the patient, all further inconvenience might have been averted.

Three months subsequently, retention again occurs, and, being unrelieved, extravasation, abscesses, and fistulæ follow, and the urine ultimately escapes by four outlets—viz., three fistulæ and the meatus urinarius. On his second admission, three months later, we find him with a distended bladder. Catheterism again fails; puncture of the bladder is again resorted to, and the canula is retained until a catheter can be inserted, with a view to redilatation and closure of the fistulæ. Our second operation, however, has not so satisfactory an issue, probably by reason of changes in the stricture due to recent urinary infiltration and inflammatory action; hence, increased density, greater resistance to gradual dilatation, and dangerous symptoms following such treatment. Perineal section meets the difficulty. A catheter is then passed, and retained until the wound heals over it; and closure of the fistulæ is almost accomplished by plastic operations, when our patient again leaves the Hospital, contrary to advice, and is not heard of for six years.

In the meantime, the stricture contracts worse than ever, urine infiltrates, the sinuses break open, and all the urine is expelled through them; these, save one, gradually close, the bladder soon becomes irritable and contracted, and incapable of retaining much urine, and, finally, closure of the perineal fistula causes retention, with which he returns to the Hospital.

We now find him in a worse plight than ever, and, with the addition of a hypogastric abscess, no catheter can be passed; therefore, for the third time, the distended bladder is punctured by the rectum. On this occasion, after seventy-four hours, the perineal fistula yields sufficiently to admit a probe, which being taken as a guide, an incision is made into the perineum, and a short catheter introduced through this into the bladder, when the canula is removed. Here, then, we have a threefold advantage (1) provision for the escape of urine; (2) diversion of that fluid from the stricture, placing it under the most favourable circumstances for redilatation; and (3) a further opportunity for the cure of the fistula by urethroplasty.

In the meantime, the hypogastric abscess is opened, and subsequently found to communicate with the intestine (cæcum ?); for a short time the entire motions pass through the wound; these, however, gradually lessen, and the fistula is healed by the sixth week.

The cause of this complication is obscure. In the absence of pus in the urine or motions, and of any history of hernia or previous mischief, I am inclined to think that the abscess commenced in the abdominal walls, and implicated the intestine secondarily.

Now, the treatment here is based upon ordinary principles, and may be divided into constitutional and local. With regard to the former, we endeavour to sustain our patient with a generous diet, tonics, and wine, and occasionally administer astringent medicines to correct diarrhœa and intestinal irritation. As to the latter, we first poultice, and then evacuate the abscess by incision; when inflammatory action subsides, we seal up the wound with starch and charcoal—the one to control intestinal action, the other to obviate the effluvia from the discharges; finally, a broad bandage encircles the abdomen, to check muscular movements. Our next step is the dilatation of the stricture by Holt's operation, and, lastly, closure of the anterior fistula by urethroplasty; the former proves successful, but before the latter is quite so, our patient leaves the Hospital.

In conclusion, a word about the satisfactory healing of the recto-vesical punctures; in every instance, not a drop of urine escaped after the withdrawal of the canula; this, I think, may be due to the following precautions:—That on each occasion previous to puncture the bladder was fully distended, and steadily fixed by an extra-abdominal grasp. The trochar and canula were then inserted at right angles to the vesical walls. Thus the tense and fixed condition of the bladder, and the direction of the punctures, to a great extent, obviated the danger of intermural extravasation, and recto-vesical fistula.

17, Guildford-street, Russell-square.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

SMALL-POX IN THE LONDON HOSPITALS.

ST. GEORGE'S HOSPITAL.

The number of patients suffering from small-pox in this Hospital has now been greatly reduced by the dismissal of the major portion of those reported as going on well when we last made note of the condition of the Hospital. One other death occurred, making three in all; but the others did well, and after a time, getting impatient of their confinement, insisted on dismissal. They themselves were disinfected as far as possible, and their clothes baked, after which they were allowed to depart. Last Saturday, however, a patient was brought into the Hospital with meningeal symptoms, who shortly after exhibited the characteristic eruption of small-pox. The patient was too ill to be sent away, and had therefore to be sent to the small-pox wards. The delirium has continued, and at the date of our information the case augured badly. No new cases have occured in the wards.

ST. MARY'S.

Two patients were admitted in the pyrexial stage, who afterwards turned out to be suffering from small-pox. They were sent to the Small-pox Hospital, and the disease has not spread.

MIDDLESEX.

No new cases are reported here, but the authorities have prepared wards for the reception of small-pox patients. Many have made their appearance in the out-patient department.

UNIVERSITY COLLEGE.

No cases have occurred among the in-patients of this Hospital. One patient applied for admission some time ago, but was rejected.

KING'S COLLEGE.

One case has occurred in the wards of King's College Hospital. The patient was admitted in the pyrexial stage. Even then, there was some doubt as to the nature of the case, which was subsequently dispelled by the appearance of the eruption. The case presented certain interesting features from a diagnostic point of view, and we hope to give fuller details of it subsequently.

There is nothing new from the other Hospitals.

If anything is to be learned from the history of this epidemic of small-pox, especially as it has affected the London Hospitals, the possibility of limiting and promptly suppressing the disease is surely most vividly brought out. A few weeks ago St. George's Hospital seemed a hotbed for the disease and a centre of infection for the locality; yet, by promptly stopping all visitors, by isolation of the sick, and by revaccinating all belonging to the Hospital, the spread of the malady was speedily and completely arrested. This fact is well worthy of general attention.

HOSPITAL FOR DISEASES OF THE THROAT.

HYGROMA OF THE HYOID BURSA.

(Under the care of Dr. MORELL-MACKENZIE.)

W. L., aged 30, a carman, applied at the Hospital, on November 25, 1870, on account of difficulty of breathing and swallowing, which he attributed to a swelling just below the chin. He stated that he had first noticed the swelling about seven or eight years ago, but that it had never caused him any trouble till 1867, when he took cold, and the swelling greatly increased in size. He then consulted an eminent Surgeon, who advised him to leave it alone. Subsequently, however, it caused him a great deal of inconvenience, and occasionally prevented him doing his work. The swelling had become much larger during the last year.

On examination, an ovoid tumour, about the size of a hen's egg, was found extending horizontally across the neck, and slightly attached to the hyoid membrane. The tumour was mobile, firm, and elastic. There was fluctuation on palpation. The skin over it was healthy and non-adherent.

The case was diagnosed to be one of hygroma of the hyoid bursa, and Dr. Mackenzie directed that the cyst should be punctured, and a small seton afterwards be put through. This was done. About three ounces of a transparent, but viscid yellowish-white fluid were drawn off. A few threads were afterwards carried through the cyst. The same evening the patient had a shivering fit, and could not sleep.

On the following morning, he experienced much difficulty in swallowing, and some shortness of breath. The surface of the swelling was inflamed, and, on making a laryngoscopic examination, the epiglottis and mucous membrane of the larynx were seen to be in a state of general hyperæmia. An inhalation of the compound tincture of benzoin, and poultices over the neck were ordered.

On the 27th the bursal cyst was found to be tense, and thick laudable pus escaped from the seton openings. Dr. Mackenzie ordered one of the orifices to be slightly enlarged, and the seton removed, when a quantity of pus was poured out. This purulent discharge continued for a few days, and at the end of four weeks (December 26, 1870) the wound had healed, and the man was made an out-patient.

January 14, 1871.—Finally discharged cured, there being no remains of the cyst.

Remarks.—Dr. Morell-Mackenzie observed that these cases are interesting, both on account of their rarity and of the close connexion which the bursa has with the larynx. A valuable communication on this subject was read before the New York Medical Association, by Dr. F. H. Hamilton, in 1869, and reported in the *Medical Record* of February, 1870. Several cases were reported by him under the name of "super-laryngeal encysted tumours," or "encysted bursal tumours in front of the larynx." On that occasion, Dr. Elsberg gave an interesting historical *résumé* of the subject. On account of their close connexion with the larynx, any curative treatment of these tumours is likely to give rise to laryngitis. The plan commonly adopted consists in puncturing and injecting iodine; but this treatment is not so certain as that by seton, for the cyst not unfrequently fills again. All observers who have met with these cases are agreed that all attempts at extirpation would be met with considerable danger. In addition to the hyoid bursa, subcutaneous bursal cysts are sometimes found over the thyroid, and even as low as the cricoid cartilage.

ROYAL INFIRMARY, EDINBURGH.

TWO CASES OF UTERINE TUMOURS GIVING RISE TO HÆMORRHAGE—TREATMENT BY PERCHLORIDE OF IRON INJECTIONS INTO THE UTERUS.

(Under the care of Dr. MATTHEWS DUNCAN.)

[Reported by Dr. J. R. Hardie.]

M. S., aged 38, was admitted to Ward 16, Royal Infirmary, Nov. 26, 1870. She is married, and has had three children, the last nearly two years ago. Until six weeks ago, she was a strong, healthy woman. About that time, after a hard day's work, she had a copious discharge of bloody fluid from the vagina, probably about three quarts in amount. This discharge continued in small quantities for a week, at the end of which time she had a second attack of bleeding from the vagina as violent as the first. Three days after this, a third time, bleeding from the genital passages set in, the blood lost being in greater quantity than on either of the former occasions. This last blood-loss left her in a state of extreme prostration. Since then, she has had a slight daily discharge of blood. When admitted into the Hospital, she appeared extremely pale and anæmic. On physical examination, the belly is found to be natural, soft, and resonant down to the pubis. *Per Vaginam.*—The finger introduced discovers nothing abnormal at first, but, on careful examination, the body of the uterus can be felt between the external and internal fingers, and feels enlarged, rounded, and not tender, about the size of a small egg. This swelling feels as if it affected the left side of the fundus chiefly. A probe passes into the uterus the natural length, and finds it to be movable. Speculum discovers in the vagina, trickling from the cervix, a small quantity of blood.

Treatment.—℞. Ext. ergot. liquid, ʒj., twice daily; et syrupi ferri phosph., thirty drops thrice daily.

December 22.—To-day, for the first time since admission, patient complains of a great blood-loss. On examination, the tumour described in the original examination feels larger. Uterus measures three inches and a half. One drachm of the liq. ferri perchloridi was injected into the uterus. Patient felt nothing.

23rd.—After the injection yesterday, the discharge almost ceased.

26th.—Since the 23rd, there has been a slight flow daily. To-day it is almost absent.

January 3, 1871.—No bleeding since last report.

J. C. was admitted to Dr. Matthews Duncan's Ward, Royal Infirmary, Edinburgh, on December 19, 1870. She is 41 years of age, unmarried, and has had no children. She complains of a swelling in the left groin, increased flow at the monthly period, and of great pain during the first twenty-four hours of the discharge. She has suffered from this pain for about a year; it has been increasing gradually in intensity, and for the last two months has been very severe. The tumour first attracted her attention in the beginning of last October, when, stooping to pick up something, she felt the pressure of it. It has not, she thinks, increased in size since then. Up to the time that these symptoms set in, patient had enjoyed moderately good health, and had regularly followed her occupation as a domestic servant. She has had a copious menstrual discharge, however, for many years; for the last three years it has been very abundant.

Physical Examination.—In the hypogastric region is observed a prominent, hard tumour, approaching in size a five months' pregnancy, reaching to within an inch of the umbilicus, and presenting a surface nearly uniform, but not quite so. The tumour is quite movable, but not to a great extent. The uterine souffle, or something closely resembling it, can be heard, but not very distinctly. *Per Vaginam.*—The cervix uteri lies near the middle of the pelvis, and all around it is felt a dense hardness, somewhat lobulated. The cervix moves with every movement of the tumour. A probe passed into the cervix advances first backwards and then upwards. It enters about three and a half inches; cervix is small, and not softened.

Treatment.—December 30.—Hæmorrhage began to-day.

January 1.—The bleeding is now severe. A drachm of the liquor ferri perchloridi was injected into the uterus this morning. No bleeding during the day, but to-night a little discharge has commenced to flow.

4th.—Since last report there has been a little blood lost every day, but not approaching in quantity to what came away before the injection.

17th.—Has had no bleeding since the 4th; lips do not appear so white; patient feels strong and well.

Remarks.—These two cases illustrate well that most dangerous symptom of fibrous tumour of the uterus—namely, hæmorrhage. It might with propriety be called a bleeding disease, because, barring the obvious inconvenience of a tumour of large size, the subject of it generally suffers little from its presence when this is absent. In the instance of M. S., had not bleeding set in she would have been unaware that any unnatural condition whatever existed. Here so much blood had been lost that the woman was brought almost to death's-door, and another equally severe flooding would probably have killed her. This her Physician in the country attested. The treatment by means of which this condition can be most successfully combatted, is that which consists in the injection of perchloride of iron into the uterus when symptoms of the approach of a severe blood-flow set in—that is, when there exists profuse hæmorrhage about the time the monthly period is expected.

Dr. Duncan's method of procedure is as follows:—After the length and direction of the uterus have been ascertained by means of the ordinary sound, a hollow one is passed into the organ. A syringe, composed of vulcanite, containing about a drachm of the liquor ferri perchloridi, is fitted closely into the orifice at the proximal end of the probe, and its contents are gently thrown into the womb. No pain is generally felt as a result of this injection, but a feeling of burning is sometimes complained of. Dr. Duncan is inclined to attribute this to the regurgitation of some of the iron into the vagina. Dr. Duncan has found this mode of treatment highly successful in many cases, and most so in those where the symptoms calling for it were most urgent.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 11, 1871.

THE SMALL-POX EPIDEMIC.

The deceptive character of the apparent reduction in the mortality from small-pox in the week ending January 28 is shown by the fact that it last week rose to 196. It is to be kept in mind that the numbers published by the Registrar-General relate to the deaths as registered, not as occurring, and hence, from accidental irregularities in registration, the result may at times appear more favourable than it actually is. The disease is still extending.

The report of the Small-pox Hospital at Highgate for 1870, which we publish at length in another column, confirms a good deal of what we said last week about the progress of the epidemic at its origin. We are able now to complete the account of the admissions in the last quarter. They were—in October 144, in November 159, and in December 178; making a total of 481; and the whole admissions for the year 1316. Of these, thirty-one were not cases of small-pox at all, so that the cases of small-pox admitted were 1285. The mistakes in diagnosis which led to the sending of these thirty-one cases of non-variolous disease to a Hospital devoted to the reception of patients suffering from so highly contagious a malady as small-pox, are much to be deplored. Medical men cannot be too cautious in such a matter; but when it is considered that the diagnosis has often to be made under most unfavourable circumstances, in dark corners of ill-lighted rooms, amidst the discomforts of squalid surroundings, chattering women, and squalling children, often by candle-light, and upon individuals where the dirt upon the skin is apt to obscure otherwise distinct signs, while the patients are too stupid to reply clearly to questions, the drift of which they are at a loss to comprehend, one cannot altogether wonder at occasional occurrence of error. It has been the same every year since the institution has been opened, the mistakes happening in a pretty constant proportion, and being of a pretty constant character. The diagnosis of incipient small-pox is not always a very easy matter under favourable circumstances, and the anxiety of masters to free themselves of a dangerous inmate in the case of a servant apparently attacked with this disease, and of Poor-law Medical men to save other inmates of a poverty-stricken house from contamination, may account sometimes for the error of judgment which consigns a case of measles or lichen to a small-pox Hospital. The report also confirms our view of the severity of the present outbreak, in the statement that "a much larger proportion of the population has been attacked in the course of the existing epidemic than has ever occurred in the memory of the present generation." Again we are tempted to ask—How and why is this? The reply that some would give is, that the great extension of the epidemic is the result of a culpable neglect of vaccination, and of the opposition to it as a measure of protection, which has been fostered of late years very manifestly in the minds of ignorant people by the wicked agitation of persons calling themselves anti-vaccinationists. Certainly, there seems at first sight to be some basis for this belief, inasmuch as the worst vaccinated districts of the metropolis have been those earliest and most fatally attacked; while Mr. Marson tells us that the proportion of children (mostly unvaccinated) received into the Hospital during this epidemic has been more than twice as large as it was ten years ago. He informs us, too, that the admissions of vaccinated persons formed only 74·9 per cent. of all the admissions. This is a falling off in a proportion which, for eighteen years past, has been gradually increasing, and one which, at the first blush, tells a tale not creditable to the progress of vaccination among our London masses.

			Per cent.
During the epidemic season	1851-2	the proportion of vaccinated persons was	66·7
,,	1854-5-6	,,	71·2
,,	1859-60	,,	78·0
,,	1863-4-5-6	,,	81·0

But then, on the other hand, it must be borne in mind that, prior to the period in which vaccination has been popular in this country, epidemics of small-pox exhibited a similar variety in severity and extent, grand epidemics occurring at comparatively long intervals, while lesser epidemics intervened. Whatever impression may have been made by the rabid apostles of the League upon the mind of the population of London, one thing is certain—namely, that it has neither been deep nor permanent, as is shown by the rush for protection now taking place to public stations and to private Practitioners alike. Again, it is a character of small-pox noticed by Dr. George Buchanan and other observers, that at the commencement of an epidemic the disease first seizes upon the unvaccinated portion of the population, and that, as it progresses, the contagion becomes more intense and concentrated, and, by the establishment of new foci, a larger and larger proportion of the vaccinated portion becomes attacked; so that it is quite possible that, by the time the epidemic has come to an end, the proportion of vaccinated persons attacked may come up to the ratio of late years. According to the statements in the Report, the existent epidemic is one of unusual malignity, as well as of unusual extent. This is especially shown in the fatality of the disease among the unvaccinated children, which was as high as 42 per cent., while in 1860 it only reached 33·8 per cent. The percentage of fatality on this occasion, as stated in the Report, may be better estimated if we append it to the table given in the report of the Hospital for the year 1868.

Mortality:—	1863.	1864.	1865.	1866.	1867.	1868.	1870.
General . . .	17.0	12.9	13.0	13.0	12.66	11.0	15.4
Unvaccinated .	48.0	36.0	38.0	35.7	36.8	34.0	38.5
Vaccinated . .	12.0	8.7	7.4	7.3	8.29	6.2	7.9

So far as a comparison based upon this table goes, it would appear that, although the fatality hitherto has exceeded that of any year since 1863, it has not been so great as it was in that epidemic year, either among the unvaccinated or the vaccinated class. The chances of recovery possessed by the vaccinated who happen to be attacked are shown by the above figures to be vastly larger than those of the unvaccinated, and the inference drawn from them is fully confirmed by observers of small-pox everywhere, and during the present epidemic by the published experience of the Hampstead Hospital. Of 280 patients received there up to January 6, 196 had been vaccinated, or 70 per cent. (a smaller proportion, even, than was found in the Highgate Hospital), and of these only 4 per cent. died, while among the 84 unvaccinated persons admitted, 27 deaths occurred, representing a fatality of 32 per cent. Probably in neither class was the number of deaths fully completed, but the difference is, nevertheless, instructive.

Next to the provision of ample means of isolating the sufferers, and of Hospital accommodation with this end—a subject upon which we made some remarks last week—comes, in order of importance among preventive measures, the vaccination of the people. And as to this, we may say that, as a rule which is almost universal, vaccination is habitually obtained by the educated classes of the community for their children within the first few months after birth. The few perverse individuals in this section of the people who assert their freedom as Englishmen by defying law and logic, make little difference in the general result. It is among the uneducated and half-educated, among those who are careless of themselves as well as of their offspring, and among those whose untrained minds are open to the specious reasoning of pestilent agitators, who flatter them with the assumption that they are competent judges in matters of dry fact, and dose them *ad libitum* with half-truths, seasoned with a fair amount of falsehoods, that the neglect of infant vaccination is almost solely observed. It is these who rise in rebellion against the compulsory clauses of the Vaccination Act, and it is the children of such as these that furnish the earliest victims to an epidemic of small-pox.

A good deal of discussion has taken place as to the wisdom of some of the regulations issued by the Medical Department of the Privy Council in connexion with the last Vaccination Act imposed upon us by Parliament. Into this question we shall not enter now. They arose out of the conviction that much of the public vaccination performed was of a highly unsatisfactory character, and their aim has been to improve the quality of the protection imparted, by requiring public vaccinations to be performed from arm to arm at the public stations, while means were adopted to ferret out recalcitrant parents, and to bring them to submit, as good citizens, to the requirements of a wholesome law. The plan adopted may be good or it may be vicious; but we conceive Dr. Seaton is not very far wrong when he protests against a hasty judgment being formed, before time has been afforded for the new system to get into perfect and harmonious working order. We think it unfortunate, however, that, regarding vaccination as a measure of preventive sanitary practice, it has been divorced from its legitimate connexion by being consigned to a department of administration other than that which has charge of sanitary proceedings of every other nature. We regard this as a mistake, and one which, on the outbreak of an epidemic such as the present, drags after it confusion and inconvenience. When it is most important, as it is now, that small-pox should be met by the energetic use of all the precautions against its spread that Medical art or the law provide, it is most provoking to meet with division of sanitary administration—the guardians of the poor dealing with the epidemic in one way, and the nuisance authority in another way, jealous, as public bodies acting in the same area, the one of the other, and unwilling to unite in a combined raid against the common enemy. We do not know that this sort of jealousy has been generally manifested on the part of the guardian and vestry boards in London; but we do know that it has cropped up here and there. Under all circumstances, it would have been better and more conducive to the public advantage, now that small-pox is so prevalent, if the whole control of the preventive measures for its arrest were placed in the hands of one executive body in each district, and that body guided and directed by the experience and skill of the Medical Officer of Health. As one compensation, however, for the radical fault, as we conceive it to be, in the vaccination arrangements in London, we have observed with satisfaction that the Medical Department of the Privy Council has approached the several boards of guardians with advice as to what it is essential that they should do in the present emergency. It would be a most unfortunate climax to the efforts of that Department in improving the vaccination of the people, if the Vaccination Act, over which no pains were spared to adapt it to the needs of the country, were to break down, and if it were to appear that it was not adapted to any period but one of epidemic quiescence. No doubt it was with the view to show that the Act was not of this restricted application that the memorandum of the 6th ult. was issued to the boards of guardians. It was evidently the intention of those who drew the Act of 1867 to render it as elastic as possible; and when read in connexion with the regulations issued under its sanction, and with the memorandum alluded to, it can scarcely be denied that there are few things, which guardians may consider it desirable to do for the arrest of the epidemic under this Act, that they cannot do. We doubt very much whether, under any circumstances, the Privy Council would throw the most trifling obstacle in the way of any board, in any effort that they desired to make, in any direction, to promote the rapid and universal vaccination of all persons at present unprotected in the several districts of the metropolis. Let us point out, then, what in our opinion ought to be done everywhere.

Confining ourselves to the functions of guardians entrusted with the working of the Vaccination Acts, it is tolerably clear that they have a triple duty just now to perform. The first is, to bestir themselves to recover with the utmost speed the arrears of primary vaccination of infants in their respective districts. The second is, to encourage and give unusual facilities for the revaccination of all persons who have attained the age of puberty; and the third, to make special investigation into the condition *quoad* vaccination and revaccination of people living in infected courts and streets, and most especially in infected houses, taking such immediate measures to facilitate the adoption of this great protective by the poor thus placed in urgent danger. In some parishes the arrears of primary vaccination are very large, and this must be believed to be especially the case in such parishes as Islington and St. Saviour's, in the former of which a Vaccination Inspector was not appointed at all until last Midsummer, and in the latter of which this officer was not appointed before last Christmas. To gather these arrears up without delay, an extensive staff of Assistant-Inspectors should be temporarily appointed; and we are glad to learn that in some districts this has been done, with the result of flooding the vaccination stations with applicants. In many instances the delay has only arisen from the inertia of parents, who cannot always find the convenient day for bringing their infants to the station.

With respect to revaccination, we do not think sufficient public prominence has been hitherto given to this most important measure. The poor require enlightenment upon the subject, and this should be afforded in part by the Inspectors and in part by public printed notices and handbills. It is in this respect that we may be permitted to say we think that the memorandum of the Privy Council of January 24 was not sufficiently explicit. The facts which demand the repetition of vaccination are patent, and are proclaimed by the statistics of small-pox anywhere, as it affects vaccinated persons. We copy, for instance, the following from Dr. Ballard's work, placing them side by side to show how uniform are the results of observations in different quarters, and how the tendency to take small-pox grows with the age of vaccinated people, until it arrives at its maximum between puberty and 25 or 30 years of age:—

Number of Cases.

Ages.	Small-pox Hospital, 1838. (Gregory.)	Small-pox Hospital, 1836-51. (Marson.)	Edinburgh Infirmary, 1863. (Crossby.)	Wurtemberg, 1831-36. (Heine.)	General Hospital, Vienna. (Constructed from Simon's Report.)
Under 5 yrs.	—	7	6	40	 234
5 to 10 „	5	56	14	68	
10 15 „	25	206	18	186	 2223
15 20 „	90	866	42	275	
20 25 „	106	1058	68	239	 2329
25 30 „	55	526	37	172	
30 to 35 yrs.	13	(30 to 40 yrs.) 312	5	75	(30 to 40 yrs.) 354

On the 6th inst., a supplementary memorandum on the subject of revaccination was issued by the Medical Department of the Privy Council, which we cannot fail to regard with satisfaction as furnishing a very necessary complement to that first put forth. Boards of guardians, we have reason to believe, were not thoroughly alive to their duties in this respect, nor were public vaccinators at all certain how far their charges for revaccination would be allowed by the boards under whom they act. The public are now told officially and by the highest authority—first, that "all persons should undergo revaccination as they approach adult life;" secondly, that "in circumstances of special danger, everyone past childhood on whom revaccination has not before been successfully performed, ought, without delay, to be revaccinated;" thirdly, that "revaccination is now performed by all public vaccinators at their respective stations;" and fourthly, that "any person who ought to be revaccinated may, on applying to the public station of the district in which he resides, obtain revaccination at the public expense." The proof given that revaccination once properly and successfully performed is a life-long protection, is the very best that we know of—namely, that "the nurses and servants at the Small-pox Hospital, when they enter the service, are invariably submitted to vaccination which in their case generally is revaccination, and is never afterwards repeated; and so perfect is the protection, that though nurses live in the closest and most constant attendance on small-pox patients, and though, also, the other servants are in various ways exposed to special chances of infection, the Resident-Surgeon of the Hospital, during his thirty-four years of office there, has never known small-pox affect any one of their nurses or servants."

For the attainment of the third object—namely, the immediate protection of individuals pre-eminently exposed by the occurrence of small-pox in the houses they occupy, or in adjoining houses, or in the close courts and alleys of the metropolis, we are convinced that nothing will meet the emergency but the visit of the public vaccinator to the spot, lymph and lancet in hand. This proceeding does not necessarily involve the use of dry or preserved lymph, although even this is quite warrantable on the outbreak of small-pox in a house on a day when no vaccinifer might be obtainable. It would be quite practicable for the public vaccinator to take a child to any infected place, and to vaccinate or revaccinate from arm to arm. Such house-to-house vaccination, or offer of vaccination, will, we are satisfied, alone succeed in bringing the endangered population under the influence of the protection. It is astonishing how reckless poor people are as regards contagious diseases, and how small an amount of trouble or inconvenience will suffice to deter them from taking the simplest precautions. If it should appear that they are indisposed to go to the station—and many cannot go without loss of work and their daily bread—we hold that it is imperative, not only for their own advantage, but for the protection of the public, that facilities should be afforded by carrying the vaccine to them. Probably, no public vaccinator, operating over a large district, could compass all the work which would thus fall upon him; but where this is so, there is a provision for his doing it through qualified deputies—and such deputies, as assistant vaccinators, should be appointed at once. In some parishes this, we believe, has been done.

THE PROGRESS OF THERAPEUTICAL SCIENCE.

No. X.

There are yet two more of the recent additions to our therapeutical weapons that seem worthy of special notice, and that for two reasons — viz., because their employment has been based on defined physiological grounds, and intended to meet defined pathological conditions; and because their value may be considered as being still a *quæstio vexata*, and as demanding still further investigation and experiment. These medicines are the alkaline hypophosphites and the peroxide of hydrogen.

The "alkaline hypophosphites," and especially the hypophosphites of lime and of soda, have been brought prominently into notice by Dr. Francis Churchill, of Paris, who believes that they are of pre-eminent value in the treatment of phthisis. He presented a memoir on the subject to the Académie de Médécine, in July, 1857, in which he maintains that the proximate cause, or, at all events, an essential condition of the tubercular diathesis, is the decrease in the system of the phosphorus, which it contains in an oxygenisable state. This deficiency can be best remedied by the administration of phosphorus in its lowest degree of oxidation, and in a state making it capable of being directly assimilated. He had, therefore, administered the hypophosphites of soda, lime, potash, and ammonia. Their physiological effects, he says, are twofold: they increase nervous force, and they are the most powerful hæmatogens; possessing all the therapeutic properties of phosphorus, without the danger formerly attending its use. But he specially recommends the soda and lime hypophosphites. These he declares are prophylactic, and are curative in every stage of phthisis. "I know," he says, "that they will prove not only as sure a remedy in consumption as quinine is in intermittent fever, but also as effectual a preservative as vaccination in small-pox." Their effects upon the tubercular diathesis is, he affirms, "immediate—all the general symptoms of the disease disappearing with a rapidity which is really marvellous." And he predicts that "the different preparations of hypophosphorous acid will undoubtedly occupy one of the most important places in the Materia Medica."(a) The employment of dilute phosphoric acid and phosphate of iron in the treatment of phthisis was by no means new at the time Dr. Churchill wrote, but they were given as tonics, and were not credited with any *specific* action. The publication, therefore, of Dr. Churchill's statements excited great attention and interest; but, unfortunately, general experience has by no means supported his estimate of the remedial value of the hypophosphites. Mr. John Taylor(b) has, perhaps, reported on them more favourably than any other English observer, and he says, "Experience has not confirmed Dr. Churchill's extravagant encomium as respects the '*curative* in every stage'; the word *palliative* would be more in accordance with the fact, when the remedy had been pure, and with auxiliary combinations." He believes that in the earlier and middle stages "the guarded introduction of an alkaline hypophosphite into the blood produces a glowing influence: as a respiratory excitant, expanding the chest; as a pyrogenic, increasing animal heat and nervous force, and removing erratic pains; and, as a hæmatogen, forming a nucleus for the rallying of red globules; it increases appetite and cheerfulness, and controls expectoration, night sweat, and diarrhœa;" and that, used in these stages, "they enable the best known means to have increased remedial energy, and thus to effect many more cures than formerly." He also found the hypophosphites sometimes of much use in the third stage of the disease. Dr. Dickson, of Jersey,(c) says—"My experience satisfies me that in the hypophosphites we have a most powerful agent. I have tried them in about thirty cases, in every stage of the disease, and in the majority—say two-thirds—the improvement has been very marked. I have requested several Medical friends to try the treatment on their patients, and they have mentioned to me that the result was most extraordinary." And Dr. Achille Vintras(d) reports that—"Without claiming a *specific* action for the hypophosphites, I have often prescribed them at the French Dispensary (in London) with very satisfactory results." Lastly, Dr. J. C. Thorowgood thinks that the hypophosphites "are certainly to be regarded as valuable remedial agents in the treatment of phthisis, especially in its premonitory and earlier stages."(e)

But in Dr. Quain's hands the results of treatment by the hypophosphites were anything but encouraging. He tried them in twenty-two cases, and states(f) that, "of the twenty cases, six were more or less improved while under treatment; of these six, three were improved in but a slight degree, and only for a short time; in three the improvement was marked, but in one only of the latter has the improvement been permanent; of the two other cases, one continued using the hypophosphite for three months after leaving the Hospital, during which time she grew gradually weaker, and finally died; the other, a man, after leaving the Hospital continued the treatment for some time, but gradually grew worse, and is now dying." Dr. J. R. Bennett, after "ascertaining what was Dr. Churchill's own method of procedure," tried his treatment in twenty cases, at the Victoria-park Hospital, and of these he says,(g) "there were only nine in which the disease did not steadily advance while under treatment, or in which there was any evidence at all of improvement. Of these nine, four only manifested any decided improvement, of the permanency of which, however, I have no proofs in any one instance." Dr. R. P. Cotton(h) has also, on more than one occasion, given this treatment a fair trial, Dr. Churchill's rule for administrating the remedy "being carefully attended to," but found it eminently unsatisfactory; in most of the cases it seemed inert, and the few which improved slightly "were evidently instances of the *post*, and not the *propter hoc*, since some advanced equally, and many of them more rapidly, under the subsequent use of steel or quinine with cod-liver oil." And in the last edition of Trousseau and Pidoux's great work on Therapeutics(i), judgment is given on the value of the hypophosphites in phthisis, in these words:—"La cause des hypophosphites nous paraît définitivement jugée dans le sens contraire à celui que M. Churchill nous a fait connaître."

Dr. Churchill, it must be said, persists in his estimate of the superlative value of his mode of treatment, and denies that the various trials above alluded to were fair trials of the hypophosphites, and in 1866 he "published a collection of reports(k) from nearly thirty Medical Practitioners of all countries, with details of nearly a hundred cases in favour of his discovery." Some remarks on the subject may be found in a review of Dr. Churchill's work in our pages for 1865,(l) and we published a communication from Dr. Cotton(m) on the use of the hypophosphites in phthisis, and some letters from Dr. Churchill, Cotton, and Thorowgood, in 1868.(n) It may be fairly said that the question is still *sub judice*, and well deserves further careful investigation and experiment.

Mr. Taylor found the hypophosphites highly useful in many conditions of exhaustion and debility, and his paper, before quoted, on the administration and effect of these drugs is worthy of close perusal.

(a) *Dublin Hospital Gazette*, vol. iv. p. 252, 1857, and "De la Cause Immédiate et du Traitement Spécifique de la Phthisie Pulmonaire." Par J. F. Churchill, D.M.P. Paris: Masson. 1858. Deuxième edition. 1864.

(b) *Lancet*, vol. ii., pp. 517, 544, 564. 1861.

(c) *Medical Circular*, March 14, 1860. P. 177.

(d) *Lancet*, vol. ii., p. 273. 1862.

(e) *Practitioner*, p. 14. 1869.

(f) *Lancet*, vol. i., p. 267. 1860.

(g) *Medical Times and Gazette*, vol. i., pp. 438, 467, 489. 1861.

(h) *Medical Times and Gazette*, vol. i., p. 163. 1858; and *Lancet*, vol. i. 1863.

(i) "Traité de Thérapeutique," etc., t. ii., p. 701. 8me Ed. 1869.

(k) "Recueil d'Observations et de Rapports sur le Traitement des Maladies la Poitrine par les Hypophosphites." Paris. 1868.

(l) *Medical Times and Gazette*, vol. ii., p. 689. 1865.

(m) *Ibid*, vol. ii., p. 555. 1868.

(n) *Ibid*, vol. ii. pp. 640, 680, 731. 1868.

Peroxide of Hydrogen was discovered by Thénard in 1818, but belonged to chemistry only till 1856, when Dr. B. W. Richardson commenced an extended and minute study of its therapeutical action and properties, and our present knowledge of it remedial powers is one of the many boons which Medicine owes to that distinguished Physician's talents and untiring love of research and experiment.(o) Water can be charged with thirty volumes of oxygen, but a solution containing ten volumes is, according to Dr. Richardson, the best form for medicinal use. The dose of this is from one to four or six drachms, in pure water. It requires free dilution, as it has a caustic, metallic taste, and it should be given without any other admixture; or it may be given in the form of *Ozonic Ether*. This, discovered by Dr. Richardson, is a very stable compound of ether and the solution of peroxide of hydrogen, and may be given by the mouth in doses of from ten minims to a drachm, or by inhalation.

Dr. Richardson has prescribed the peroxide in a large number of cases of different forms of disease; and at the end of last year, in a highly interesting and full lecture on peroxide of hydrogen and ozonic ether,(p) he gave a very candid account of his experience of their remedial properties. Speaking of the former, he sums up thus: "The solution of the peroxide of hydrogen may be fairly considered a medicine which promotes glandular secretion generally, quickens the action of iron, and which, to a certain extent, represents mercury and iodine as a specific remedy for syphilis. Problematically, it may be considered as having an influence on nervous function, preventing or reducing over-action. It deserves on this ground extended trial in epilepsy. It is useful as a means of relief in dyspnœa, in cases where there is great destruction of the lung and deficient oxidation; but whether its effect is due to the direct addition of oxygen to the blood, or to a sedative action on the nervous centres, or to the promotion of secretion from the liver and kidneys and the removal of temporary congestion, is not known." The ozonic ether may be advantageously used in the form of spray, to cleanse and deodorise fetid, ulcerated, or sloughing surfaces; by inhalation, it may be administered in phthisis pulmonalis, especially when there is a cavity. "It soothes in these cases, destroys the fetor of the breath, and relieves the sense of suffocation." And given by the mouth it appears to possess some advantages over the solution of the peroxide in water. Dr. Richardson tried the solution of the peroxide first in diabetes, as a popular theory has attributed that disease to deficient oxidation; but the results he obtained were not encouraging. Dr. Day, of Geelong,(q) has, however, found the ozonic ether very effective, and has prescribed it largely in diabetes; and several observers in this country support his experience. For instance, cases of great and continued improvement under its use, even without restricted diet, have been placed on record by Mr. Bayfield,(r) Mr. Wilmot,(s) and Dr. W. H. Day.(t) On the other hand, Dr. Pavy has not met with success from the exhibition of the remedy. He says,(u) "I have tried both the aqueous and ethereal solutions of peroxide of hydrogen in the complaint (diabetes), but have not been able to perceive that the slightest benefit has been produced. . . . . I have come across several cases in private practice, in which the ozonic ether has been tried. In none have I been able to learn that any benefit was produced." Oxygen, more or less diluted, has long been used as a remedy, and Dr. Birch and some other authorities, English and foreign, have a high opinion of its value in some diseases, but its use has always been limited to a few Practitioners. Theoretically, it has high claims on our attention, and, as Dr. Richardson's preparations give greatly increased facilities of administration, we may hope and expect that its remedial powers may be fully and fairly tested.

OFFENCES AGAINST THE PERSON IN INDIA—ROBBERY BY POISONING.

Offences against the person, of a rough and brutal nature, are common enough in England, and we are accustomed to speak and write of our criminal classes, but crimes such as those perpetrated in India are rare among us, and men, though they band themselves together for the purpose of robbery, rarely do so for that of murder also. In India it is different. There human life is even less respected than it is by railway directors in this country, and it used to be no unusual thing to find whole tribes devoted to, and dependent for their livelihood upon, robbery, accompanied by murder. It is true that Thuggee, as a system, has been in great measure, and perforce, abandoned, but isolated bands still prowl along the main roads, seeking for plunder by hocussing their victims, if they can with safety; if not, by murder. The chapter of Indian crime, as affecting personal safety, is a most interesting one, and, for those who care to study the subject, a book just published will afford to individuals living in this country no ordinary opportunities for making themselves, as far as possible, masters of it. The volume we allude to is the work of Dr. Norman Chevers, a name already well known to many interested in the study of Medical Jurisprudence as the author of a valuable work on that subject as it belongs to India. The present volume(a) is in reality the third edition of the work referred to above; but the first edition might be considered a reprint of an essay in the Indian Annals of Medical Science for October, 1854, and the second was drawn up by order of Lord Dalhousie especially for Indian use, and never found its way except into public libraries and a few belonging to those specially addicted to this department of our Profession who gave themselves some trouble to obtain it. Consequently, this may be said to be the first appearance of the book before the public. There is much that is interesting in it, but no chapters more so than those referring to crimes against the person. The conditions of society and the modes of life in India differ so greatly from those observed in this country that crime also assumes a new aspect—for race, caste, and habit affect crime as they do everything else in India. As an illustration, Dr. Chevers refers to a case of murder after which certain Hindus were asked by another of the same race whether they did not mean to bathe. This was at night, and they said No, for, if they did so, they would be suspected. The individual who made the suggestion was subsequently tried for the crime, and the fact of the suggestion was used against him; for as a Hindu after touching a corpse is held unclean till he has bathed, it was considered unlikely that one who had nothing to do with the murder would suggest bathing in the middle of the night.

But of all the crimes accompanied with violence, none exceeds in interest to the Medical man that of robbery by poisoning. The detection of this as a system was in great measure due to Dr. Chevers, who, however, failed to establish a clanship between those concerned in carrying it out, although voluntary associations were evidently formed for the purpose. It should be noted that Dr. Chevers's information refers especially to Bengal and the North-West Provinces, although the crime is not unknown elsewhere. At one time it was especially prevalent in the high roads leading from Calcutta to Patna and Juggernath in Orissa respectively. It also presented various degrees of criminality, from inducing intoxication merely by means of the coarse spirit of the bazaars to causing death by various combinations of poisons. The poisons employed also varied in different instances; sometimes mineral substances, like white and yellow arsenic (arsenious acid and orpiment); much more frequently vegetable matters, as opium, hemp or bang, aconite, nux vomica, and (above all) datura were used. The last-named plant, represented in this country by the *Datura stramonium* commonly used in Medicine, is in India exceedingly common. Various species abound, especially the *Datura alba* and the *Datura fastuosa*, and there is also another, known as *Datura ferox*. Exceedingly abundant, these plants would also seem to be well known as dangerous, both in the leaf and in the seed. These last are the portions of the plant chiefly used by the poisoners, who decorticate them after parching, pound them, and in some instances distil from them an essence. When powdered, they are fit to mix with the food or drink of the individual selected for a victim, or to be given him along with tobacco to smoke, whilst the essence is added to the sweetmeats so commonly used in the East.

(o) *Lancet*, vol. ii., p. 390. 1860; *British Medical Journal*, March 22, 1862.
(p) *Medical Times and Gazette*, vol. ii., pp. 661 and 694. 1869.
(q) *Lancet*, vol. i. 1868.
(r) *British Medical Journal*, vol. ii., p. 423. 1868.
(s) *Medical Times and Gazette*, vol. ii., p. 680. 1868.
(t) *Lancet*, vol. i., p. 396. 1869.
(u) *Lancet*, vol. i., p. 358. 1869.

(a) A Manual of Medical Jurisprudence for India, including the Outline of a History of Crime against the Person in India. By Norman Chevers, M.D., Surgeon-Major H.M. Bengal Army; Principal of the Calcutta Medical College; Professor of Medicine, and Senior Physician, in the College Hospital, etc. Calcutta: Thacker, Spink, and Co. Pp. 861.

Curiously enough, it would seem that the lowest classes of the community are usually selected as victims—fakirs, prostitutes, boatmen, pilgrims, etc.; none are so poor as to be out of danger, none too high could they only be reached; but there is the difficulty. The poorer travellers along the roads are more readily beguiled into conversation; the custom of the country—that perfect strangers, if of the same caste, should eat and smoke together—facilitates the nefarious projects of these professional robbers; whilst people of higher rank travelling with vast companies of retinues could hardly, if at all, be reached. The class of prostitutes would seem to be very liable to attempts at drugging, probably from their friendlessness, but also from the custom they have of investing all their savings in personal ornaments, which can be readily removed and hidden. They are, however, also made the agents of the professional poisoner in certain instances. One illustration of the mode in which they inveigle their prey may serve for many. One of the professional poisoners (Khoman) specially devoted himself to native carriers. He hired the carts when the drivers had just been paid, and were in possession of their money, and set out with them. When they halted to cook, he had no flour, and set off on the pretence of procuring some, but returned saying he could get none. One of the cartmen said, "We have plenty of flour, take some of ours;" and he gave him about a pound and a half. Khoman went off, but returned immediately, saying he only wanted enough to make two cakes; he had received too much, and begged leave to return the remainder, which he had mixed with datura seeds. The flour thus returned was used by the drivers for their meal; they speedily became insensible, and were robbed of all they possessed.

The effects of the datura in these cases are very curious: sometimes stupor only is produced, sometimes complete insensibility; but when this is the case, the victims, after recovering from the immediate effects of the drug, remain in a fatuous or delirious condition for one or two days, thus giving ample time for the escape of the robber. When the seeds are given, the symptoms continue as long as any of them remain in the intestinal canal, and probably in many cases much longer—says Dr. Chevers. He further states that there appear to be three sets or stages of symptoms observed in cases of poisoning with datura:—

1. Headache, dryness of the throat and fauces, urgent thirst, *faintness*, difficulty in walking, languor, and impairment of vision, the pupils being greatly dilated. When the dose is considerable, insensibility rapidly supervenes.

2. Maniacal delirium, flushed face, eyes glistening and in constant motion, the pupils being exceedingly dilated. There is no fever, but intense thirst and violent perspiration from incessant motion, *the pulse remaining very slow*. All the symptoms are noted as having a very remarkable resemblance to those occasioned by belladonna.

3. Those accompanying the fatuous condition already described.

It would seem that in small doses intoxication or delirium is the most marked symptom; in larger quantity insensibility speedily supervenes, and death may follow, or the patient pass into the fatuous condition described. It would also seem that the drug is sometimes given with no further evil intent than that of inducing the maniacal and fatuous symptoms for the sake of affording amusement to the bystanders. In most instances the knowledge necessary for the use of the drug in robbery would seem to be handed from one professional scoundrel to another—in many cases coming from Oudh, but in several acquired by coolies in the Mauritius.

It may be worthy of note, that the seeds of the datura closely resemble those of the capsicum universally used over India as a condiment, and the difficulty of their detection is enhanced by the fact that, apart from bitterness, the poison-seeds have little taste, and, as impure salt is generally used in India, the bitterness may be attributed to its excessive use without exciting any suspicion on the part of the intended victims.

THE WEEK.

TOPICS OF THE DAY.

We are glad to be able to announce that substantial progress has been made by the Committee of the three English Corporations in the work of drawing up a scheme for a conjoint examination in Medicine, Surgery, and Midwifery. At the last meeting, on Monday, the scheme to be submitted to the governing bodies of the Royal Colleges of Physicians and Surgeons and of the Apothecaries' Society was agreed on. Without professing ourselves aware of all the details of the arrangement — which, of course, may yet be submitted to further discussion in the Councils of the Corporations—we believe we may state confidently that the following are the chief features of the scheme:—In the first place, the Board is truly to be a conjoint one, the examiners being nominated by the three Corporations. The nomination of the examiners will be apportioned thus: — The Royal College of Physicians and the Society of Apothecaries will nominate examiners in Medicine; the Royal College of Surgeons will nominate examiners in Surgery; the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries will nominate examiners in Midwifery; the Royal College of Physicians and the Royal College of Surgeons will nominate examiners in Anatomy and Physiology; the Royal College of Physicians and the Society of Apothecaries will nominate examiners in Chemistry, Materia Medica, and Botany, and in Forensic Medicine. Candidates who shall pass the conjoint examination will be entitled to the licence of the Royal College of Physicians, the Membership of the Royal College of Surgeons, and the licence of the Society of Apothecaries, or to any one or two of these diplomas, without other fee or examination, upon undertaking to comply with the bylaws of the respective Corporations. The fee for the conjoint examination and diploma or diplomas is fixed at thirty guineas. A sufficient portion of the proceeds will be apportioned to the Royal College of Surgeons for the support of the Hunterian Museum and the library of the College. The question of the co-operation of the Universities, either by the nomination of assessors or examiners, has not yet come formally before the Committee. At this stage of the proceedings we must repeat that their co-operation would be most welcome and desirable, provided it be thorough enough to include the submission of all University students previously to graduation to the examinations of the Conjoint Board. This only is requisite to carry out, well-nigh in its entirety, the "one-portal" system. We trust that the Medical members of the governing bodies of the Universities will see the benefit to the whole Profession which must accrue from adopting this course—the benefit of union and substantial uniformity. It cannot for one moment be maintained that the Universities would risk either dignity or privilege by joining thus heartily in the amalgamation movement. Those bodies would have the power of supplementing, in the case of their graduates, to any extent they please the examinations of the Conjoint Board, and if the question of the fee raised any difficulty, the amount to be paid by undergraduates might be specially arranged. It is clear, however, that if the Universities still refuse to submit their graduates to the examination, the Conjoint Board, however we may regret it, cannot accept their co-operation. The Corporations have the power of nominating as examiners the very best men which Medicine can produce. The Board can gain nothing, therefore, from the Universities which the Corporations cannot supply, and it is only for the sake of uniformity and union that the co-operation of the Universities is so desirable. We heartily hope that it may be given, and we fully believe that sooner or later our hope will be realised. But, at all events, we congratulate the Committee on having discharged its duties thus far so successfully. As regards England and Wales, we repeat that the work which it has in hand is unquestionably the most practical piece of Medical reform since the Act of 1815.

In another column we publish a syllabus of Mr. Flower's lectures on the "Comparative Anatomy of the Digestive Organs," which commence on Friday, the 17th inst. The present course will be occupied with a description of the teeth of mammalia—organs of special interest to the palæontologist and comparative anatomist from their indestructibility and from the index they furnish to the character and habits of the animals. The Medical students of London are, perhaps, not aware that these lectures are open to them, on application to the Secretary of the College. If the attendance is in any degree commensurate with the interest of the subject—and, we may assuredly add, the value of the lectures—the theatre of the College will be overflowing.

The Royal College of Physicians have issued a short, but thoroughly concise and practical statement on vaccination and revaccination, in view of the present prevalence of small-pox. The College recommends:—

"1. That all persons who have not been vaccinated, or who have not already had small-pox, should at once be properly vaccinated by competent vaccinators. 2. That all persons who have passed the age of puberty, and have not been revaccinated since infancy, should be revaccinated. 3. That all persons, of whatever age, who have not sufficient and characteristic marks, and are likely, as at the present time, to be exposed to the infection of small-pox, should be revaccinated."

Dr. Douglas Powell has been elected Assistant-Physician to the Charing-cross Hospital. Two candidates for the Assistant-Surgeoncy have been selected; there is practically, therefore, no vacancy for that office.

We hear there is a vacancy for an Assistant Obstetric Physician to University College Hospital, and that Drs. Squarey, Wiltshire, and Edis are candidates for the post.

It is rumoured that the staff of University College are still endeavouring to obtain an amalgamation with another Hospital, for the purpose of giving increased facilities for Hospital work, with dresserships and clerkships, to their students.

The examiners in physiology of the University of London, Mr. Henry Power and Dr. Michael Foster, have addressed a letter to to the Registrar of the University, in which they suggest that the *vivâ voce* examination in physiology in the first M.B. examination should be abolished, or limited to clearing up uncertainties or obscurities of expression in the written papers, but that the practical examination in physiology should be remodelled. Hitherto, the practical examination has consisted of the exhibition of prepared microscopical specimens to be recognised by the candidate. A quarter of an hour has been allowed to each candidate, during which time six or eight specimens only can be shown. It would appear, however, that the supply of specimens at the service of the examiners has been limited, for they naïvely write—"As the students wait for their turn, they are told by those just come out what the preparations are; and hence the later comers appear to have more knowledge than they really possess." To remedy this and the other imperfections of the present system, the examiners suggest, "Let the whole of one day, or the halves of succeeding days, be given up to practical histology, and let the students be examined (say) in batches of twenty-four. The batch being placed in a suitable room, there would be allotted to each student a microscope, glasses, reagents, needles, scissors, razor, etc. Before each student there would be placed a few (four or five) characteristic mounted specimens, and as many portions of tissue, fresh or prepared for examination, all numbered and carefully selected. Each student would then have the whole three hours in which to examine without hurry, and to report upon the tissues and specimens thus presented to him. The examiners might also request the candidates to put up preparations illustrating this or that tissue or organ." The examiners also suggest that "each examiner might take a student aside for fifteen minutes, and during that interval put him through some simple physiological exercises—*ex. gr.*, simple stimulation of nerve and muscle, coagulation of blood, digestion, action of heart, uses of physiological instruments, physiological chemistry, etc. In this way, the two examiners would, in the three hours, pass before them the whole batch of twenty-four." We are glad to see that the Senate of the University have acceded to the suggestions of the examiners, as far as histology is concerned—at least, they deem it expedient to limit the practical examination, in the first instance, to histology. The candidates, in order to pass the examination, will not only have to familiarise themselves with the whole range of tissue anatomy, but they will have to acquire themselves a certain amount of manipulative skill, which cannot fail to be of use to them in their after-study of pathology. The Senate of the University has, thus far, made provision for carrying out the plan of examination indicated by the examiners, and notice has been given to the various Medical schools that, at the first M.B. examination of 1872 and subsequent years, candidates will be required to pass a practical examination in histology. The question whether it is desirable that the practical examinations in physiology should be carried further, is left open; but, provided the students are not required to take part in vivisection or operations inflicting pain, we can see no reason why these examinations should be limited to histology. We heartily agree with the Senate, however, that it *is* advisable that the *vivâ voce* examination in physiology should be retained, and that it should not be limited to the subjects of the written papers. The experience of all examiners of long standing we believe to be in favour of combining the methods of examining by written papers and by oral conversation. Many a man who has not the gift of expressing himself fully and perfectly on paper, can display his knowledge to better advantage when "drawn out" by an examiner. The converse is equally true.

The subject of the pathological changes in the spinal cord in cases of traumatic tetanus was discussed at unusual length at the Pathological Society on Tuesday last. Dr. Clifford Allbutt brought forward specimens obtained from four persons who had died from traumatic tetanus. In these there were more or less appearances of softening, venous congestion, extravasation, especially in the cervical and lumbar enlargements of the cord, together with proliferation of the epithelium in the central canal, and alteration of the nerve cells of the anterior cornua of grey matter. On the other hand, Dr. Moxon said that many of the spinal cords he had examined, taken from persons who had died from tetanus, exhibited no change which could be fairly said to be pathological. He, moreover, argued that considerable pathological changes in the cord were not likely to be found in tetanus, because in no case of recovery from tetanus of which he was aware was the disease followed by paralysis. One point noticed in two of Dr. Clifford Allbutt's cases has a practical bearing. In these the sheath of the nerve of the injured limb contained pus. Dr. Allbutt observed that such cases suggested a rediscussion of the question whether the nerve of the injured limb should be divided in the onset of traumatic tetanus.

MR. BERKELEY HILL ON THE STATISTICAL RESULTS OF THE CONTAGIOUS DISEASES ACTS.

We have before us, in a pamphlet form, extracted from the *Journal of the Statistical Society of London* for December, 1870, Mr. Berkeley Hill's paper on the Statistical Results of the Contagious Diseases Acts, read before Section F British Association, at Liverpool, September, 1870.

In attempting to estimate the numbers of venereal patients in London, Mr. Berkeley Hill thinks that we must accept with much reserve the estimate of the Medical Officer of the Privy Council, that only about 7 per cent. of the sick poor are suffering from venereal disease of any kind, and only about 3½ per cent. from true syphilis. But even accepting this estimate and the calculation of the Medical Officer of the Privy Council, that 1,500,000 persons are annually treated gratuitously in the metropolis, Mr. Berkeley Hill shows that we have 52,500 persons yearly suffering from venereal diseases; and, as 53 per cent. of the syphilitic patients are adult males, we get 28,000 of the male working population of London alone every year more or less hindered by syphilis from earning their livelihood. And these calculations do not include patients treated by regular Practitioners, by druggists, or by quacks, or those undergoing no treatment at all—a very numerous class. It must, however, be observed that the estimate as to a million and a half, or half the whole population of London, being treated gratuitously is open to the objection that we have no means of discriminating between *persons* and *cases*. The repeated appearance of the same person at an Hospital, or his application to another institution, increases the apparent number of persons obtaining gratuitous relief.

As another fact indicating the extent to which venereal disease prevails among the young adult population, Mr. Berkeley Hill extracts from the Annual Reports of the Army Medical Department a table showing that 16 per 1000 of those who offer themselves as recruits have true syphilis, and that 38 per 1000 of the rejected have syphilis. We suspect that in making use of the term "true" or "constitutional" syphilis as a cause of rejection of recruits for the army, Mr. Berkeley Hill assumes more than the returns warrant him in doing, as we are informed that venereal sores of all kinds are classed among the diseases which disqualify recruits from entering the army. He also gives a table (No. XII.), purporting to be extracted from the official statistical reports of the health of the army, showing the invaliding for venereal diseases in the British Army, as follows:—

Year.	Number Discharged for Venereal Diseases.	Ratio per 1000 of those Invalided.
1864	106	24
1865	185	39
1866	146	24
1867	172	52
1868	131	38

We have looked in vain through the reports of the years here given for the above information, or for any returns from which it may have been compiled; but, taking the Abstract No. 1 in the appendix of each volume for the five years 1864 to 1868 as our guide, we extract from it the following particulars, showing that in 1000 invalids discharged from the service the proportion of men disabled by venereal diseases is even higher than that given by Mr. Berkeley Hill. Although the proportion of the same class of invalids to the total strength of the army is not so high as might have been anticipated, it represents the total loss of half a regiment in five years, and, valuing each soldier at £100, a money loss to the amount of £49,300.

Year.	Annual mean strength.	Total number invalided.	Number invalided for enthetic diseases.	Ratio per 1000 of strength invalided for enthetic diseases.	Ratio per 1000 invalids of men disabled by enthetic diseases.
1864 ..	63,153	2056	116	1·8	56·4
1865 ..	62,911	1965	120	1·9	61·0
1866 ..	59,758	1789	77	1·3	43·0
1867 ..	62,901	1552	83	1·3	53·4
1868 ..	68,350	1471	97	1·4	65·9
Total ..	317,073	8833	493	1·5	55·8

These numbers refer only to men who have served throughout the entire year in the United Kingdom. The term enthetic diseases, moreover, includes constitutional syphilis and the results of gonorrhœa, but the number invalided for such causes presenting *primâ facie* evidence as to their origin gives a very inadequate idea of the real number of men disabled by enthetic diseases, as there can be no doubt that a large proportion of the cerebral, pulmonary, and abdominal affections, also of the chronic rheumatism on account of which soldiers are annually discharged from the service, is of syphilitic origin.

DR. C. A. GORDON, C.B.

The correspondent of the *Daily News*, who was the first person to enter Paris after the capitulation, among other incidents of his ride into the city, gives some information concerning Dr. C. A. Gordon, C.B., which will no doubt be gladly received by the friends of that officer. It appears that, since his arrival in Paris, some days before the commencement of the siege, Dr. Gordon has lived at the Hotel de St. Honoré, an old-fashioned and well-known house, kept by a worthy North Briton named Unthank, who has taken a pride in asserting, what the correspondent of the *Daily News* believes to be true, that, under his auspices, Dr. Gordon has lived better than any other man in Paris. The Hotel de St. Honoré is said to be the only house in Paris into which horseflesh has not been allowed to enter. There is some store of oatmeal in Paris, and Dr. Gordon's nationality having inured him to the use of porridge, he was enabled to enjoy and thrive on it, while others, not to the manner born, gave themselves internal uneasiness by eating the stuff which bore the conventional name of bread. But Mr. Unthank was able to do for his guests better still than this, as, on the day on which the *Daily News* correspondent dined at his establishment, a fowl was supplied—pretty nearly the last in Paris, and for which, while it had its feathers on, 80 fr. had been refused. The visitor also bears testimony to the excellence of the Scotch whisky-toddy which Mr. Unthank keeps for his friends. So, between one thing and another, we hope to see Dr. Gordon return to this country nothing the worse in bodily frame from his siege experiences.

FOUL AIR IN THE LAW COURTS.

It is not only amongst the ignorant and prejudiced that common sanitary precautions are neglected. It is well known that for years the Houses of Parliament were badly ventilated and uncomfortable. The state of our law courts is really disgraceful. Those at Westminster are constructed as badly as can be conceived for comfort and health. Cases are not uncommon in which persons who are long engaged in either of them are seized with faintness or some indisposition which requires their removal. As a juryman is occasionally the victim, the trial has to be stopped, or, as was the case on Tuesday last, a new jury to be empanelled, and the trial commenced *de novo*. The *Times* reporter attributes the foul atmosphere of the Court of Queen's Bench to the overcrowding of the passages leading to it.

> "As it is," he says, "these passages, the only avenues for air and means of ventilation, are allowed to be densely packed with human beings close up to the bar and the jury-box, from which it follows that the heat of the Court is intensely increased, and that the ventilation of the Court is entirely prevented; added to which, the entrance of persons is so obstructed that it is only after a severe struggle it can be effected."

No doubt this is correct, but why should the passages be the only means of ventilating the Court? Surely it would be easy to devise some plan of letting fresh air into a building even as badly constructed as the Court of Queen's Bench.

MURDER OF FRENCH MILITARY SURGEONS BY PRUSSIAN SOLDIERS.

A CORRESPONDENT of the *Daily News*, writing from Dijon, on the 26th ult., describes his visit to Hauteville, where the members of the Saône and Loire Ambulance had been murdered on the night of January 21 and 22, in the house of the sister of the Mayor of Hauteville. This lady stated that on the night in question her house was converted into a temporary Hospital for French wounded, the red-cross flag was hoisted, and, secure under its fancied protection, the Surgeons and *infirmiers*, having attended to the wounded, were seated in the kitchen, awaiting some food which was being prepared for them. Suddenly the Prussians, under command of an officer, rushed in to search for Francs-tireurs, long after firing had ceased on both sides. They found none, but attacked the unarmed Surgeons and attendants. The head Surgeon, Dr. Morin, received two balls in his head, an officer discharged his revolver into his breast, and the soldiers finished him off with their bayonets. Dr. Milliard was murdered outside the house, while trying to escape; the *infirmiers*, D'Heret, Champigy, Fleury, Legros, and Moine, were fired on and wounded by officers armed with revolvers. The assassins carried off the four horses, materials, and even the Surgical instruments belonging to the ambulance. The same correspondent confirms the account of the Franc-tireur captain having been burned to death by the Prussians at Daix.

A HOMŒOPATHIC DIAGNOSIS.

A LADY, as we are informed, was approaching the age of 50. She was the mother of a numerous family, and her youngest child was born about ten years ago. She had resided for many years in India, but had been living at home for a considerable time, and, on the whole, had enjoyed good health. She was an ardent homœopathist, and in October or November last came up to town to consult the practitioners of the homœopathic art on account of general *malaise*, lumbar pains, some abdominal swelling, and slight jaundice. She was ordered to take Turkish baths, and to employ various remedies, as to the nature of which we are, of course, in ignorance. An aggravation of symptoms, and an increase of debility, followed this treatment, and we believe the patient procured the attendance of another homœopathic physician, who took quite another view of the case, and stated that all that his predecessor had done had been utterly wrong. The premature birth of a stillborn child was the startling revelation of the true nature of the case to all concerned, and the death of the mother a sad comment on its diagnosis and treatment by the homœopathic attendants.

The age of the patient, the interval since the birth of her youngest child, and her long residence in India, might for the time have diverted the minds of her attendants from the suspicion of pregnancy; but we maintain that if the usual means of physical diagnosis of that condition had been carefully employed, the nature of the abdominal swelling would have been detected, and the pregnancy would in all probability have advanced to a natural and safe termination.

That portion of the public who resign themselves to homœopathic treatment, do so, of course, on their own judgment and at their own risk. How immensely that risk is increased, when careless, incorrect diagnosis is superadded, the case which we have mentioned affords abundant evidence.

THE CHAPLAINCY TO STEEVENS' HOSPITAL, DUBLIN.

WE regret to observe that one of the indirect effects of the disestablishment of the Church of Ireland has been to deprive Steevens' Hospital of the sum of £1000, with which the chaplaincy of the institution had been endowed by Mrs. Esther Johnston, better known as "Stella." The chaplain, the Rev. William Dobbin, having claimed, in virtue of his office, to be considered as a perpetual curate of St. James' Parish, his Counsel, Mr. Pilkington, Q.C., quoted the following clause in Mrs. Johnston's will, said to be in the handwriting of Dean Swift:—

> "And if it shall happen (which God forbid) that at any time hereafter the present Established Episcopal Church of this kingdom shall come to be disestablished, and no longer the National Established Church of the said kingdom, I do declare wholly null and void the bequest above made; and I do hereby divest the governors of the principal and interest, and in that case it is to devolve on my nearest relatives living."

Judge Lawson, one of the Commissioners of Church Temporalities, remarked that it was rather curious that Dean Swift himself had made a similar disposition. The claim was disallowed, on the ground that chaplains of public institutions cannot be considered as parochial curates.

SEWAGE AT OXFORD.

IN view of the impending heavy penalty for fouling the Thames with the town sewage, after May next, the local authorities (University and city) of Oxford have adopted a plan for thoroughly draining the whole district of the local board, at a cost of £40,000. This will provide for some twenty-three miles of sewers, the contents of which, kept separate from the rainfall, will be conveyed to Iffley, more than two miles down the river.

FROM ABROAD.—THE WOUNDS FROM THE NEEDLE GUN AND THE CHASSEPÔT—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

IN the *Deutsche Klinik* for November 19, Dr. Ewich furnishes a communication upon "The Differences in the Wounds caused by the Needle Gun and the Chassepôt." Residing at Cologne, he has had ample opportunity of studying the subject on the persons of hundreds of the many thousands of wounded French and Germans who have been consigned to that city. 1. The first point he notices is that the needle gun, as a general rule, gives rise to a much wider track, and in consequence the matter arising from the wounds it causes is discharged with much greater facility. 2. Then the orifice by which the ball from the chassepôt enters is much smaller than that caused by the needle gun, and, in recent wounds, is sometimes scarcely perceptible, resembling a mere round suggillation, which has to be inspected closely to discover the small aperture. The orifice of exit, on the contrary, is so wide that the end of the finger or thumb can be passed in. The difference in the two orifices is also quite perceptible in the wound from the needle gun, but it is not so remarkable. 3. The tracks of wounds of the thorax coursing under the skin, caused by either of the two arms, gave rise to little pain or suppuration, while those involving the soft parts of the limbs were attended with abundant discharge. 4. These circular wounds of the thorax are much more dependent upon the elasticity of the skin than upon that of the ribs. The shape of the ball does not seem to exert any influence. 5. The narrow, long wound-tracks in the soft parts, and especially in those of the thigh, more easily give rise to the gravitation of pus than do the wounds with wider tracks. Such cases were oftenest observed among the German wounded, although the wounds with wider tracks, caused by the needle gun, in soft, lax tissues, were not exempt from such gravitation. 6. The grazing and spent shot, which sometimes injured only the skin, or induced slight inflammation in the vicinity, came most frequently from the chassepôts, because of their being fired from greater distances. 7. The chassepôt causes the same injuries to the joints and shafts of the bones as the needle gun; and sometimes cases which at first appear as mere grazing of the bone by a chassepôt ball, at a later period are attended with much suppuration, and turn out to be fractures. 8. Owing to the shape of the chassepôt ball, however, this will sometimes graze the shaft of a round bone, which, by a needle-gun ball, would have certainly been fractured. The mere striking of the bone without fracture may, however, by the contusion it gives rise to, set up inflammatory action in the periosteum and the medulla of the bone, inducing osteo-myelitis. 9. The centre of gravity of the needle-gun ball lying more forwards than that of the chassepôt, if it strike the shaft of a bone with even less force, will usually crush it. The chassepôt will only produce this effect when fired point-blank; otherwise, it may easily glance off, or become so compressed as to give rise to the supposition of the lead being soft. 10. This glancing off (*conturirung*) of the ball, however, may occur with the needle gun, but in a far less proportion than with the chassepôt. Exact statistics as to the lesser gravity of these injuries to bones from the chassepôt are not yet attainable. 11. To the form of the ball is greatly due the intensity of the injury, and in a humanitarian point of view the preference should be given to the chassepôt.

Dr. Ewich enters into an elaborate comparison of the form, weight, and mode of propulsion of the balls of the needle gun, chassepôt, and mitrailleuse; but for his account of these, we must refer those interested to his paper.

Professor Billroth, in his tenth letter, observes that although the newspapers were constantly announcing the great dearth of Surgeons, he never could make out when and where this existed, and he and all those with whom he conversed on the subject found them in superfluous abundance. The Hospitals at Weissenburg and Mannheim were already well supplied with skilled assistants; and although it was not always easy to refuse the crowd who were pressing for active employment, yet how could it be given to persons whose capabilities were known to no one, and who, arriving from all parts of Europe, would have only interfered with or paralysed the activity of assistants who had been chosen in consequence of their ability. It is obvious that all that could be done for the some ten Surgeons who arrived daily was to refer them to the period of visiting the patients, and then the busy officer on duty could only find time to give them the briefest information. Much more might have been done for them if some of these numerous Surgeons had limited their inquiries to definite points. Had any experienced inquirer busied himself, for example, with collecting and pursuing cases of gunshot wound of the thigh, knee, etc., he would have been able to visit the various Lazareths in a systematic manner, and would have received every possible assistance.

> "That immediately after a battle, and especially in an enemy's country, Surgeons are always too few in number is true enough, and will always remain so. How can it be otherwise? The commanding officer, himself, often does not know how soon a battle may take place, or what extension it may take, and if he does know he will not communicate it beforehand. The advancing army is already overladen with it enormous *matériel*, and it is impossible that this should be augmented by multiplying field Hospitals ten-fold. Admitting that there might be a great amount of aid organised by the volunteer societies at a few miles' distance from the seat of war, and which might be advised by telegraph of the commencement of a battle, what general would allow the trains and railways to become obstructed, or locomotives or horses employed that he might find required for strategetic purposes? Were they even possessed of horses, these would be liable to seizure by the military. If a nation has finally resolved to wage war, before all things it demands that the armies it sends forth shall prove victorious. In face of this leading idea, any scruples on account of the loss of a thousand or two men, more or less, would be criminal towards the country, and would be an insane perversion of humanitarianism if defeats or partial victories resulted from a temporary care for men's lives impeding the suitable strategetical combinations, and thus prolonging the war more and more, and increasing the losses that might have occurred. I will not say that during the present war all has been done that was possible for the supply of rapid aid to the wounded; but as long as sanitary columns (*Sanitäts-colonnen*) and field Hospitals cannot be transported through the air to their appropriate positions, some days must always elapse before an extensive battle-field can be cleared, the slightly wounded sent far away, and materials enough brought up to erect field Hospitals for the treatment of the severer cases. Two or three days may well be required for the completion of all this, although when good means of communication are still open it may be accomplished more rapidly."

Professor Billroth believes that in future wars it will be essential that the Aid Societies and Johanniter shall be organised in the same manner as the military Medical service, for at present it is quite a matter of chance whether the Hospitals they do erect are supplied by suitable persons. Still, the active usefulness of all voluntary bodies must be dependent on their means of locomotion and the state of the communications; several instances have occurred in which the sanitary bodies have been entirely separated from their *matériel* and means of usefulness. Members of such societies should travel in not too large numbers, some of them, not in connexion with their waggons, but free in all their movements, holding themselves in readiness for administering and supplying the Hospitals about to be erected, the entire body working harmoniously under the direction of the Surgeon-in-chief. In travelling-bags and knapsacks they should carry as many bandages and instruments as they conveniently can, but not more. When their services are no longer required, they can move on to where they are in demand. "An iron will and an iron constitution are prime requisites for the members of such *Lazareth-colonnen*."

Returning again to the subject of the superabundance of volunteer Surgeons, Professor Billroth observes:—

> "As I have already said, neither at Weissenburg nor at Mannheim did I find any lack of Doctors, while all who had the management of Hospitals suffered from their superabundance. Almost all of the great number who came, especially during September, did so with the form of speech that they wished to place their services at our disposal. I say with the form of speech, for if they were put to treat the weary and footsore, the slightly wounded, or those suffering from dysentery and typhus, they then said that they had not travelled hundreds of miles for such purposes. They were for the most part mere battle-field loafers, every one of whom wished to be Surgeon-in-chief, and act without control. As the majority of the German Professors of Surgery who were not officially attached had already offered their services, it was very natural that they should be preferred as chiefs of the aid societies' Hospitals."

In contrast with these were, however, the Medical officers attached to the Dutch Red-Cross Society, who undertook and persevered in the most laborious work in their own Hospitals, or in any others in which their services of any kind promised to be useful; and warm indeed were the thanks bestowed upon them by the sick soldiers and wanderers. The reluctance of the volunteer Doctors to attend to any but the wounded became quite epidemic, although it was in this direction that aid was chiefly required. At first, of course, the number of wounded always is in excess of that of the sick; yet after a while, even during this war, which at first was carried on during a period so exceedingly favourable to the health of the troops, the numbers soon became alike, and after the second month the sick were in excess of the wounded. This, which is only a result of the reported experience of every war, has not been sufficiently taken into account. The number of the Lazareths was indeed, for this reason, too few, or the military force would not have been weakened as it was by the distant transport of even slight cases of diarrhœa, which in a few days would have been able to rejoin the army. So, also, slight cases of dysentery, which were transported by the railways day and night, lying at the bottom of luggage trains, scarcely covered with straw, and often unaccompanied by Medical aid, were rendered much worse, although the reports in the newspapers on the subject were exaggerated. Professor Billroth speaks highly of the sanitary trains (*Sanitätszüge*), which were soon arranged for the transport of the badly wounded, in which, suspended on their mattresses, they lay in great ease. Care had to be taken, however, not to suspend too many in one carriage, owing to the great difficulty of ventilating it. The most sensitive patients were not those suffering from fracture of the limbs, but the subjects of injuries of the chest, who were sometimes thrown into a state of the greatest suffering on the occurrence of any shaking movement. These patients felt easier when lying on a bed placed on a mattress or sack of straw, or, when possible, on three or four mattresses piled on each other. When such accommodation could not be obtained, it was found best to keep them on their bedsteads, the feet of which rested in straw or chaff. By the press it was often urged that these sanitary trains should be more generally employed, in order that the wounded should be at once transported with as much comfort as possible. This is all very well on paper; but practically such trains are sometimes in one place and sometimes in another, become "*requirirt*" for military purposes, and are dispersed in every direction. It is impossible that such empty trains can be allowed to stand at railway stations near the seat of war, awaiting their employment for their specific purpose. They would only serve still further to bewilder the railway officials, who have, as it is, enough to do to meet the military exigencies. Most of the Hospital trains, which were in September despatched with some difficulty to the vicinity of battle-fields, returned either without any wounded, or filled only with the slightly wounded and typhus cases.

After describing his daily routine of work at Mannheim, and giving some idea of the operations he performed, Professor Billroth continues—

"With many men the accounts of their proceedings in war-time much resemble that of their success in the hunting-field. The number of badly wounded and operations which are said to have crowded into the hands of some of our otherwise sensible colleagues, is simply incredible. Those who are aware of what a Surgeon who has had very great experience, and who has long been accustomed to rapid thought and action, can execute, and then hear from Practitioners, who, as Surgeons, can only be regarded as mere *dillettanti*, that they have been able to get through twenty or thirty times the work in half the time, can only regard such statements as very vexatious. A Surgeon will not enumerate as operations the removal of balls, dilatation of wounds, and opening of abscesses; and if the Practitioner does lug these into account, it will still remain a falsehood when he boasts of his hundreds of operations and his thousands of wounded. You must not expect that I am going to deal with these hundreds and thousands, although my field of observation has been a proportionally large one."

Having now said what he wished on these personal matters, Professor Billroth, in his future letters, proposes to give some of the results of his observations of the cases that have come under his care.

(*To be continued.*)

MUSCULAR ANOMALIES.—At a recent meeting of the Royal Irish Academy, an abstract from a paper by Dr. McAlister was read, entitled "Additional Observations on Muscular Anomalies in Human Anatomy, with a Catalogue of the principal Muscular Variations." The author stated that there are more than 2000 deviations from the normal arrangement of the muscles in the human body. Of these upwards of 1500 had been seen by Dr. McAlister himself. The paper will be published.

DR. RICHARDSON ON CHLORAL HYDRATE.

BEFORE commencing his lecture on experimental and practical Medicine, on Tuesday last, Dr. Richardson offered some observations on the subject of hydrate of chloral, to which we would call the attention of our readers. He said—

"My lecture to-day is on suspended animation, but I will ask you to allow me first to offer a note or two on another subject at this moment of urgent importance—I refer to the administration of the hydrate of chloral. There have recently been two assumed deaths from the hydrate. In the course of the past ten days I have myself been consulted not fewer than three times on what have been considered dangers attending the administration of the hydrate; and I know generally that doubt and uneasiness prevail in the Profession respecting the abuse as opposed to the use of this agent. I think it right, therefore, as I had much to do in introducing chloral hydrate into Medical practice into England, to answer a few of the questions that are most pressing from this place, where so many demonstrations of the action of the hydrate have been carried out.

"*Question* 1.—*Is the practice of resorting to the use of hydrate of chloral as a narcotic, in the absence of Medical advice and direction, becoming a common practice amongst the people?* The answer to this question is strictly affirmative. The novelty of its administration, and of proving its effects at an end, the hydrate is not at the present time used so largely by the Medical Profession as it was a few months ago, when its true place in the Materia Medica was less clearly defined. The sale of the hydrate to Medical men is, consequently, considered as declining, while the general sale is, perhaps, increasing. Corresponding with this state of things, we in the Profession are becoming conversant with cases of what may not improperly be called chloral drinking, and in which singular and serious symptoms are presented. Three classes of people specially resort to hydrate of chloral—viz., alcoholic devotees, who take the substance to counteract excess of alcohol and of alcoholic delirium; sufferers from neuralgia and other painful chronic diseases, who find in the substance temporary relief from pain; and persons having much mental worry, grief, or care, who, flying to it at first in order to obtain sleep, continue it until the occasional practice becomes a persistent habit. As an indication of the quantity of hydrate of chloral used in this country since its introduction here about a year and a half ago, I may state, incidentally, on what I have every reason to consider reliable authority, that one commercial house alone has supplied the English drug market with ten tons of the substance; three other houses have, it is supposed, supplied as much, so that fifty tons weight have been on this calculation sent out—an amount which, divided into grains, would yield over 36,000,000 narcotic doses to England alone since August, 1869.

"*Question* 2.—*What is a dangerous, and what is a fatal single dose of hydrate of chloral?* The largest dose I have known to be taken was 120 grains. This dose produced a prolonged and dangerous coma, but recovery ultimately followed. I think we may consider 120 grains, as a maximum dose for an adult, dangerous, but not of necessity fatal. Beyond 120 grains the danger increases, and 180 grains may be considered a dose that would prove, in the majority of cases, positively fatal.

"*Question* 3.—*What quantity of hydrate of chloral can be given with safety in divided doses, during a stated period of time, say of twenty-four hours?* Judging from the physiological effects of hydrate of chloral in relation to dose and to order of phenomena in relation to time, I should infer that the body cannot decompose and throw off the hydrate more rapidly than at the rate of from five to seven grains an hour. There will be difference according to age of person, the temperature to which the body is exposed after the dose has been taken, and the largeness of the dose, a small dose being disposed of quicker, in proportion, than a larger one. But the variation is not such as to alter materially the rate of action from the estimate given: I should consider consequently that 120 grains administered, even in divided doses, in twenty-four hours, would be the safe limit of administration. In the treatment of tetanus this proportion has been exceeded, but not, I think, to the safety of the patient; for the fact that the hydrate overcomes or reduces the spasm is no safeguard against its own poisonous effects. From what I know, I conclude that the hydrate of chloral can be given to the extent of overcoming the severest spasm; but if the dose be carried too far, with the determination of removing spasm at all risks, the success may easily be bought at the expense of a fatal narcotism from the remedy.

"*Question 4.—Does the frequent administration of hydrate of chloral lessen or increase the danger of the administration?* On this question I am forced to state that the frequent administration of chloral, though it may suggest greater confidence in it on the part of those who take it, increases the danger from an excessive dose. Hydrate of chloral differs from opium in this respect. Opium produces chronic symptoms peculiar to itself, but the dose may be steadily increased without *immediate* danger from the increase. Hydrate of chloral cannot be used in this accumulative way without danger. In a word, although a person may become habituated to chloral, there is a limitation to the quantity to be taken safely, which limitation is not materially modified by persistence in the habit of taking, but rather the reverse."

After discussing three other questions relating to the symptoms and pathological changes incident to the habitual use of chloral hydrate, to the chemical tests for the hydrate in cases where it has caused death, and to the post-mortem distinctions in instances of chronic poisoning by hydrate of chloral and of poisoning by chloroform, Dr. Richardson closed by observing, that as the world was indebted to the Profession of Medicine for the benefits derivable from the hydrate of chloral, it behoved the members of the Profession to use their influence in protecting the public from an agent which, under improper use, might be turned from its good purpose to positive evil.

MEDICAL REPORT OF THE SMALL-POX AND VACCINATION HOSPITAL FOR 1870.

PRESENTED TO THE ANNUAL GENERAL COURT OF THE GOVERNORS, HELD ON FRIDAY, FEBRUARY 3, 1871.

THE year 1870 will be memorable in the Medical history of the nineteenth century. It has been marked by an epidemic of small-pox of peculiar severity, which has found the population of this metropolis very inadequately protected by vaccination, and therefore but little prepared for such a visitation. A much larger proportion of the population has been attacked by small-pox in the course of the existing epidemic than has ever occurred in the memory of the present generation. The epidemic of small-pox continues, and is extending. Each succeeding week it becomes more widely diffused, and the number of persons attacked is greater.

Small-pox was epidemic in London during the whole of 1870. Judging from the monthly admissions of patients into the Small-pox Hospital, the epidemic may be assumed to have commenced in November, 1869. The rise and increase of the epidemic during at least a portion of its course will be shown by the monthly admissions into the Small-pox Hospital. For the last three or four months of the year, however, our admissions give no adequate idea of the prevalence of small-pox. Owing to the crowded state of our wards during the months of October, November, and December, large numbers of applicants have of necessity been refused admission, and, although additional Hospitals have been opened in various parts of the metropolis, and the accommodation for small-pox patients has been enormously increased, it has been found insufficient to meet the requirements of the epidemic.

The minimum of admissions into the Small-pox Hospital in 1869 was in the month of August, when they were only twenty-eight. At that time small-pox was sporadic only, and epidemic influence had not yet come into operation. It may serve, therefore, for a standard of comparison with the months that follow.

Monthly Admissions of Patients into the Small-pox and Vaccination Hospital.

1869:	August	28	1870:	May	112
	September	31		June	112
	October	34		July	113
	November	51		August	89
	December	52		September	108
1870:	January	79		October	144
	February	66		November	159
	March	73		December	178
	April	83			

In the year 1870, 1316 patients were admitted into the Small-pox Hospital. Of these, 1285 were suffering from small-pox, and 31 from various forms of eruptive or febrile disease not small-pox, but assumed to be so, and on such assumption sent to the Small-pox Hospital. Of these 31 cases, 3 died. Of the 1285 cases of small-pox, 962, or 74·9 per cent. of the whole cases, had been vaccinated, and 322 were unvaccinated. One patient was said to have had small-pox previously, and that case recovered. Of the 962 vaccinated cases, 76 died, giving a mortality of 7·9 per cent.; whilst of the 322 unvaccinated cases, 124 died, being a mortality of 38·5 per cent. Six of the deaths—5 in the vaccinated and 1 in the unvaccinated class—were due to gangrene or some other form of superadded disease. Upwards of 30 patients admitted last year are still in the Hospital under treatment, and of these several are in great danger.

The general mortality for the year 1870 has been 15·4 per cent.

The high death-rate of the last year was due in part to the unusual severity or malignancy of the disease, and in part to the number of children suffering from small-pox who have been received into the Hospital. Ten years since—namely, in 1860—7·37 per cent. only of the whole admissions were children under 10 years of age. As will be anticipated, the greater proportion of these were unvaccinated, and amongst them the mortality was 33·8 per cent. In 1870, more than 16 per cent. of the whole admissions were children under 10 years of age, and the mortality amongst those of them who were unvaccinated was as high as 42 per cent.

Not a single fact has occurred within our experience at the Hospital during the past year to shake our confidence in vaccination when properly performed, or to detract in any degree from that high estimate of its value which many years' experience in the wards of the Hospital and a close study of small-pox have led us to form. But vaccination is an operation of considerable delicacy, and requires much care in order to secure the advantageous results it is capable of imparting. The failures of vaccination to prevent fatal small-pox which have occurred are almost all of them due to the careless and imperfect manner in which it has been practised.

In the present state of the population, revaccination is of scarcely less importance to the adult than is primary vaccination to the infant. A very large number of the adult population of this country are without adequate protection from vaccination, and are liable to take small-pox in its gravest and most deadly form. All persons who have not already had small-pox, and have been, or are likely to be, exposed to the infection of that disease, and all who have not several (at least four) good marks testifying to the character and efficiency of the primary vaccination ought to be revaccinated. Revaccination has proved itself to be a most important and efficient means of preventing small-pox. For upwards of thirty years, all the nurses and servants at the Small-pox Hospital who had not previously had small-pox have been revaccinated before entering on their respective duties, and in no one instance has it failed to preserve them from small-pox. We believe, therefore, that revaccination extensively practised, and with the same precaution to insure efficiency as ought to be observed in primary vaccinations, will prove to be the most certain mode that could be adopted of checking the present epidemic of small-pox. 360 persons have been vaccinated at the Hospital during the year, and 580 charges of vaccine lymph have been supplied to the Medical Profession at home and abroad.

WILLIAM MUNK, M.D., F.S.A.,
Physician to the Hospital.
J. F. MARSON, F.R.C.S.,
Surgeon to the Hospital.

PRELIMINARY COMMUNICATION CONCERNING THE FUNCTION OF THE PROSTATE GLAND.

By Dr. KRAUS,
Editor of the *Vienna Medical Times*.

I BELIEVE that I have discovered some essential points relating to the function of the prostate; but I will at present only make some preliminary statements that I think will be found to deserve attention.

1. The seminal fluid, as long as it remains within the testes, vesicles, and other seminal passages, is colourless and scentless, being in appearance exactly like fresh honey while deposited in the comb; and in its reactions it is neutral.

2. Only when it has quitted the passages and arrived in the

urethra does it acquire its white colour and its peculiar faint smell.

3. During its passage through the prostatic portion of the urethra, the prostate empties out its fluid, colours the semen white, and confers upon it the faculty of coagulating when exposed to the air (alkaline reaction). Semen taken from the seminal vesicles does not coagulate, but remains clear, colourless, and scentless.

4. The spermatozoa, in the absence of the prostatic fluid, cannot live in the mucous membrane of the uterus of mammalia; but with its aid they may live for a long time in the uterine mucus, often more than thirty-six hours.

I have conducted these experiments with the greatest care, and recommend their repetition, in order that the truth of my positions may be ascertained. From the above, the conclusion may be drawn that the prostatic fluid exercises an unlimited influence on the viability of the spermatozoa, sustaining it when endangered by the mucus secreted by the mucous membrane of the uterus.

This is undoubtedly the case with those species of animals which possess a prostate, and I intend next to extend my investigations to those species which are destiute of this.

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,
Now Prisoner of War at Versailles.

(*Continued from page* 111.)

On the 18th, early, as we were leaving Metz, heavy cannonading could be heard in the distance ahead of us; the battle of St. Privat had begun by daylight that morning, and the whole army—occupying the line of defence between Rezonville, Gravelotte, Armanvillers, and St. Privat, over a distance of eight miles—was engaged long ere we reached the field. The battle of St. Privat, called by the Prussians "St. Marie aux Chênes," is, so to say, a continuation and end of the battle of Gravelotte, fought on the 16th, for there was fighting on the 17th as well, and the movement of the bulk of the army in a northerly direction was operated for no other purpose than to gain a better camp and a better line of defence. The great extent of territory over which the army was spread made it difficult for our ambulance to find a suitable point, so as to be most useful. M. Lefort chose Lessy, a little village midway and about two miles in the rear of the troops in action, for our head-quarters. We were here, though quite a distance from the battle-field, still what is generally termed *une ambulance de première ligne*. Our flag was quickly displayed over the church, which we had taken charge of, and before our *infirmiers* could be sent forward, wounded were beginning to arrive. The inhabitants of the village—who, fortunately, had nearly all remained at home—assisted in getting together mattresses, straw, wine, and water, so that after the first dressings were attended to the peasants did the rest. A couple of barrels of wine stood on draught near the entrance of the churchyard, and every new-comer or passer-by was greeted with a cupful. The slightly wounded and the wounded in the upper extremities were, in every case possible, sent to Metz on foot; the most severe cases only were kept in the village.

The artillery fire from the enemy must have been terrible, judging from the great number of shell-wounds which came to us. I remember, among others, our *infirmiers* bringing in a sergeant-major with both legs and the left arm shattered from the explosion of a single shell; the triple amputation, performed by M. Liégeois, at first promised to do well, but purulent infection set in, and the man died a month afterwards. A great number of shell-wounds of the scalp came under my observation that day, and I have since learnt, from the ill-successes which attended these wounded, that the slightest shell-wound of the scalp and the head must be regarded as very dangerous. Such men often leave the battle-field scarcely complaining of headache; they do well for some days, until suddenly high fever, delirium, and the whole train of symptoms of meningitis declare themselves. Many, also, of these wounded in Metz died of pyæmia. It was two o'clock in the morning when we were able to lie down upon some straw, between the benches in the church, to get a few hours' rest.

Inasmuch as we could only take time to make minutes of the more important cases, it is impossible to give an exact statement of the work done that day and night, but I am sure that fifteen of us attended to the dressing and first care of some 800 wounded—proof, I think, that a volunteer ambulance can do good, in spite of what "pure" military men may say to the contrary.

The French admit that everything appertaining to their army is rotten to the core. Agreed! but I would add, that the branch in which the greatest changes and the greatest improvements are necessary is field Surgery. The means of assisting the wounded during and after a battle are criminally insufficient; whether the battle-field remained in our hands or with the enemy, in every action around Metz wounded were neglected, and hundreds of them suffered and died from want of proper attention. The pangs of the wounded soldier—of one who has fought bravely for his country—should, and can, be greatly lessened by the Physician's care; this is his duty. Precious few, however, of the 40,000 wounded in the Hospitals in and around Metz have had this consolation; on the contrary—and I repeat it—hundreds have died for want of proper organisation in the Medical department. And how can it be otherwise, as long as the Intendance controls us? The Medical department in a large army in the field is too important an item to be mixed with sundry others. The people of the United States, during the war of secession, had the moral courage and the good sense to separate the Medical from all the other departments of the army; and where, I ask, have ambulances and Hospitals—everything, in fact, appertaining to the sick and wounded—been better conducted than in that country?

The first step in the French army after peace will be to adopt the Prussian system. That this improvement must also bring about a change in the Medical department can scarcely be doubted.

The battle of St. Privat—styled by the Prussians the "Sadowa of the war," and in which the French losses amounted to from 18,000 to 20,000 in killed and wounded—lasted until long after dark. Canrobert's corps, on our extreme right, gave way about five o'clock in the afternoon, resulting in a hasty retreat, and a consequent falling back of the whole army towards the outer forts of Metz. It is generally admitted, I believe, that Bazaine showed himself very capable, on this occasion, in foiling the enemy in his attempt to cut off our retreat. From that day (on August 18), the army, Metz, and everything in it, became effectually blockaded and cut off from all communication with the outer world.

(*To be continued.*)

REVIEWS.

Wonders of the Human Body. From the French of A. Le Pileur, Doctor of Medicine. Illustrated by forty-five engravings by Leveillé. London: Blackie and Son. Pp. 256.

Of late it seems to have become fashionable to publish books of "Wonders" translated from the French. We are, fortunately for ourselves, not in a position to state accurately the value to be placed on all of them, but if we are to take M. Pileur's volume as a sample, the greatest wonder appears to us to be, that there have been found a translator and publishers for such a book. The author shows symptoms of being an educated Frenchman; as to being a physiologist, his claims are not at all doubtful, for it is difficult to look over a page without detecting more than one error. The drawings are said to be by Leveillé, and on certain of them the name is to be seen imprinted; but it is exceedingly difficult to reconcile such scratchings, we suppose we must call them, with the beautiful workmanship of the same gentleman elsewhere; we should be inclined to call some of the performances before us villanous.

The author tells us that the elementary anatomical structures of the body are globules, fibres, tubes, cells, and amorphous material; that De Blainville has called the colouring matter of the blood *hematosine;* that M. Longet (and no one else) has shown the existence of minute, and therefore harmless, proportions of sulpho-cyanide of potassium, one of the most virulent poisons, in the saliva; and that the fibres of Remak are found in nerves of motion (nothing is said of any other situation). Nay, more, we are informed that "the organs of digestion are the mouth, the pharynx, the œsophagus, the stomach, the liver, and the pancreas." Why the viscus into which the two last pour their secretion, and where alone they can have any digestive action, is not included we are not told. But the translator also seems to have forgotten his *rôle*—if, indeed, he ever knew it; for in this part of the work we are told of a duct called that of "Sténon"—one which we do not readily recognise under such a cognomen, but at which we may nevertheless guess. Next we are told that the liver secretes sugar; that the special use and purpose of the spleen are unknown—and, we presume, unguessed at.

There is nothing said of hydrochloric acid as existing in the stomach, only lactic acid, which is usually nowadays considered an abnormal product. When absorption is mentioned, not a word is said of the discoveries of Graham as to dialysis, only something of Dutrochet's old experiments in *osmose.* People would laugh at us were we to quote what is said of the functions of the great sympathetic nerve, but we are assured that " it is formed by the sensitive and motor filaments coming from the cranial nerves, or from the roots of the spinal nerves." Let these examples suffice, for we are weary of making more. The original author has apparently followed French authorities and no other, and the translator seems to have followed the original author more slavishly still. If the book does no harm we shall be content; it is plain it will do little good.

First Medical and Surgical Report of the Boston City Hospital. Edited by J. Nelson Borland, Physician, and David W. Cheever, Surgeon. Boston: Published by the Board of Trustees. Pp. 688.

It is hardly possible to do justice to a volume like this in the short space at our disposal, for not only is it weighty with solid matter, but it is also overlaid with elaborate statistics. The Hospital is a new growth, having been opened only in 1864, but its usefulness has rapidly extended since that time, for during the five years the Hospital has existed the numbers treated have enormously increased.

The volume begins with a paper on Perinephritic Abscess, by Dr. Bowditch, a subject which that author has made peculiarly his own, and on which he is an esteemed authority. Ten cases are here recorded, seven not having before been made public, and four of them occurring in this Hospital. The two conclusions he drew in former articles on the subject were, that with perinephritic abscess, left to itself, there was great danger of chest complication, and, consequently, that the abscess should be tapped before even there was any appearance of pointing —as soon, in fact, as the diagnosis was made clear. These chest complications are apt to be overlooked if the whole bearings of the case be not considered, and hence a careful physical examination should be made in all cases falling recently under notice. In his present article, Dr. Bowditch strenuously urges early operation, and, if no pus make its appearance, he advises that the wound be kept open. As an appendix is published a tenth case, ending in death. No operation.

The next paper is on Excision of the Joints, from the pen of Dr. D. W. Cheever. He says the large joints have been excised twenty-eight times in this Hospital, the elbow ten times, the hip eleven times, the knee six times, and the wrist once. The shoulder and ankle have not been excised. The total mortality was ·43 per cent. In excising the wrist, a longitudinal incision was made on the dorsal and another on the palmar aspect of the hand. The patient subsequently died of uræmia. Of excisions of the hip, two occurred in adults, nine in children; the adults died, and two only of the children did very well. The cases of the children are subsequently considered in detail. Neither can we congratulate the Boston Surgeons on their excisions of the knee. In each case the operation was for disease, and the cases must either have been badly selected, or the Surgeons very unfortunate, for only three recovered " with more or less useful limbs." It is a well-ascertained fact that every case of knee-joint disease is not fit for excision; and, when the prospect is bad, it is better to amputate as low down on the thigh as possible.

An exceedingly interesting article on Cases of Pneumonia, by Dr. J. N. Borland, comes next—190, in all, are tabulated, and the results given. As usual in such tables, a certain amount of the information given is not very valuable, but other portions of it are. The duration, for instance, of the disease he makes out to be, on an average, eleven days before entering the Hospital, and twenty-three and a half within its walls, the complicated cases lasting rather longer. The list of complications given seems rather absurd, especially as we note only a single case where Bright's disease existed, and only two with cardiac mischief, although both are potent agents in inducing the disease. As to temperature, where noted, the author gives nothing new. The treatment adopted was generally restorative; milk was given *ad libitum*, beef-tea and white wine whey at frequent intervals. A jacket poultice was sometimes employed, and occasionally vinum antimoniale was given, in small doses frequently repeated. Of the uncomplicated cases, ninety-seven were discharged well, two relieved, and ten died.

Article IV. deals with Displacement of the Upper Jaw. Its author is Dr. Cheever. This really means dealing with a naso-pharyngeal polypus which had caused protrusion of the jaw-bone, and interfered with deglutition. The peculiarity of the operative procedure, which was twice rendered necessary, was the retention of the upper jaw-bone. It was only temporarily bent down in front, the antrum was exposed, and the tumour removed. The patient did well. Both Langenbeck and Ollie have tried similar plans, and a case is here recorded wherein Dr. Peaslee, of New York, performed a like operation on both jaws at the same time.

(*To be continued.*)

NEW BOOKS, WITH SHORT CRITIQUES.

Ought the Contagious Diseases Acts to be Repealed?

⁂ This anonymous little pamphlet—all inartistic from a literary point of view, but laden with Christian charity—seems likely to supply, in a certain degree, an antidote to the mischievous nonsense talked and written by a certain section of the opponents of these Acts. We are perfectly well aware that these Acts are conscientiously opposed by men and women who, in any interests but those of what they conceive morality, would object to find themselves allied with utter unbelievers; and it may be well for them to know, as this little pamphlet teaches, that God-fearing men and women may heartily support Acts which they had supposed to be subversive of morality. Let any unprejudiced person visit a Hospital under these Acts, and they will see that in the calm regularity, which can be enforced if necessary, there exists a more suitable atmosphere for the work of the bible-woman or missionary than in the pandemoniums frequented by the perverse opponents of these Acts, and where they hold forth on woman's rights and the constitution of England.

Alleged Increase of Lunacy. By C. Lockhart Robertson.

⁂ A reprint from the *Journal of Mental Science*, in which the entire subject is treated with ability, the result being to show that insanity is not on the increase.

GENERAL CORRESPONDENCE.

DR. BURDON-SANDERSON ON SPECTRUM ANALYSIS.

Letter from Mr. Jabez Hogg.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Sanderson's lecture, in this week's *Medical Times and Gazette*, page 124, contains a somewhat puzzling statement with regard to the value of spectrum analysis, and one which can scarcely be allowed to be passed over in silence. He says: —" The application of the spectroscope to the examination of absorption spectra—*i.e.*, the spectra which are produced when the light which is admitted into the spectroscope has passed through coloured transparent liquids—is neither more nor less than a method of analysing colour. The optical facts which it enables us to estimate by precise measurement are the same of which we judge by the eye alone, the only difference being that our judgment of them is more accurate. In this regard the spectroscope stands in the same position with other instruments of research which do not bestow upon us any new faculty, *but only* enable us to use those we already possess to greater advantage." To my mind, such a statement tends to dethrone the spectroscope from that high position assigned to it by such investigators as Stokes, Hoppe, Sorby, Thudichum, etc., and I doubt much if this can be the intention of Professor Sanderson. If it is, then I cannot help saying that I believe he does injustice to an instrument which, beyond the shadow of a doubt, is of the highest value in the physical and chemical sciences—not as a means of " estimating the precise measurement of colour " only, but as a method of qualitative analysis—since it is founded on the power possessed by many substances of developing peculiar bright lines in the spectrum flame; and, doubtless, the absorption bands observed in the spectrum of both vegetable and animal (coloured and uncoloured) fluids indicate the most delicate changes in their chemical constituents, and, when we shall have been able to read them rightly, must prove of incalculable service.

The spectroscope used simply as a means of more accurately analysing colour, could never have entered into Dr. Thudichum's mind when working with it to assist in determining the chemistry of the normal and pathological ingredients of the animal body and "the chemical identification of disease;" neither could colour have had much to do with the discovery by Crookes of thallium. Take a specimen of urine, which to the eye gives a most doubtful indication of colour, place it before the slit of the spectroscope, and the well-known absorption bands of reduced hæmatin are at once seen. To a certainty we know blood is contained in such a specimen of urine. With the micro-spectroscope we recognise the characteristic absorption bands when a single dried blood corpuscle, having lost all appearance of a corpuscle, is put in a glass slide, moistened, and submitted to examination. The colour to the unaided eye of this speck is of no value whatever—even with the highest power of the microscope is scarcely recognisable—and, therefore, until the spectroscope is brought into requisition, the investigation was of no service to science. Indeed, in such a case the colour-value of the object might fairly be put out of the question. The lens of a wild rabbit kept for a time in dilute acetic acid, taken out and dried, and burnt in the flame of a Bunsen jet, produced the brightest of sodium bands and the solitary band of thallium. Here, again, we deal with a perfectly colourless substance. Further, take two solutions totally unlike each other in colour—one a pale blue, the other a lively pink. It could not have been supposed that one skilled in the use of the spectroscope should have been able to say that both were derived from a copper salt; so it has proved, however, in the case of tauracine. Recognition by colour, or probably other ordinary known means, would not have enabled chemists to warn the toxicologist of the presence of two virulent metallic poisons often naturally occurring in the animal body, whereas the spectroscope readily detects thallium and iridium; and the merest tyro in science can detect the one three-millionth part of a milligramme of sodium with the utmost certainty.

I am, &c.,

February 6. JABEZ HOGG.

"A FEVER DEN."

[To the Editor of the Medical Times and Gazette.]

SIR,—From a paragraph in your last impression I learn that Fleet-row, a court in the Holborn District occupied exclusively by Italians, is, on the finding of a coroner's inquest conducted by Dr. Hardwicke, stigmatised as above. A more inappropriate and unmerited epithet could not be applied to it, except it be on the principle of "*lucus a non lucendo*," for there are no other eighteen houses in the district so constantly free from continued fever and all other preventible diseases as this court.

The case under investigation was one of no uncommon occurrence—that of an infant, aged 3 months, overlaid in bed by the man or woman who kept its mother to either sit as a model for artists, or to dance and play the tambourine to a bagpipe-blower in the public streets. The late Mr. Wakley used to assign the true cause of death when he classed them as "Saturday night cases." Now, the practice with, I regret to say, a Medical coroner is, to impress upon juries "that the house is so overcrowded as to render the air most noxious and dangerous to the unfortunate occupants," and then follows the verdict of "Death by suffocation from want of fresh air." The jury proceed to draw up requisitions to the local authorities, the Medical Officer of Health, and the Inspector of Nuisances, drawing attention to the imaginary overcrowding, the disgraceful state of the house, etc., not one of which requisitions ever comes into the hands of the parties named.

As regards the house in question—No. 7, Fleet-row, Eyre-street-hill—it consists of three rooms. A large one on the ground floor has a window, and a door opening into it from the front, and another window and door from the back yard. This room was occupied by a man, his wife, and two children under 10 years of age, and the servant girl with her infant, that was brought up by hand, in order that its mother might follow her out-door avocations. The cubic space of the room is such that each adult would have about 400 feet, and each child half that amount. The two rooms above are smaller, but are each tenanted by a man and his wife, with an infant in one instance.

Not knowing who Mr. Cole was, I wrote to ask Mr. Norton the number of the houses, and whether his evidence was correctly given in the report you published. I append his reply, from which it appears that his evidence related to an Italian lodging-house, which is really two houses knocked into one—viz., 1 and 2, Eyre-court—having a common dining-hall or kitchen on the ground floor. My inspector has counted thirty-five or forty persons asleep at midnight in these two houses; so that probably Mr. Norton's informant did not exaggerate in saying that fifty persons had slept in the two houses. But what this hearsay evidence about a different class of house, in a different court, had to do with the premises *sub judice*, I am unable to state, unless it was to give confidence to the jurors in drawing up their requisitions for the use and benefit of—shall I say—the "penny-a-liner."

On the best authority, I do know that this so-called judicial investigation has nearly been the means of depriving many of the Italians of their employment as models in the art school of the Kensington Museum.

A few months ago an equally, if not more, unfounded verdict was recorded by the same coroner as to an infant which was overlaid by its mother in Baldwin's-gardens. The mother and three small children occupied a good-sized and well-ventilated room. Death was attributed to noxious and foul air, resulting from the overcrowding, although the mother, the day after her child's death, went to a place as wet-nurse which she had previously secured.

The coroner's court is a venerable institution, and may do a little good, but you will, perhaps, agree with me that nothing but mischief can result to the court—*i.e.*, the coroner's—and the community from their propounding untrue and exaggerated verdicts. This is the day of commissions of inquiry, and I would respectfully suggest to yourself or to one of your Medical contemporaries that an inquiry into the constitution and procedure of the coroner's court would do much good.

I am, &c.,

THE MEDICAL OFFICER OF HEALTH FOR HOLBORN.

February 8.

REPORTS OF SOCIETIES.

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ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 24, 1871.

DR. BURROWS, F.R.S., President, in the Chair.

A PAPER by Mr. JOHN G. FRENCH was read "On the Probable Cause of the Post-mortem Muscular Contractions in Cholera, and on the Philosophical Treatment of that Disease." The author believes that a physical law of nature, discovered by Dr. Marshall Hall, accounts for the post-mortem contractions in some cholera patients. He also thinks that Dr. Hall's study of the subject of hibernation, in which he discovers abnormal physiological conditions for prolonging life without food, suggests an analogy to the abnormal conditions in cholera, where these sustain life during the elimination of a mortal poison. Appropriate treatment results from the premises as a necessary consequence.

A paper by Dr. ROBERT LEE was read "On Cases of Hysteria with Sneezing." This paper contained an account of two cases of hysteria in which sneezing fits formed a prominent symptom. The author did not profess to give any explanation of the occurrence.

A paper by Dr. E. MERYON was read "On Suggestions in Support of a Rational System of Therapeutics." In a former paper Dr. Meryon showed that every ganglionic centre of the sympathetic system of nerves has three distinct elements, over and above the ganglionic cells, and that each element or nerve-cell has its own special attribute; the sensory fibres, to impart the vital sense of an organ, affecting its histological tissues, without operating immediately on its bloodvessels; the motor fibres, to incite vascular action and secretion in response to the vital sense; and the grey fibres of Remak, to restrain and regulate the stream of nutriment conveyed by the arterioles into the cell-territory for secretion or for assimilation. In the present paper the above anatomical and physiological data are utilised for the purpose of interpreting the operation of many medicinal agents. For instance, the fact shown by M. Claude Bernard, that section of the fibres of Remak induces increased vascularity and elevation of temperature in the parts to which those sympathetic nerves are supplied, has its pathological counterpart in inflammation, in which, owing to the loss of the inhibitory influence of the nerve-fibres of Remak, blood corpuscles penetrate into those minute arterioles through which blood-plasma only should be propelled. In the spurred rye (ergota), we have an agent which produces the very opposite effect. By increasing the inhibitory influence of the sympathetic fibres, it diminishes the calibre of vessels, shuts out blood corpuscles from the capillaries, and even the blood-plasma itself, and so restrains many forms of hæmorrhage. Dr. Meryon then goes on to show that, just as the localised ganglionic centres of innervation are suggestive of independent action, and localised, accelerated, or retarded circulation is an obvious indication that the vascular function of each individual gland is regulated by such ganglionic centre, so have we medicinal agents which localise their power on special parts, either by exciting or restraining their functions. This proposition is illustrated by showing the manner in which drugs having antagonistic actions exert their influence on the different individual organs. Seeing that most pathological conditions are but extensions or exaggerations of physiological actions, and the effects of derangement of the operations of the vaso-motor nerves; seeing, moreover, that we have therapeutical agents which stimulate, or assist, or supplement the attributes of the vaso-motor nerves, on which the healthy functions of all organs depend, Dr. Meryon concludes, that in the knowledge and due appreciation of such aids we have the foundation of a rational and scientific system of therapeutics.

CLINICAL SOCIETY OF LONDON.

Friday, January 27.

Dr. W. W. Gull, President, in the Chair.

The President delivered an Inaugural Address (which we published last week) to a large number of members, which occupied thirty-five minutes, and was listened to and received with marked attention and approval.

Dr. Silver read an Account of certain Cases of Rheumatism treated with Veratrum Viride. The drug was given in two-minim doses every hour, ten-minim doses, which were first given, causing sickness and pain in the epigastrium. Its effects were noticed chiefly with regard to two particulars: reduction of temperature, and diminution of pain. The temperature charts were laid before the meeting, and the author was of opinion that they testified to an abatement of bodily heat as soon as the drug-influence had time to manifest itself; but the cases being only six in number, and his opportunities for further observations being meanwhile in abeyance, he fortified his position by the experience of Biermer, who had used the drug largely in the treatment of crupous pneumonia, and in whose hands it had acted powerfully in inducing defervescence. In the cases recorded a speedy diminution, in certain of them a complete abolition, of pain was brought about within forty-eight hours after giving the drug. As to the other objects to be aimed at in treating acute rheumatism, specially the removal of any *materies morbi* from the system, the facts recorded did not enable the author to speak; except that with its use the urine speedily became clear. As to the obviation of heart-complications, it was pointed out that these depended rather on the period of the disease than the withholding of any special mode of treatment, patients ordinarily giving evidence of the complication during the first week of the disease, or at the period of relapse. For reasons hinted at above, the paper could only be considered as a fragment, but might be useful to those who cared to pursue the subject further.

Dr. Clapton commenced the discussion by remarking that he had found the stomach very intolerent of veratrum viride. It was well known that the North-American Indians used it in the ceremony of choosing their chiefs, because it was thought that the individual who resisted the irritating effects of the drug most successfully must be the best man. Hence, according to his experience, it was necessary to combine the veratrum with opium or some other sedative, so that it was difficult to know which preparation procured relief. He believed the effects of veratrum were somewhat allied to those of colchicum and digitalis.

Dr. Murchison had no experience of veratrum in rheumatism. He had, however, employed it experimentally in pyrexia, and entirely subscribed to Dr. Silver's remarks as to the remarkable effects produced on pulse and temperature, as in cases of scarlet fever, pneumonia, and typhus treated by the drug; lowering, both of pulse and temperature, were markedly observed. He did not, however, think that it shortened the duration of disease, and discontinued its use, or rather did not adopt it, because rather alarming symptoms approaching to syncope were induced (without any irritation of the stomach), requiring the use of stimulants. The drug, however, was worthy of further trials, and would, he hoped, receive further attention.

Dr. Thorowgood hoped that the author of the paper would have included some experiences of aconite as compared with veratrum in the prevention of pericarditis.

Mr. Carter asked if exact notes had been taken as to frequency and force of pulse—say, half an hour after the drug was taken—and, if any change was observed, how long that change continued.

The President asked, if any negative cases occurred, in what way the failure consisted—whether as to pulse and temperature, or not.

Mr. Kesteven remarked that, in veterinary practice, a decrease of temperature always followed the taking of any drug.

Dr. C. T. Williams asked if the drug produced any effect on the urine or the alvine evacuations.

After some remarks from Mr. Barwell as to the treatment of inflamed joints,

Dr. Silver replied that these were all cases treated as in-patients, but that he had seen the most marked effects as to the success or failure of the drug among out-patients. He was glad to have the support of so excellent an authority as Dr. Murchison as to the effect of veratrum in reducing temperature. He could give no information to Dr. Thorowgood as to the relative value of aconite and veratrum. From the exceedingly small doses given, there was at first no derangement of stomach, and no direct effects on the pulse, both becoming gradually affected. The only exact information as to the secretions was gleaned from America, where it appears that in some cases the urine was notably increased by it. The author added that since writing the paper he had found that veratrine had been used for acute rheumatism in Trousseau's wards, and was greatly commended by Bouchut. Arran had also confirmed its very remarkable powers in lowering the temperature, the pulse, and respiration. From the physiological inquiries of Kölliker and Pelikan, it seemed probable that veratrum acted primarily and directly upon the heart, but he had rested his views on its remedial action alone. The author greatly regretted that the number of cases at his disposal had not permitted him to contribute more than a fragment to the history of the drug.

Mr. Teevan briefly related the particulars of four cases of unusually Large Calculi, and stated that there were four points of interest:—(1) that the calculi were large; (2) that the method adopted for their extraction was not in accordance with the rules laid down and accepted by Surgeons; (3) that the patients recovered; and (4) that there was no incontinence of urine in any case. Surgeons usually extracted calculi by means of a limited internal incision, and a subsequent so-called process of dilatation, which was in reality complete rupture of the prostate and its capsule. This method was opposed to the teachings of anatomy, and was usually followed by one of three bad results—death, impotence, or incontinence of urine. If, on the contrary, a free incision be made into the bladder, the rate of mortality will be lessened, and such sequences as impotence or incontinence of urine be abolished. One of the reasons which deterred Surgeons from making a free internal incision was the fear of infiltration of urine. Now, such an event, after lithotomy, was a physical impossibility. Infiltration of urine could only occur when the fluid was pent up and was unable to escape. After lithotomy, the urine passed freely, either by the wound or per urethram. Now, as there was no danger of infiltration of urine from making a free incision, and as the extraction of a calculus without the rupture or incision of the prostate was not possible, it followed that it was preferable to extract a stone by cutting it out rather than by tearing. Mr. Teevan stated that after he had, with the forceps, grasped the calculus, he was in the habit of introducing a probe-pointed bistoury, and cutting downwards and outwards sufficiently freely to enable the stone to glide out of the bladder without the slightest traction being exerted. He brought forward the above cases to show that the method was unattended with danger, and that the patients were in all respects better off by being treated with free internal incisions rather than by indefinite lacerations of important structures.

Mr. De Morgan said every Surgeon would corroborate the view that it was better to cut than to tear the prostate. He thought there was a difference between the mode suggested and that adopted—that is to say, between making a single large incision in the prostate, and cutting it in various directions. The multiple incisions might be advisable with a large stone, ordinarily they were not so.

Mr. Teevan said he made a moderate incision in the prostate, laid hold of the stone, and then cut in various directions until it was released. There was no such thing as dilating the prostate ; there was laceration merely, and the laceration sometimes extended even to the ureter.

Mr. **Barwell** said that in cutting the prostate they had to try to avoid cutting the fascia ; if that were done, the only chance for the patient was to make the external opening very large. He had never felt anything like a tear.

Mr. **Teevan**, in reply, said no one could tell whether the prostate was cut completely through or not. He believed there was no such thing as infiltration of urine after lithotomy; the external incision did not matter. His subsequent excisions must have far exceeded the prostate, and that must be always the case with children. Pathological specimens showed that some patients lived long after tearing the capsule of the prostate. Soon after an operation the cut surfaces would be covered with lymph.

OBITUARY.

SHERIDAN MUSPRATT, M.D., F.R.S.E.

This well-known chemist died on the 3rd inst. in his 51st year. He was a man of good abilities and suggestions; somewhat too fussy and demonstrative, but, notwithstanding a somewhat over-estimation of himself, he did good service in his time, especially in relation to his discovery of the virtues of a mineral spring. In addition to his qualifications above stated, he was a Member of the Royal Irish Academy, and Membre de la Société D'Encouragement, etc., etc.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a special meeting of the Court of Examiners, on the 8th inst., viz. :—

Chessall, William, M.D. St. Andrews and L.S.A., Horley, Surrey, of the Middlesex Hospital.
Liebreich, Friedrich Richard, M.D. Berlin, Cork-street, Burlington-gardens.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 2, 1871 :—

Green, Charles Josephus, Sunningdale Berks.
Turner, William Mulholland, King's-road, Chelsea.

The following gentleman also on the same day passed his First Professional Examination :—

Parkhouse, Henry, Westminster Hospital.

The Apothecaries' Hall, Dublin.—At the Quarterly Examinations, which commenced on January 2, 1871, at the Apothecaries' Hall, the following candidates obtained the Certificate in Arts :—

Bergia, Daniel.
Emerson, Thomas Gilbert.
Kenny, Michael Joseph.
Leggett, Charlotte Maria Ianthée.
McCabe, John.
Murphy, James.
O'Connor, James.
Revell, John.
Seagraves, Charles.
Smith, Michael.
Spain, Rody.

At the same time the following gentlemen obtained the Licence to Practise :—

Barry, Richard John.
Boland, Christopher Thomas.
Halahan, John W.
Kidd, Henry.
McEnter, William Charles.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cowell, George, F.R.C.S.—Assistant-Surgeon to the Royal Westminster Ophthalmic Hospital.

Smith, R. Shingleton, M.D. Lond., B.Sc., etc.—House-Surgeon to the Bristol Royal Infirmary, *vice* Dr. Ludlow, appointed Assistant-Physician.

MILITARY APPOINTMENTS.

Medical Department.—Assistant-Surgeon Julius Wiles, from the Rifle Brigade, to be Staff Surgeon, *vice* Francis John Shortt, appointed to the 6th Foot. Staff Assistant-Surgeon Thomas Norton Heysted, to be Staff Surgeon, *vice* William Henry Price, appointed to the 46th Foot. Assistant-Surgeon Thomas Wood, M.D., from the 45th Foot, to be Staff Assistant-Surgeon, *vice* Frederic William Lloyd Hodder, M.B., appointed to the 45th Foot.

Rifle Brigade.—Staff Assistant-Surgeon Alexander Minty, M.B., to be Assistant-Surgeon, *vice* Julius Wiles, promoted on the Staff.

6th Foot.—Francis John Shortt, to be Surgeon, *vice* George Edwin Gains, deceased.

45th Foot.—Staff Assistant-Surgeon Frederic William Lloyd Hodder, M.B., to be Assistant-Surgeon, *vice* Thomas Wood, M.D., appointed to the Staff.

46th Foot.—William Henry Price, to be Surgeon, *vice* Robert Speedy, deceased.

BIRTHS.

Galton.—On February 1, at Thicket-road, Upper Norwood, the wife of John H. Galton, M.D. Lond., of a daughter.

Horneby-Wright.—On February 7, at Clarence Lawn, Dover, the wife of Jos. C. Horneby-Wright, M.D., Surgeon 2nd Battalion 17th Regiment, of a son.

Ogilvie.—On February 7, at Oxford, the wife of John Forbes Ogilvie, M.D., Egyptian Medical Service, of a son.

Tanner.—On February 4, at 9, Henrietta-street, Cavendish-square, the wife of Thomas Hawkes Tanner, M.D., of a son.

Thurston.—On February 6, at Ashford, Kent, the wife of Edward Whitfield Thurston, Surgeon, of a son.

Woodman.—On February 5, at Queen-street, Deal, the wife of Frederick Woodman, M.D., of a daughter.

MARRIAGES.

Brooking—Puddicombe.—On February 2, at St. Jude's, Wolverhampton, Charles H. Brooking, M.D., of Brixham, Devon, to Laura, daughter of the late Alfred Puddicombe, Esq., of Mortonhampstead, Devon.

Harris—Vigers.—On January 31, at St. Peter's, Paddington, Arthur G. R. Harris, L.R.C.P. Lond., M.R.C.S.E., to Mary, eldest daughter of Edward Vigers, Esq., of Tavistock Lodge, Upper Westbourne-park.

Hives—Vesey.—On February 7, at St. Swithin's Church, Magherafelt, County Londonderry, Charles John Hives, Esq., Lieutenant Royal Navy, eldest son of Charles Hives, Esq., of 6, Clarendon-place, Hyde-park-gardens, London, to Anne Frances Georgina, eldest daughter of John Stuart Vesey, M.D., of Bellevue, Magherafelt.

O'Bryen—Burke.—On February 1, at the Pro-Cathedral, Kensington, Basil, second surviving son of the late John Roche O'Bryen, M.D., to Harriet Matilda, youngest daughter of the late William Henry Burke, both of Thistle-grove, South Kensington.

Orton—White.—On February 1, at the Parish Church, Beeston, Notts, Frederic Orton, M.D., of Hornsey, to Clara, daughter of the late G. White, Surgeon, of Nottingham.

DEATHS.

Boott, Mary, widow of Francis Boott, M.D., at her residence, 48, Gower-street, on February 6, aged 76.

Muspratt, Dr., at the Hollies, West Derby, Liverpool, on February 3, aged 50.

Parry, Augusta B., the last surviving daughter of the late Charles D. Parry, M.D., of Summer-hill, Bath, in London, on February 2.

Rees, Louisa, widow of the late George A. Rees, M.D., formerly of 45, Finsbury-square, E.C., at 17, Canonbury-square, on February 7.

Richmond, Robert Knewstub, Surgeon, of 11, Bermondsey-square, on February 5, in the 59th year of his age.

Werner, Ernst, Esq., son of Dr. Ernst Werner, of Darmstadt, at Camberwell, on February 4, aged 24.

Whitfield, Charles Tomlins, Esq., late Surgeon Royal Artillery, at Brighton, on February 5, aged 81.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Alnwick Union, Northumberland.—Medical Officer and Public Vaccinator for the Embleton District. Candidates must be duly qualified in accordance with the requirements of the Poor-law Board. Applications and testimonials to J. A. Wilson, Clerk, Alnwick, on or before February 23. Election on the 24th.

Bristol General Hospital.—House-Surgeon ; must be a Member of the College of Surgeons of London, Edinburgh, Glasgow, or Dublin, and be L.S.A. London or Dublin. Applications and testimonials to the Secretary on or before February 24.

Devon and Exeter Hospital.—House-Surgeon. Applications and testimonials to E. Force, Esq., at the Hospital.

Dursley Union.—Medical Officer for District No. 3. Candidates must be duly qualified in accordance with the General Orders of the Poor-law Board. Applications and testimonials to Mr. George Wenden, Clerk to the Guardians, on or before February 15. Election on the 16th.

Hospital for Women, Soho-square, W.—Physician ; must be a Graduate in Medicine of some recognised University, and be a Member of the Royal College of Physicians of London. Applications and testimonials to H. B. Ingram, Esq., Secretary, on or before February 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon ; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Lancaster Dispensary.—House-Surgeon ; must have both Medical and Surgical qualifications. Applications and testimonials to the President on or before February 16.

Poplar and Stepney Sick Asylum District.—Resident Medical Superintendent for the New Asylum at Bromley, Middlesex. Candidates must be duly qualified and registered. Applications to be made on printed forms, which may be obtained of Mr. R. Foskett, Manager's Offices, Stepney Union Workhouse, Bromley, E., on or before February 24.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

St. Mary's Hospital and Dispensary for Women and Children, Quay-street, Manchester.—Visiting Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to John Barber, Esq., Secretary, 41, John Dalton-street, Manchester, on or before February 17.

St. Thomas's Hospital.—Assistant-Surgeon; must be a Fellow of the Royal College of Surgeons of England. Applications and testimonials to be sent, under cover to the Treasurer, to the Office, 13, St. Thomas's-street, S.E., on or before February 14. Election on March 9.

St. Thomas's Hospital.—Resident Assistant-Surgeon; must be a Fellow of the Royal College of Surgeons of England. Applications and testimonials to be sent, under cover to the Treasurer, to the Office, 13, St. Thomas's-street, S.E., on or before February 14. Election on Feb. 28.

Strand Union.—District Medical Officer for the District of St. Martin-in-the-Fields. Candidates must be duly qualified and registered. Applications and testimonials to the Guardians of the Strand Union, 6, Bow-street, W.C., on or before February 13.

University College Hospital.—Assistant Obstetric Physician. Applications and testimonials to John Robson, B.A., Secretary to the Council, on or before February 22.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Banbury Union.—Mr. Thomas Harris has resigned the Chipping Warden District; area, 8580; population, 1538; salary, £43 2s. per annum.

North Witchford Union.—The Second District is vacant; area, 10,628; population, 2712; salary, £40 per annum.

APPOINTMENTS.

Aylsham Union.—Frederick Little, M.R.C.S. Eng., L.S.A., to the Fourth District.

Bosmere and Claydon Union.—Frederick Gull, M.R.C.S. Eng., L.S.A., to the Coddenham District.

Guisborough Union.—Alexander Cameron, M.D. and M.C. Univ. Glas., to the Danby District.

Melton Mowbray Union.—James Roberts, M.R.C.S. Eng., L.S.A., to the Melton Mowbray District.

Skirlaugh Union.—Robert V. Ash, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., M.B. Univ. Aber., to the Skirlaugh District and the Workhouse.

South Metropolitan School District.—John Wilton, M.R.C.S.E., L.S.A., L.R.C,P. Edin, to the School at Sutton.

The Poor-law Board has sanctioned the expenditure of £350 by the Paddington guardians for the erection of an iron Hospital for the reception of small-pox cases in that parish.

The Metropolitan Board of Works have given permission to the Native Guano Company to erect works at Crossness for the utilisation of sewage.

Mrs. Gladstone, the wife of the Premier, offers two houses at Clapton to be used temporarily as a Small-pox Convalescent Home.

The British Orphan Asylum, Slough, has received no less than three donations of £1000 each from an anonymous donor with the initials R. W. T.

Dr. Liebreich.—It will be seen in another page that this distinguished Ophthalmologist was examined and admitted a Member of the Royal College of Surgeons on Wednesday last, preparatory, it is stated, to being invited to the Ophthalmic chair at St. Thomas's Hospital.

Munificent Support.—"S. W. Y." has for the third time kindly sent £1000 to the exchequer of the Great Northern Hospital.

The Middlesex Hospital.—This institution has just received a donation of £1000 from "D. T. S.," being the third sum of a similar amount for which the funds of the Hospital are indebted to their anonymous benefactor.

Belfast Royal Medical Benevolent Fund.—The annual meeting was held last week. Dr. Browne, R.N., was re-elected treasurer, and Dr. Stewart honorary secretary. The Fund is in a satisfactory state, but it is intended to increase its amount by some one of the Council or members calling upon those gentlemen not connected with the Fund, to solicit their aid and co-operation.

The death of William Keith, M.D., of Aberdeen, took place at Edinburgh on February 6, of apoplexy. He was admitted a Member of the Royal College of Surgeons of Edinburgh in 1822, and was appointed a Surgeon of the Aberdeen Infirmary in 1843, retiring from the Senior Surgeonship of that institution in June last. He practised Surgery very successfully for over forty years, and was widely known throughout the North of Scotland as a most skilful and successful operator.

Munificent Donation.—At the last weekly board of the General Hospital, Birmingham, the chairman announced that a cheque for £500 had been received from Messrs. E. and A. Ludlow, which they hoped would cover the expenses entailed upon the Hospital by the late calamitous accident at their works. Messrs. Ludlow had also sent a cheque for £50 as a donation to the "Temporary Building Fund."

Question in Vaccination Law.—An important question was raised on Monday last at Bridgwater, in connexion with the objection which some parents still entertain to having their children vaccinated. The magistrates ordered the fathers, who appeared before them in answer to summonses, to bring their children into Court, which they declined to do, on the ground that they were not the custodians of the children, but that the mothers were, up to 7 years of age. The Bench adjourned the case till Monday next, for the production of the children, but it was intimated that they would not be forthcoming.

Small-pox in Large Establishments.—In several of our large establishments the assistants have been revaccinated, in order to avoid the possibility of catching the disease. This simple fact has given rise to an unfair and cruel report—that the disease itself is prevalent in several large houses at the West-end of London. Inquiries have been made into the truth of the assertion, and the result has shown that such a scandalous report is baseless. Several well-known houses have been visited, and it is found that, although hundreds of the young people employed have been revaccinated, there is not a single case of small-pox among them. It is necessary to make this fact known, because many regular customers at these establishments may, not knowing the rumour to be groundless, be debarred by fear from continuing their patronage, and almost inconceivable losses may accrue to the proprietors in consequence.

Sudden Death.—On the 1st inst., Dr. Bunny, Coroner for Newbury, Berkshire, held an inquest on the body of Mr. S. Chesterman, who for many years had an extensive practice as a Surgeon at Banbury, but had latterly retired from the Profession. Last week he arrived on a visit to his sons-in-law, Messrs. B. and J. C. Pinnifer, solicitors, in Newbury. While sitting by himself in an armchair in the dining-room, he suddenly expired, and was found almost immediately afterwards by Mr. Cockburn Pinnifer in an easy attitude. He had apparently died without the least struggle. The jury found that death arose from heart disease. Mr. Chesterman was 67 years of age, and much esteemed in Banbury and its neighbourhood.

Society for Relief of Widows and Orphans of Medical Men.—At a quarterly Court of Directors of the Society, held January 11, £1078 10s. was voted in various sums to fifty-six widows, and £242 to fifty children for the half-year beginning January 1. A sum of £22 was granted to one widow and two children as extra grants from the Copeland Fund. In the absence of the President, Dr. Pitman, V.P., took the chair. The Court was well attended. The usual business of such meeting was transacted. Only two new members were proposed. There were none for election. The directors once again urge on the Profession the necessity of increasing assistance to enable them to meet the very heavy and increasing demands on the Society. It is expected the balance-sheets of 1870 will show but a few pounds to the credit of the Society. It having been decided that no anniversary festival be held this year, the directors earnestly request the wealthier members of the Profession to make donations to the declining funds of the Society.

Effects of Frost on Iron.—The general opinion is that cast and wrought iron become more brittle under the influence of a low temperature, and that hence arise some of the railway accidents from broken tires, which we hear of every winter. This matter has been discussed at the Manchester Literary and Philosophical Institution, with the result that the popular notion is unfounded. Dr. Joule said the common-sense explanation of these accidents is, that the ground being harder than usual, the metal with which it is brought into contact is more severely tried than in ordinary circumstances; but to set the matter at rest he made a series of experiments on wires, needles, and cast-iron nails, from which he concludes that—"Frost does not make either iron (cast or wrought) or steel brittle, and that accidents arise from the neglect of the companies to submit wheels, axles, and all other parts of their rolling stock to a practical and sufficient test before using them." Similar experiments with the like result were made by Mr. Spence and Sir W. Fairbairn, and the last-named gentleman points elsewhere for the real cause. "The danger" he says, "arising from broken tires does not, according to my opinion, arise so much from changes of temperature as from the practice of heating them to a dull red heat, and shrinking them on to the rim of the wheels. This, I believe, is the general practice, and the unequal, and in some cases the severe strain to which they are subject, has a direct tendency to break the tires. What is required," he adds, "in this description of manufacture is, that the rim of the wheel and the inside of the tire should be turned to a standard gauge, accurately calculated to give the required amount of tightness with a larger margin of strength; and this done we should attain greatly increased security to the public, and a great saving in wear and tear—to say nothing of the large sums expended by companies in the shape of compensation for injuries and loss of life." Says *Nature*, "Here, then, is another potential triumph for more scientific accuracy, and more hope for travellers."

ROYAL COLLEGE OF SURGEONS.—Professor Erasmus Wilson, F.R.S., will bring his course of lectures to a close this day (Friday). Sir William Fergusson, Bart., the President of the College, will deliver the Hunterian oration on Tuesday, the 14th, at three o'clock, and Professor Flower, F.R.S., Hunterian Professor of Comparative Anatomy and Physiology, will commence his course of eighteen lectures on the Characters, Structure, Functions, and Modifications of the Teeth and Allied Organs in the Mammalia, on Friday, the 17th inst. The following is the programme of the learned Professor, viz.:—Essential characters and structure of teeth. Development and succession of teeth. Classification and nomenclature of teeth. Dental formulæ. Modifications of the characters of the teeth in the different groups of the mammalia. Teeth of man. Teeth of *Simiina*. Old-world monkeys. New-world monkeys. Teeth of *Lemurina*. Teeth of terrestrial *Carnivora*. Dogs and allied forms. Cats and allied forms. Bears and allied forms. Teeth of *Pinnipedia*. Sea bears and seals; walrus. Teeth of *Insectivora*. Hedgehogs, moles, shrews, etc. Galeopithecus. Teeth of *Chiroptera*. Frugivorous bats, insectivorous bats, blood-sucking bats. Teeth of *Rodentia*. Hares, guinea-pigs, porcupines, rats, squirrels, etc. Teeth of *Cetacea*. Odontocetes, or toothed whales; dolphins, porpoises, narwhal, sperm whale, ziphius, and allied forms. Zeuglodonts. Mystacocetes, or whalebone whales; rudimentary teeth. Structure and function of baleen or whalebone. Teeth of *Ungulata*. Perissodactyles; ancient and modern forms, palæotherium, horse, rhinoceros, tapir. Artiodactyles; pigs, hippopotamus, anoplotheridæ, camels, chevrotains, and pecora (deer, giraffe, antelopes, sheep, goats, and oxen). Teeth of hyrax, of toxodon, of typotherium, and other anomalous forms. Teeth of *Proboscidea*. Elephant, mastodon, dinotherium. Teeth of *Sirenia*. Dugong and manatee. Teeth of *Edentata*. Sloths, ant-eaters, armadillos. Teeth of *Marsupialia*. Opossums, thylacine, dasyures, perameles, phalangers, kangaroos, wombats. Fossil marsupials. Value of dental characters in drawing inferences as to the affinities and habits of extinct animals. Horny teeth of *Monotremata*. Ornithorhynchus. The course will conclude on Wednesday, March 29.

VACCINATION IN 1803.—As there is a strong prejudice in some quarters against vaccination, it may be as well at the present time to call attention to a statement made by Mr. Highmore, Secretary to the Small-pox and Inoculation Hospital, at a meeting which was held on January 19, 1803, under the presidency of the then Lord Mayor, at the London Tavern, "to consider of the best means to be adopted for the extermination of the small-pox." On that occasion Mr. Highmore presented a report from the Committee respecting the increased benefit of the institution "since the introduction of the vaccine inoculation has been added to the former branches of its practice." The system began in the Hospital, under the direction of Dr. Woodville, in January, 1799, and from that period to December 1, 1802, 11,800 patients and upwards had been vaccinated, of which number about 2500 were afterwards proved to be secure from the natural small-pox by receiving a further inoculation according to the former practice which took no effect; "a number," Mr. Highmore remarked, "amply sufficient to satisfy the public mind of the security and success of the new practice of vaccination." No complaint had been heard from any one of those who were not inoculated a second time, of their having since taken the natural small-pox, although they were chiefly indigent persons, and the far greater number of them living in places where the air was very confined, and particularly where it had since been ascertained that the natural small-pox was prevalent among those with whom many of them necessarily had continual intercourse. At this same meeting Mr. Wilberforce mentioned a curious circumstance as showing the popular prejudice against vaccination. Out of every 100 persons, he said, who had been vaccinated at the Small-pox Hospital, not five would have submitted had they not supposed it to have been the old-fashioned mode of inoculation.

AVERAGE COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN THE YEAR 1870—from the monthly returns of Dr. Letheby to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·53	0·078	0·076	0·002	14·2	3·7
West Middlesex	18·43	0·053	0·095	0·001	14·0	3·7
Southwark & Vauxhall	18·37	0·077	0·073	0·003	14·2	3·9
Chelsea	18·67	0·085	0·080	0·002	14·3	3·8
Lambeth	19·04	0·071	0·081	0·002	14·3	3·9
Other Companies.						
Kent	27·31	0·011	0·142	0·000	20·0	5·2
New River	18·31	0·024	0·086	0·000	14·0	3·5
East London	18·62	0·041	0·093	0·001	14·1	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The fluctuations in the proportions of soluble matters have not been considerable, although the largest amounts have been found in all the waters supplied to the metropolis during the winter months, and the smallest in summer, when the rain-fall was least.

The water was found to be clear and nearly colourless in all cases but the following, when it was more or less turbid, from imperfect filtration—viz., twice in the case of the Grand Junction water, four times in that of the Chelsea, and four times in the Lambeth.

The average quantity of water supplied daily to the metropolis during the year was 104,003,947 gallons, and the average number of houses supplied was 477,916. This is at the rate of 32·3 gallons per head of the population daily, and the particulars of the supply are as follows:—

Names of Water Companies.	Average Daily Supply.	
	No. of Gallons.	No. of Houses.
Thames Water Companies	53,684,665	219,312
Grand Junction	10,734,368	30,929
West Middlesex	8,814,045	40,887
Southwark and Vauxhall	15,622,730	77,076
Chelsea	8,167,208	25,518
Lambeth	10,316,314	44,902
Other Companies.	50,319,382	258,604
Kent	7,439,899	39,521
New River	23,198,417	117,845
East London	19,680,966	101,238
Total	104,003,947	477,916

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JANUARY, 1871.—The following are Dr. Letheby's returns to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·61	0·070	0·110	0·005	15·9	4·1
West Middlesex	21·49	0·067	0·110	0·003	15·6	4·0
Southwark & Vauxhall	20·72	0·063	0·110	0·003	16·0	4·2
Chelsea	22·67	0·073	0·125	0·004	16·4	4·4
Lambeth	22·79	0·058	0·091	0·003	16·5	4·4
Other Companies.						
Kent	27·37	0·009	0·199	0·001	21·2	5·3
New River	23·37	0·045	0·125	0·002	16·0	4·2
East London	25·13	0·079	0·136	0·005	16·7	4·5

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—viz., in that of the Chelsea Company.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 97,371,249 gallons; and the number of houses supplied was 479,848. This is at the rate of 30·3 gals. per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 29·3 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

THE *Scientific American* says that the Board of Trade of Buffalo have obtained a franchise, and organised a Company to be styled the "Oxy-hydrogen Gas Company," having for its object the introduction of the oxy-hydrogen gas light into that city. Buffalo, it seems, is to be the first city in America to adopt this splendid light.

Vital Statistics of 1870.—In England the registered births were 792,129, and the deaths 515,544, equivalent to a ratio of 35·9 births and 23·3 deaths to every 1000 of the population. The births exceeded the deaths by 276,585, and the year's emigration of persons of English origin was 107,926, the difference between the two (168,659) approximately representing the actual increase of the population of England during the year. The birth-rate was ·5 per 1000 above the average of the preceding ten years, and was higher than in any year of the ten, with the exception of 1868. The death-rate was ·8 per 1000 above the average, and was in excess of the rate for either of the previous ten years, excepting 1864, 1865, and 1866. The marriage-rate for the year cannot yet be determined, but there is little doubt it will be below the average.—*Registrar-General's Quarterly Return.*

Hope for the "Dunces."—Generally speaking, it is not the high classical or even the mathematical boys that have excelled in science-learning, but precisely those who before occupied no prominent place in the school, had no special gift for classics or mathematics, and were considered, more or less, "good-for-nothings." And here it is important to remember that a person may have a mathematical mind without being a mathematician.—*Nature.*

Suspicious Vegetation.—Dr. Cohn has discovered a plant in well-water, at Breslau, to which he has given the name of *Crenothrix polyspora.* The genus is new and is closely allied to *Chamæsiphon*, being intermediate between that and *Lyngyba.* It was first noticed in water from a well at Breslau, in a part of the town notorious for the prevalence of typhus. It has been found also in other wells of bad reputation, but whether it has any injurious effect upon the health of the dwellers in the neighbourhood of the wells in question, Dr. Cohn cannot venture to say.—*Nature.*

Yawning.—The *Midland Gazette* says:—"Yawning has been known to produce dislocation of the jaw; but that an injury should arise from 'stretching' is certainly peculiar. Still, a youth, of Bedford-street, a few mornings ago, having risen from bed, proceeded deliberately to stretch himself, and in so doing dislocated his left arm at the shoulder."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Berryman, St. John's, New Brunswick.—Your letter, with enclosure, has come safely to hand.

A St. Bartholomew's Student.—On making application to the Secretary of the College, you will, no doubt, obtain admission to Professor Flower's course of lectures on Comparative Anatomy.

An Old Member.—The first Hunterian Oration was delivered by Sir Everard Home, Bart., in 1814, who, like Sir William Fergusson, Bart., the orator for the present year, was Sergeant-Surgeon to his Sovereign.

Colonial.—The Act for constituting a Medical Board for New Zealand bears date October 10, 1867.

Pluto.—The oration was delivered in 1837.

A. R. should state the case to the Poor-law Board.

Parens.—Persons should not be revaccinated from "matter" derived from revaccinated arms.

Non est.—The lecturer cannot be compelled to sign the certificate.

Dr. Martin.—Your complaint should be addressed to the journal where the mistake was made—viz., the confounding Dr. William Powell, F.R.C.S. (exam.), with the person of the same name who was examined in the Poor-law inquiries.

Dr. Lavies has received acknowledgments for the sum of £153 15s., paid by him to Dr. O. W. Letters from St. Oermain acknowledge, with deepest gratitude, the kindness of those who have contributed. A considerable sum still remains awaiting Dr. O. W.'s order for payment.

Sulphuric Acid in Wine.—A correspondent calls our attention to an article in the *Pall-mall Gazette* of Jan. 31—it stating that Mr. Muntz, in order to prepare himself for a fresh crusade against adulteration of food, had witnessed some experiments by Mr. Postgate, of Birmingham:—

"Mr. Postgate went through the usual experiments upon tea, coffee, arrowroot, and the cheaper condiments, and arrived at the usual results. All were more or less adulterated, but the superadded ingredients were comparatively harmless in their effects. This, however, was not the case with three samples of sherry, bought at the rate of 54s., 65s., and 72s. per dozen. These when tested with carbonate of soda effervesced like soda-water, and one of them was found to contain so large an amount of acid to the ounce as to require twenty-five grains of soda to neutralise it. Further investigations showed at the bottom of the vessel employed a heavy deposit of sulphuric acid, sufficient to carbonise the organic matter in the liquid, and to produce inflammation in the stomach of any unfortunate consumer. The lecturer told his hearers that he had known an instance in which the use of such wine had seriously affected a person who had drunk it. And what makes the case of the purchaser of this sherry peculiarly hard is that the article in question can scarcely be called "low-priced," and that the remedy for his sufferings prescribed by the Doctor is very likely to fail in its effects from having been adulterated by the chemist. Pure drugs are at least as rare as pure wine. Mr. Postgate mentioned a case which had come under his own notice of a man who had been poisoned by taking large quantities of precipitate of sulphur in which there was an admixture of plaster of Paris to the amount of 92 per cent."

The writer clearly does not know that all pure wines effervesce with carbonate of soda; and that sulphuric acid, if previously mixed with sherry so as to carbonise the organic matter, will no longer carbonise the stomach. As for the precipitated sulphur, it must be borne in mind that, as prepared by the old Pharmacopœia authorised processes, it always contained sulphate of lime. It is a scandal that it should do so still, and we should be glad to see a staff of inspectors employed regularly to examine and report upon the stock of grocers and chemists of the underselling order.

Mr. Armstrong.—Cases of a similar kind constantly come under our notice. Publicity is the only means of arresting the evil. The person more immediately interested should apply to a magistrate in London and state the circumstances. The duty is not a pleasant one to discharge; but it would be appreciated by the public, and put a stop, to a certain extent, to the nefarious system of extortion now carried on.

Malvern again.—Mr. Smith, whose conduct we noticed three weeks since with reference to his isolation of scarlet fever, publishes, in the *Malvern News*, the following advertisement:—

"January 30, 1870.
"Leeston.

"I HEREBY CERTIFY that everything has been done in the case of Mr. Smith's two children, which science and experience suggest, to prevent the diffusion of scarlatinal contagion throughout the house; and that the house, and everything it contains, have been thoroughly disinfected, cleansed, and purified, the disease being at an end.

"(Signed) "Walter Johnson, M.B."

That newspaper makes, in a leading article, the following suggestions. There is a good deal of common sense in them; but we fear that, in attempting to carry them out, the cry of endangering "the liberty of the subject" would be successfully raised. We are sadly deficient, even now, in sanitary arrangements; the present epidemic of small-pox may have some effect in making us quicken our pace:—

"And what, let us ask, would be the effect of the general adoption of this plan—say, that, wherever an infectious disease has invaded a household, the responsible proprietor should be compelled—1st, to make known the fact by some established signal; 2nd, to communicate the facts to the police, who should be required to publish the name on the outside of the police-station, or in some other conspicuous place in the district. The effect would be—1st, that the public would know what houses should be avoided; and this alone would cut off one great source of infection; 2nd, each town, knowing that concealment was impossible, would do its utmost to render itself as healthy as possible; 3rd, the public, having the health registers of our towns open to their inspection, would select those localities which should be shown to be most deserving of support. And thus would be brought about a noble rivalry between watering-place and watering-place, as to which should obtain the prize for salubrity."

The Metropolitan Asylum District and the "Pall-mall Gazette."—We have received a long letter from Mr. Jebb, the Secretary of the Metropolitan Asylums' Board, addressed to the President of the Poor-law Board, upon the subject of the mis-statement as to the proceedings of the managers, which have for some time past appeared in the *Pall-mall Gazette.* Mr. Jebb's letter deals *seriatim* with the complaints made by the *Pall-mall.* Thus, it asserts that the location of one of the Hospitals at Haverstock-hill was a proper proceeding, and that the cost of the land was not exorbitant, but "fair and reasonable." A long quotation is then made from an article in the *Pall-mall Gazette*, giving a graphic, but certainly, we think, exaggerated, picture of the opening of the various Hospitals at Stockwell, Homerton, and Haverstock-hill, the conveyances being so numerous as to resemble a Derby day; and then a description is given of the desertion of the neighbouring houses by the inhabitants, and a fierce denunciation made against the employment of every kind of conveyance to carry infected persons from one populous place to another, and thus propagate infectious diseases wholesale. The letter of Mr. Jebb, in answer to this, says that—

"Out of the whole number of small-pox patients received at the three Hospitals of Hampstead, Homerton, and Stockwell, consisting of nearly 800, the whole (with one exception) have been brought in ambulances specially set apart for this purpose. The exception, a man—not a pauper—who came up in a public cab, was immediately reported to the police, who took proceedings, which were followed by the conviction of the driver and the person who employed him."

The letter proceeds to say that no patient is discharged until perfectly free from infection; that not a single case of small-pox has appeared amongst the staff of officers and nurses; that the opening of the Small-pox Hospital at Stockwell has made no perceptible difference in the occupation of the houses in the neighbourhood, and large additions have been made within the last two years to the number of houses near to the Hospital.

The Quantity of Beer, etc., allowed to Hospital Patients.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I should be glad to be informed what (about) is the average allowance daily per patient of stout and ale, wine and brandy, in the chief London Hospitals. Could any of your readers kindly inform me?

I am, &c. X.

Japanned Tin Dissecting Cases.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Referring to your notice in last week's journal, under the heading "New Inventions," of a dissecting-case, made by Messrs. Matthews Bros., I beg to inform you that I introduced to the Profession japanned tin dissecting and minor operating cases three years since, and enclose herewith a specimen. I have supplied the same largely to instrument makers in this country and in America, and furnish my customers with no other form.

I am, &c., T. P. Hawksley,
Surgical Instrument Maker.

4, Blenheim-street, New Bond-street, London, W.

Out-patient Hospital Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you kindly allow me to acknowledge, in your next issue, the receipt of the following sums towards defraying the expenses incurred by the Out-patient Hospital Reform Committee?

Mr. Walter Coulson ...	... £1	1	0	Dr. Ogle (Derby) ...	... £0	5	0
Mr. F. M. Corner ...	... 0	10	0	Mr. Roger Bell ...	... 0	5	0
Mr. G. O. Coles ...	... 0	10	0				

I think, Sir, you will agree with me that this is not a very satisfactory reply to the question which I asked in my last appeal—as to whether the meeting that appointed us a committee intended us to pay all expenses, as well as do all the work? We have already paid our fair share of the former; and unless other donations are sent to me at once, I must make up the deficiency—about £20—as the accounts must be paid forthwith. Other expenses have also to be incurred to complete the work which the committee have in hand. I am, &c. Alfred Meadows.

27, George-street, Hanover-square.

COMMUNICATIONS have been received from—

Professor Laycock; Mr. Spencer Wells; Mr. C. A. Fox; Dr. Morell-Mackenzie; Dr. B. W. Richardson; Dr. Day; Mr. J. Chatto; Mr. G. Gregson; Mr. W. Clode; X.; Mr. W. Armstrong; Dr. J. Whitmore; Messrs. Schoetensack; Mr. Force; Mr. H. C. Lawrence; Mr. V. Jackson; Mr. G. Cowell; Dr. Phillips; Mr. W. F. Jebb; Mr. T. P. Hawksley; Dr. R. S. Smith; Dr. Braxton Hicks; Mr. J. Rofe; Dr. Bischoff, Munich; Mr. J. B. Blackett; Dr. Gibbon.

BOOKS RECEIVED—

Rules for the General Management of Infants, recommended by the Obstetrical Society of London—The Correlation of Zymotic Diseases. By A. Wolff, F.R.C.S—Lectures on Dermatology: Synopsis of Diseases of the Skin. By Erasmus Wilson, F.R.S., F.R.C.S.—Statistical Review of Ten Years of Disease in Manchester and Salford, by Dr. A. Ransome—Michel's Process for Removing External Tumours. By William A. Bell, M.A., M.B. Cantab.—The Inaugural Address of Balddwin Latham, Mem. Inst. C.E., President Society of Engineers.

PERIODICALS AND NEWSPAPERS RECEIVED—

Medical Press and Circular—Nature—The Malvern News—The Pharmaceutical Journal—The Monthly Homœopathic Review, February—The Indian Medical Gazette—American Journal of Syphilography and Dermatology—Practitioner, February—Edinburgh Medical Journal, February.

APPOINTMENTS FOR THE WEEK.

February 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Rev. W. H. Channing, "Laws of Life Revealed in History."

13. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. Barnes, "A Case of Fatal Hæmorrhage from Fibroid Polypus of the Uterus." Dr. Semple, "On Diphtheria and the Diseases Allied to it, or Mistaken for it."

14. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Anthropological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. Callender, "Cases of Injury to the Brain." Dr. Bakewell, "Pathology and Treatment of Malarious Fever."

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

15. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 8 p.m. Meeting.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society, 8 p.m. Clinical Meeting.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

17. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 9 p.m. Mr. James N. Douglass, Engineer to the Trinity House, "The Wolf-Rock Lighthouse."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 4, 1870.

BIRTHS.

Births of Boys, 1173; Girls, 1177; Total, 2350.
Average of 10 corresponding weeks, 1860-69, 2215·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	801	882	1683
Average of the ten years 1860-69 . . .	798·7	772·9	1571·6
Average corrected to increased population .	...	...	1729
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	38	2	10	2	9	...	3	2	4
North ...	618210	57	3	10	1	9	6	4	2	1
Central ...	383321	19	...	7	1	3	2	1	4	1
East	571158	53	4	2	1	10	2	3	1	4
South	773175	29	3	20	1	12	1	4	4	4
Total	2803989	196	12	49	6	43	11	15	13	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·828 in.
Mean temperature	34·9°
Highest point of thermometer	47·9°
Lowest point of thermometer	28·2°
Mean dew-point temperature	32·4°
General direction of wind	Variable.
Whole amount of rain in the week	0·19 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 4, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Feb. 4.	Deaths Registered during the week ending Feb. 4.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2350	1683	47·9	28·2	34·9	1·61	0·19	0·48
Portsmouth ...	125464	13·2	91	34	48·8	22·8	34·7	1·50	0·15	0·38
Norwich	81787	10·9	60	45	43·2	25·0	33·3	0·72	0·30	0·76
Bristol	173364	37·0	150	105	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	52	33	45·8	26·1	32·5	0·28	0·16	0·41
Birmingham ...	378574	48·3	265	200	47·2	26·2	32·8	0·45	0·15	0·38
Leicester	101367	31·7	82	57	44·5	26·7	33·4	0·78	0·21	0·53
Nottingham ...	90480	45·3	53	34	40·2	26·3	31·8	−0·11	0·16	0·41
Liverpool	526225	103·0	401	470	43·5	27·4	33·5	0·84	0·26	0·66
Manchester ...	879140	84·5	270	221	...	...	...	...	...	...
Salford	123851	23·9	95	60	44·9	27·0	33·5	0·84	0·35	0·89
Bradford	148030	22·5	131	92	38·4	28·0	33·1	0·62	0·21	0·53
Leeds	266108	12·3	220	142	37·0	30·0	33·2	0·67	0·30	0·76
Sheffield	255247	11·2	190	143	39·5	26·2	32·1	0·06	0·32	0·81
Hull	135195	38·0	82	51	40·0	27·0	32·5	0·28	0·44	1·12
Sunderland ...	103037	31·2	63	69	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	90	57	40·0	30·0	34·2	1·22	0·21	0·53
Edinburgh	179944	40·6	119	105	40·7	33·0	35·6	2·01	0·50	1·27
Glasgow	477627	94·3	338	384	39·4	25·0	32·2	0·11	1·08	2·74
Dublin (City, etc.†)	322321	33·1	185	222	51·5	32·2	38·9	8·83	0·21	0·53
Total of 20 Towns in United Kingd'm	7336941	34·4	5287	4207	51·5	22·8	33·7	0·95	0·31	0·79
Paris—Week ending Feb. 4	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Jan. 21 ...	622087	68	...	367	...	...	28·8	−1·80	...	...
Berlin—Week ending Feb. 4 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·83 in. The highest was 30·09 in. on Tuesday morning, and the lowest was 29·52 in. on Saturday afternoon.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

CURTIS & CO.,

48, BAKER-STREET, LONDON, W.,

Beg to direct the attention of Buyers to their superior Manufactures of

CONCENTRATED INFUSIONS, CONCENTRATED DECOCTIONS, EXTRACTS, EXPRESSED JUICES, LIQUORS, TINCTURES, AND WINES, &c.

IMPORTANT NOTICE.—CAUTION.—The only Genuine Syrup of the Superphosphate of Iron, Quinine, and Strychnine.

THIS SYRUP HAS BEEN PRESCRIBED BOTH AT HOME AND ABROAD FOR MORE THAN TWELVE YEARS,

And pronounced by the highest Medical Authority to possess tonic powers far exceeding all other preparations. It is always uniform in character, and has never been known to produce any unpleasant symptoms—due to its careful mode of preparation. Its composition is as follows:—Two grains of Iron, one grain of Quinine, and the thirty-second part of a grain of Strychnine in each fluid drachm. **5s. 4d. per lb.**

Curtis's Improved Chlorodyne. 12s. per lb.
Curtis and Co.'s Active Syrup of Senna—(B.P. Improved.)—2s. 8d. per lb.
Ess. Ergotæ Ammoniata. 8s. per lb.
Ext. Cinchonæ Liquidum. P.B. 28s. per lb.
Ext. Fuci. Vesiculosi Liquidum. 10s. per lb.
Ext. Sarsæ Liquidum, B.P. 12s. per lb.
Ext. Sarsæ Comp. Liquidum. 10s. per lb.
Liquor Copaivæ Comp. 3s. 6d. per lb.
Liquor Copaivæ Comp. c. Cubeb. 3s. 6d. per lb.
Liquor Copaivæ Comp. et Cubebæ c. Buchu. 3s. 6d. per lb.
Liquor Copaivæ Comp. et Cubebæ c. Matico. 3s. 6d. per lb.
Liquor Cubebæ Alcoholic. 5s. 4d. per lb.
Liquor Hæmatoxyli Aromat. 5s. 4d. per lb.
Liquor Tritici Repens.—Pronounced by Sir H. Thompson to be the best Concentrated Preparation of Triticum.—4s. per lb.
Liquor Sennæ Dulcis. 2s. 4d. per lb.
Liquor Rhei Dulcis. 2s. 8d. per lb.
Liquor Opii Sedativus. 10s. per lb.
Liquor Quinæ Ammoniata. 7s. per lb.
Parrish's Chemical Food, or Compound Syrup of the Phosphates.
Syr. Ferri Citratis c. Strychnia.
Syr. Ferri Phosphatis c. Strychnia.
Syr. Ferri et Quinæ Hypophosph.
Syr. Ferri et Quinæ Hypophosph c. Strychnia
Syr. Ferri et Quinæ Superphosph.
Syr. Ferri et Ammoniæ Citratis.
Syr. Ferri et Quinæ Citratis.
Syr. Ferri Iodidi c. Quina.
Syr. Quinæ Phosphatis.
Syr. Gummi Rubri. 3s. 4d. per lb.
Syr. Ipecacuanhæ. 3s. 4d. per lb.
Syr. Pruni Virginiæ. 3s. 4d. per lb.
Succus Aconiti. 4s. per lb.
Succus Belladonnæ. 4s. per lb.
Succus Conii. 4s. per lb.
Succus Cotyledonis Umbilici. 4s. per lb.
Succus Digitalis. 4s. per lb.
Succus Galii Aparinæ. 4s. per lb.
Succus Hyoscyami. 5s. 4d. per lb.
Succus Lactucæ. 4s. per lb.
Succus Scoparii. 4s. per lb.
Succus Taraxaci. 3s. 4d. per lb.
Tinct. Actææ Racemosæ. 3s. 6d. per lb.
Tinct. Gummi Rubri. 4s. per lb.
Tinct. Lactucarii. 5s. 4d. per lb.
Tinct. Physalis Alkekengi. 5s. 4d. per lb.
Tinct. Pruni Virginiæ. 4s. per lb.
Tinct. Veratri Viridis. 4s. per lb.
Vin. Ferri Citratis. 2s. 8d. per lb.
Vin. Ferri Citratis et Quinæ. 4s. per lb.
Vinum Pepsinæ. 5s. per lb.

				Per lb.	
				s.	d.
Dec.	Aloes Co., B.P.	Conc.	2 to 6 ...	4	6
"	Chimaphilæ	"	1 to 7 ...	5	4
"	Cinchon. Flavæ	"	1 to 7 ...	5	4
"	" Lanc.	"	1 to 7 ...	5	4
"	Dulcamaræ	"	1 to 7 ...	2	0
"	Granat. Rad.	"	1 to 7 ...	2	8
"	Krameriæ	"	1 to 7 ...	2	0
"	Papav.	"	1 to 7 ...	2	0
"	Papav. c. Anthem	"	1 to 7 ...	3	4
"	Pareiræ	"	1 to 7 ...	3	4
"	Querçus	"	1 to 7 ...	2	8
"	Sarsæ Jam., Sx.	"	1 to 7 ...	5	0
"	" " "	"	1 to 15 ...	9	0
"	" " "	"	1 to 31 ...	16	0
"	" " Comp.	"	1 to 7 ...	4	6
"	" " "	"	1 to 15 ...	8	0
"	" " "	"	1 to 31 ...	15	0
"	Scoparii	"	1 to 7 ...	3	0
"	"	"	1 to 7 ...	3	0
"	Senegæ	"	1 to 7 ...	3	4

				Per lb.	
				s.	d.
Dec.	Tormentil	Conc.	1 to 7 ...	3	0
"	Ulmi	"	1 to 7 ...	2	8
"	Uvæ-Ursi	"	1 to 7 ...	2	8
Inf.	Anthemidis	"	1 to 7 ...	1	6
"	Aurant.	"	1 to 7 ...	2	0
"	" Co.	"	1 to 7 ...	2	0
"	Buchu	"	1 to 7 ...	2	4
"	Calumbæ	"	1 to 7 ...	1	6
"	Caryoph.	"	1 to 7 ...	2	0
"	Cascarillæ	"	1 to 7 ...	1	6
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ORIGINAL LECTURES.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

ON DEATH BY DROWNING AND COLD.(a)

Gentlemen,—I have taken advantage of the late extremely cold weather to institute a new series of researches on death by drowning in water at 32° F. This is the season in which such inquiries can only be satisfactorily carried on in our country, and it is the season, also, in which accidents occur that call forth our special curative skill. The study, consequently, is both practical and philosophical, and I do not know in which of these directions it is most absorbing. To be able, by any line of study, to see the way more clearly towards lifting up those who have suddenly fallen into death, and who, but a moment before, were in the full of life, is a good effort, even in imperfection of grand result; and if attended in the end with affirmative result, would be, of all efforts in the practice of our art, the grandest; so that, in practice, the enterprise towards any improvement of treatment is worthy any amount of labour. Philosophically, the study is equally worthy, for it leads us to contemplate the physical phenomena of death with an appreciation which nothing less than an experimental research, tending towards the highest of intellectual advancements and the solution of the most solemn of mysteries, can develope and sustain.

I wish us, if you please, to keep these two lines of thought in our minds as we proceed; to think first of the practical, as experiment teaches us fact; to think of what is suggested for practice by each experiment; but to think, also, of the general teaching that may be gleaned, of the alliances of conditions of disease and of death, of the reasons why phenomena of death are manifested, and of the methods by which the phenomena may possibly be averted or removed in various forms of disease.

Two Forms of Real or Apparent Death.

When an animal body ceases to render to any of our senses evidence of motion, voluntary or involuntary, we are accustomed in the common range of our knowledge to think it is dead. If, when we try to make the body move of itself, we fail in the effort, we usually affirm the fact of death; but if there is to be detected the merest ripple of motion in any part or organ, we hesitate to pronounce the word. In a certain rude sense we are correct in this mode of reasoning, for death truly is inertia of all that was actual or capable of motion under the *régime* of life. But in a scientifically strict sense we are not correct, for the inert body may not be dead; it may be simply in a condition of apparent death, from which it might recover, or it may be in a condition from which, according to our present light of knowledge, it is absolutely irrecoverable.

Thus I would begin by pointing out this truth; and, as far as I know, it is the first time the same truth has been clearly defined: that when motion ceases in an animal, the body settles into one of two physical states:—(*a*) a state in which the water and crystalloidal matter are fixed, the fatty matter solid, but the colloidal matter still hydrous and ready for action; (*b*) a state in which the water and crystalloidal matter are free, but in which the active colloidal matter has become pectous—has passed, that is to say, from the hydrous to the pectous condition. I propose, therefore, to divide the process of death immediately sequential to the arrest of motion into these two conditions—

1.	2.
Crystalloidal.	Colloidal.
Glacial.	Pectous.
Solutive.	Insolutive.

As a rule, the immediate condition of the body after arrest of motion of life is the second condition named above, the pectous or insolutive; for so soon as the animal motion has ceased, the tendency of the fibrine is to become insoluble, and to settle into the solid or pectous form. Only one circumstance connected with death can, as far as I know, prevent this change, and that is, exposure to great cold. If the body, at the time of death, is so placed that it is quickly reduced below 45° Fahr. in all parts, the pectous change will be avoided, and the solutive or glacial condition will be established. As I shall illustrate presently, we can, by experiment on certain animals, induce the pure glacial death; and there are some facts which tend to prove that the same kind of death may happen even to man. But let us at once understand that the event in the human subject is extremely rare.

It is essential to have the two conditions immediately following death, of which I have spoken, in the clearest appreciation; and especially so when we turn from the study of condition to the study of treatment. For here at once is a fact of primary interest: the state which I have called glacial or solutive is one from which we may secure recovery; the pectous or insolutive is one from which there is, according to our present light, no means of recovery. Moreover, as the glacial lapses into the pectous condition very easily on mere elevation of temperature, it is worth remembering that in processes of recovery we may, if we are not careful, transform the recoverable into the irrecoverable death.

Characteristic Features of the Glacial and Pectous Conditions.

Let us now turn to the physical characters of the animal matter in and during the two conditions named. At first the animal tissues and fluids are closely alike: there is appearance of solidity, with continuation of form. Here, for example, are two eggs from which the shells have been removed; both are solid, both admit of being cut by the knife, and both, when cut, present the same general appearances of surface. But these eggs are in entirely different conditions: the one is in the state of solidification from cold, which we call "glacial"; the other is in the state of solidification from heat, which I call "pectous." The first is resoluble without chemical decomposition of its parts; the second is insoluble unless it be allowed to decompose. Here are two specimens of blood, both solid, or rather semi-solid, looking each as if clotted; they were taken from the same animal—a sheep—two hours ago, and in colour, consistency, general character, they are still as one; but they are quite different in this physical respect—that one is in the glacial, the other in the pectous condition of solidification. I take the first, gently warm it, and it liquefies; I take the second, gently warm it, and it remains solid; in short, while the first specimen could be brought back to the condition of natural fluid blood, the second is immovable. It is worth while before we move from these specimens of blood to make a further observation. In these bloods the fibrine is the colloidal substance that undergoes change. Now, fibrine at rest and out of the body passes into the pectous state whenever the fluid of which it forms a part is at or above a temperature of 45° Fahr. If, consequently, in the process of thawing blood that has been made to undergo glacial solidification, we raise the temperature too suddenly, we may transform the glacial condition into the pectous without witnessing the intermediate stage of fluidity, so rapidly will that pass over. In order, therefore, successfully to thaw frozen blood, we must put the glacial mass into a metal cup that is immersed in water above freezing-point, but not above 45° Fahr., and we must add a little more frozen blood if solution is taking place too quickly. In this manner we can get the blood fluid, and can hold it fluid for a long time by simple management of temperature. I press this point forcibly on the attention, because it explains the cause of many dangers in efforts for recovery, local or general, after glacial solidification.

We pass from the specimens of blood to something more telling. Here are two animals—two carp; both are what would be called dead; both are stiff, motionless, cold. Without experiment, I could not myself tell the condition of one from the other, were they brought before me accidentally; yet they are so far different that one of them is actually *not* dead, while the other is irrevocably dead—the one is locked up motionless in glacial, the other in pectous death. I take the fish that is locked up in pectous death, and manipulate it as I will, but I cannot make a muscle move; I take the fish in glacial death, and, if I bring sufficient care to bear, I can unlock the fixed muscles, restore circulation, and restore life. I will try this experiment. I place the fish solidified by cold in a globe containing ice-cold water, with a little ice floating in the water, and then I pour in hot water, taking care, if I can, that the ice is not melted too quickly; and, if my arrangements are correct, the fish in a minute or two will move briskly. It does not move, and I see I have failed. I have failed for want of due care; I have raised the temperature of the water too high, and have transformed the glacial into the pectous form of death.

We need not regret this experimental failure, for it is a useful lesson, indicating how easy is the transition from one state to another. We will simply take a second carp, that has been also locked up motionless in glacial death, and try again, using more care to restore. This time we succeed; the rigid animal rapidly relaxes, and leaps even out of the water as it is resolved into life. For a time it will remain dull, but it will recover as perfectly as though nothing had happened to it.

(a) Delivered on Tuesday, January 3, 1871.

This experiment, on one single fish, is but representative of a larger experiment sometimes seen. Not long since, Mr. King, the well-known naturalist, of Portland-road, had sent him from Newcastle a cargo of gold fish. The fish had been placed in tepid water; but, in journeying to London, water and fish too were fixed by intense cold, and when they arrived at their destination, the animals were all intensely rigid, and apparently dead. On pouring heated water upon the ice, and so dissolving it gradually, the fish recommenced to move in the water, and, as I learn from Mr. King, who himself carried out the proceeding, they all recovered. The experiments thus described can be performed on frogs in an equally determinate manner. When, however, we ascend to the higher class of animals, the process of resuscitation from glacial death is more difficult; the sources of difficulty being that the whole mass of the animal body cannot be equally and simultaneously resolved, and that in the higher animals the blood passes much more quickly into the pectous state; but what we have seen illustrates with sufficient clearness the distinction, in respect to the restoration of life, between glacial death and pectous death.

I have already said that the two conditions resemble each other closely. It is so. In both states the muscles may seem firm and rigid; in both the blood may seem solidified if a vein be laid open; in both the crystalline lens may appear opaque; and in both all motor phenomena of life may be entirely absent. But here is the distinctive difference: In the glacial death the active colloidal structures remain hydrous and ready to react; in the pectous death they have taken on a new state—they have been rendered molecularly inactive in respect to motion of fluidity, and cannot be restored to their original condition.

I have said that the outward signs of death are much alike in both kinds of death. I should add now that the more refined evidences of death answer equally in both cases. In glacial death, while it lasts, the muscles fail to respond, unless heat be introduced, either to mechanical or electrical excitation. When we lift up a part of the body that is thin and semi-transparent there is no colouration from vascular current; nay, when we try Laborde's ingenious experiment of thrusting a needle into the muscles of the animal the steel comes out unoxidised. In a sentence: In the pure and extreme glacial death there is perfect cessation of motion, as far as we can gauge, and yet the functions are not impossibly prevented, for we know how to restore some animals by the simple process of restoring heat in a gradual and scientific way.

And still, with all the similarities, there is the marked difference that the glacial condition can, for a given time, be recovered from—and perhaps for any time can be recovered from—if evaporation be prevented; while the pectous state cannot be resolved by any known method. If the resolution of the pectous condition back to the fluid condition could be secured without change of molecular constitution, we should indeed make progress; but up to the present time we have not succeeded in the attempt. Here is this pectous or coagulated egg; here is this pectous or coagulated blood; here is this pectous or coagulated carp—the problem is, how to bring them back from the insoluble to the soluble state without changing their character and their properties; how to bring them back in the same way as we bring back the glacial egg, the glacial blood, the glacial animal. Whoever may effect this transformation is a master in science.

Some years ago I thought, in respect to blood, I had, in an imperfect manner, resolved the difficulty. I took coagulated blood, triturated the mass with ammonia until it became fluid, and then extracted the volatile alkaline solvent by exhaustion under the air-pump; and it is true that a process like the process of recoagulation could afterwards be induced. I fear I was deceived, and that the condition of solidity induced was not the true pectous condition; it was like it, but was not the same.

I must leave these definitions of the two states of animal bodies after death, in order to pursue the rarer of the two states—that in which the glacial condition remains for a longer or a shorter space of time. We have seen that in fish and in frogs the body may be brought to such a degree of cold that the process of pectous change may be suspended. It remains to be asked whether the same may occur in the higher animals, and in the highest animal in the scale of created beings on this planet—man.

Touching warm-blooded animals, I may say that, after many experiments, I have once known a recovery of a kitten after no less than two hours' immersion in ice-cold water; but I have repeated the experiment several times without obtaining the same result. Once, also, the following experimental fact occurred to me, and it is of singular interest:—A dog was put to sleep with the vapour of chloroform during a time of intense frost. The animal died in the vapour, and the body was opened after death, and was left exposed to the open air with an injecting tube tied in the ascending aorta. Three hours after exposure to the cold air, the thermometer registering six degrees of frost, water at 130° was injected by the tube through the arteries of the animal. The result was most singular: as the warm fluid traversed the body, every muscle appeared to be brought into action. The intestines first showed active vermicular action; the muscles of respiration followed; and, finally, the muscles of the body generally, commencing with the facial, took on movement. At one moment it seemed as if the animal were alive again; but as the injection was continued the muscles settled into persistent contraction—they had passed through an interval of motion, during which they had been transformed from the glacial into the pectous state.

Observations on the Human Subject.

Observations on the human subject after death by simple cold have been very imperfect, but facts have been elicited which demonstrate that even in man the pectous change, in the muscles at least, may be suspended for long intervals of time, and that the muscular motion may be reinduced under the stimulus of heat. The great experiment of Aldini—in which a man who had been executed was made to exhibit such extreme excitability of muscle that he seemed to live again—was of this character, the man having been submitted to the executioner on a day when the air was extremely cold; and later experiments have confirmed what was seen by Aldini and his fellow-observers. In cases of death by drowning in water at freezing-point, some truths even more practical have been brought under notice. Last year, my friend, Dr. Belgrave, of Hendon, was summoned to attend two men who had been immersed in the lake at the Welsh Harp, Hendon. One of these men was extricated from the water by Dr. Belgrave himself after twelve minutes of immersion, and, artificial respiration having been immediately set up by Silvester's method, the man recommenced to breathe naturally, and lived for several hours—the death taking place, ultimately, from what Dr. Belgrave considers to have been congestive bronchitis. It was unfortunate that this patient was conveyed quickly to the house, and, before the Doctor could control the treatment (the second man being also under his supervision), was placed in a hot-water bath, a method which, as I shall show in my next lecture, is opposed in every particular to recovery.(b)

In this case, then, there was an example of a man who was subjected to drowning and cold at freezing-point for twelve minutes, and in whom, nevertheless, the muscles remained capable of excitation and the brain of consciousness (for the man became conscious), and who, on restoration of respiration, lived again.(c)

A case such as that described by Dr. Belgrave, and so thoroughly supported, leads to the conclusion that, in sudden death by drowning and cold, the body of a warm-blooded animal may be so left that the colloidal part shall not for a long period become pectous, but that it shall be left in a condition for recovery even after a prolonged immersion. I have been led thereupon to endeavour to ascertain, by direct observation on the inferior warm-blooded animals—first, what are the phenomena of death after the same mode of death; and, secondly, what are the obstacles to recovery. The first of these inquiries I will proceed to explain, in so far as I have obtained information; the second I will reserve for another of our meetings.

Mode of Death and Condition of the Body of Warm-blooded Animals, after Drowning and Cold.

When strong and healthy warm-blooded animals fall in water at freezing-point, the death from the drowning, if death follow, is, as a rule, remarkably rapid, and apparently free of pain. The same obtains in the human subject; for, in the case of a woman who was immersed in water at freezing-point, who was taken out in an unconscious state, and who remained unconscious for more than twelve hours, I had the opportunity of putting to her the question of her sensations at the time of the accident. She affirmed to me that she felt nothing but an indescribable intenseness of cold, which seemed to make her body feel smaller, followed as quickly by an utter and helpless exhaustion, after which she remembered nothing. It was proved by those who were engaged in dragging her out of the water, that she struggled severely, and was convulsed; but of this she had no knowledge whatever. In strong animals we sometimes see convulsive movements when the body is under the water, and these may occur a few seconds after what appears to be the quiescence of death. The whole of the phenomena, up to the time of absolute cessation of motion and of consciousness, are included in the period of a minute, probably, in every case, and I have seen them included in thirty-five seconds. In very young animals the struggle for life is longer than in old, and in animals well primed with food, and well fed, the struggle is longer than in animals requiring food or imperfectly nourished; but in all it is very short. I refer to these facts, because to those who have been so unhappy as to lose relatives or friends by drowning and cold, it is a satisfaction, sad as it may be, to know that the death is free from prolonged suspense and from acute pain. Indeed, I should judge it to be one of the easiest of deaths—as easy as death by chloroform. The convulsive movements that are seen are unconscious movements; they are the same as those which mark the period of stupor, in death by hanging, by narcotic vapours, by concussion; and they are simply the results of action of muscles from which the controlling power of the nervous centres has been removed.

(b) It is worthy of notice that, in the second case attended by Dr. Belgrave, the process of artificial respiration, carried out also by Sylvester's method, was of no avail. On this point my friend, in his report to me, observes that the man who for a time recovered was at the moment of immersion under the extreme influence of alcohol, while the second man, though he had taken alcohol, was not under the same influence to the degree of intoxication.

(c) The inquest on the cases named was held by Dr. Lankester, who, being greatly interested in the subject, took special care in the investigation, and recorded all the facts from witnesses on oath with a precision that admits of no reasonable doubt.

Various speculations have been offered respecting the suddenness with which those who are immersed in water at freezing-point sink in it so readily, the favourite theory being that the sufferers are subjected to what is commonly called cramp of the extremities, and are thus prevented from exerting themselves, even if they be swimmers, so as to escape from death. My own view differs from this. It is clear, I think, to all who have witnessed the phenomena of death by drowning and cold, that the cause of the sudden and complete collapse is peripheral nervous shock and sudden exhaustion of the nervous centres by direct extraction of animal heat. It would be most correct to say that the death is by nervous syncope; for although there is no actual loss of blood from the vessels, there is loss of the force the blood supplies, which amounts practically to the same thing.

If a body be removed from the water in from one to two minutes after complete immersion, the muscles everywhere are found perfectly flaccid; and, assuming the convulsion which always precedes death shall have been passed through, the muscles will be found motionless as well as relaxed. The voluntary muscles will be found at first very feebly excitable; the respiratory muscles more excitable; the heart not simply excitable under stimuli, but acting of itself, often in perfect rhythm and in all its parts. Thus, the heart in these cases, as in cases of hanging, poisoning by narcotic vapours, and hæmorrhage, continues to the last true to its duty. The action of the heart is, however, very feeble, and it is not sustained long as an independent motion. I should limit the duration of action to five or six minutes.

The heart and all the other muscles, motionless and flaccid though they are, are nevertheless capable of showing vigorous action when they are supplied with heat; and under the influence of heat they soon undergo true rigor mortis. If a dead animal just removed from water at freezing-point be laid on one of its sides upon warm sand, sand at 115° Fahr., the whole of the muscles on that side will pass into firm, pectous rigidity, while the muscles on the side exposed to the air will remain flaccid. We may thus witness the curious phenomenon of intense rigor mortis and flaccidity in the same animal at the same time.

The condition of the internal organs of the body immediately after death by drowning in water at freezing-point is favourable to recovery, as you will see here in the body of an animal—a rabbit—that was removed from the water five minutes after the cessation of respiration. The conditions are fairly representative of what is always seen after this form of death. The brain and spinal cord are free of congestion, the cut surfaces free of vascular line or speck, the structure rather firm; the sinuses hold blood, but are not distended. The heart is charged with blood on the right side, but not to distension; the pulmonary artery contains blood in its trunk and branches; the left side of the heart is contracted, but contains a little blood both in the auricle and the ventricle; the arteries are empty, indicating that the final arrest of the circulation of the blood was in the pulmonary tract of blood. The abdominal organs are natural, neither congested with blood nor pale. The muscles are still flaccid, and, under the influence of heat, are capable of undergoing contraction.

We should infer, from what we see here, that for some time after death a body so little injured and so ready for motion ought easily to be set again in motion. It does truly often occur to my mind as if the merest device would be sufficient to bring back the phenomena of life. What is more, if the body already drowned be left in the water at freezing-point, it will retain the favourable conditions I have described, not for minutes merely, but for hours—as long, probably, as the carp which we brought back to life at the early part of the lecture. I am certain, too, that the day must come when this suggested restoration of the higher animal will be matter of fact, miracle as it now may seem.

Against such success at this moment there are certain obstacles which observation has rendered clear to view, and there may be obstacles not yet foreseen; but those known are sufficient to engage our attention, and they are fatal unless they can be removed or overcome. I will bring them carefully before you at next lecture.

ORIGINAL COMMUNICATIONS.

FIRST PRINCIPLES.

THE NATURE AND TREATMENT OF DISEASE.

By Dr. LIONEL BEALE, F.R.S.,
Physician to King's College Hospital.

> "The valuable labours now under prosecution in the long-neglected field of treatment of disease. . . . . have received general recognition, and thus a final blow has been given to the dominion of a disheartening therapeutic nihilism."—*Felix von Niemeyer.*

The Feverish State and its Treatment.(a)

Let us inquire into the nature of the changes which mark the feverish state, and endeavour to decide upon what principles our treatment of this common morbid condition should be based. Feverishness may be induced by many very different circumstances, and varies in intensity from a very slight derangement of the normal physiological changes, of little consequence, to a condition that must end fatally in the course of a few hours.

The invasion of almost every form of acute disease is marked by feverish symptoms; and there are not a few chronic diseases which are accompanied throughout their whole course by fever. Feverishness may be studied in the Surgical as well as in the Medical wards of the Hospital; and there is certainly not an individual in any civilised community, and probably not one even among savages, who has not experienced, at least in some degree, the phenomena of feverishness in his own organism. Nor are any warm-blooded animals exempt from fever. It is probable that even cold-blooded vertebrata suffer; and I could adduce evidence to show that some of the changes characteristic of fever may be induced even in the frog. Slugs and snails and worms suffer some of the changes characteristic of the feverish state. Insects, probably owing to their organisation, cannot be feverish; and certainly the lowest animals and plants are free from any general morbid change allied to fever.

Now, the living organism which is the seat of a slight feverish attack, differs only from the perfectly healthy body in the fact of the accelerated rate at which some of the ordinary physiological actions are being carried on, and the reduced intensity of other constant processes.

The change may be very temporary, lasting, perhaps, only for a few hours, and neither accompanied nor caused by any structural change in any tissues whatever. At first the blood alone is affected, and a little increased action of the lungs, skin, bowels, or kidneys may at once cut short the slight disturbance which has taken place in the circulating fluid, and which has occasioned the fever—so far a *functional derangement only.*

In very slight fever the heart beats more frequently than in the normal state, but it by no means follows that the blood is made to circulate more quickly through the capillaries of the tissues and organs of the body. On the contrary, there is evidence in many organs of impeded circulation, of obstruction to the free passage of the blood through the capillaries, of distension of their walls, and in some of accumulation of blood. Consequently, the animal heat is not carried off as fast as usual, and the temperature of the blood rises. At the same time there is in many parts of the body, even at an early period of the disease, an increased development of heat. The exalted temperature in fever is, indeed, due partly to the disturbance of the processes concerned in the *carrying away of heat*, and partly to the *increased activity of the heat-producing process.*

(a) From a Clinical Lecture delivered at King's College Hospital.

Less water is given off from the blood in the feverish than in the healthy state. The blood is, therefore, of lower specific gravity than in health. Many of the little arteries are dilated, and, the capillaries being distended, the blood flows through them more slowly, and undergoes less change as it flows than in perfect health. The pressure upon the vascular walls is increased. The feverish patient is even conscious of a *feeling* of fulness and distension in many parts of his body. The muscles seem tired; the skin is dry; the lips parched; and the mucous membranes less moist than they should be. All the excreting organs—the liver, the skin, the kidneys, and the bowels—work less actively than is their wont. Although the temperature of the body rises, there is a feeling of chilliness—perhaps actual shivering, as from cold—an instinctive desire for external warmth, yielding to which will, indeed, bring ease. A warm bed or a warm bath will relieve all the unpleasant sensations accompanying a slight febrile attack in a very short time; but they recur if the external heat is removed before recovery has taken place.

The phenomena characteristic of the feverish state we are discussing, and some others, the consideration of which I have purposely omitted, are consequent upon changes in the blood. A perfectly healthy state of the blood and the feverish condition cannot coexist, and it is impossible for fever, even of the mildest degree, to occur without accompanying changes in the composition of the blood. Indeed, the blood-change is the starting-point of every feverish attack, and, if this be due to temporary disturbance only, the balance of opposing actions is soon restored by compensation, and health returns; but if it depend upon circumstances which cannot be quickly changed, the feverish state continues, and the degree of its intensity increases.

It has long been known that when fever, inflammation, and other blood diseases have become established, the composition of the blood is altered, and even in a slight feverish attack which constitutes an ordinary cold, the chemistry of the blood is temporarily deranged. The extractive matters soluble in boiling water are present in undue proportion, and it is probable that this increase arises from insufficient oxidation. Various matters, which in perfect health are very highly oxidised, so as to be eliminated in the form of carbonic acid, urea, and other substances which are readily excreted, there is reason to think, remain in the blood imperfectly oxidised, or are very slowly and with difficulty eliminated in a suboxidised state. Thus there remains in the circulating fluid an excess of soluble material, which permeates the tissues much more readily than ordinary healthy serum would do. This soluble matter transudes through the walls of many capillaries, and is appropriated by the bioplasm of the blood, of the vessels, and of the tissues, to their detriment. These very substances are susceptible of a higher degree of oxidation, and might have been oxidised and excreted as urea, carbonic acid, and other fully oxidised substances. The bioplasts or masses of germinal matter invariably increase in size in every form of fever. By this increased growth of germinal matter, which invariably takes place in all inflammations as well as fevers, the close analogy existing between these two classes of diseases is established.

One important change in the composition of the blood when fever has been induced, may be demonstrated in a very simple way. If the dried residue of the fever blood be extracted with boiling distilled water, it will be found that the proportion of matter dissolved out from the fever blood is much larger than that obtained from the healthy blood residue. Three specimens of blood taken from animals which died of the cattle-plague fever contained, respectively, 2·91, 2·22, and 1·81 parts of soluble matter dissolved out by boiling water, or twice the quantity extracted from healthy ox-blood. The exact amounts were as follows :—

	Healthy Ox-Blood.		Blood from Cattle Plague.		
	1.	2.	1.	2.	3.
Solid matter obtained by evaporating 100 parts of blood ...	19·87	20·63	23·1	22·78	24·88
Substances soluble in boiling water ...	1·33	1·11	2·91	2·22	1·81

The solid matter of the two healthy specimens contained, respectively, 6·69 and 5·38 per cent. of matters soluble in boiling water, while the diseased specimens contained, respectively, 12·62, 9·72, and 7·22 per cent. So that not only is the percentage of the *solid matters* generally greatly increased in this form of fever, but the extractives and other substances soluble in boiling water are present in increased proportion. These substances probably constitute a pabulum, which is very readily appropriated by degraded forms of bioplasm.(b)

On the other hand, it has been insisted upon by many—but upon purely theoretical grounds—that fever results from peroxidation. So far from this being so, it is certain that the feverish condition is from the very first associated with diminution in the activity of the oxidising processes. I even doubt if there is any evidence whatever in favour of the view that any morbid state known to us depends upon *too free oxidation.* I do not believe that hyperoxidation is possible. I doubt if we *can* oxidise ourselves too much. The greater number of our ailments—temporary and permanent, slight and severe, trivial and fatal—are unquestionably due to, and are associated with, the very opposite condition—insufficient oxidation.

Although fever and inflammation are often considered as if they were very different conditions, the essential pathological phenomena are the same in both states, and a fever may be looked upon as a general inflammation, while an inflammation may be correctly regarded as a local fever. Fever may usher in a terrible inflammation, and a local inflammation may give rise to general fever. The minute changes which may be so readily demonstrated in ordinary inflammation, have much in common with those that take place in fever, but in the former condition the phenomena may attain a stage which in fever could not possibly be reached, for the simple reason that death would occur first. A part of the body may be destroyed by the growth and multiplication of the living matter, or bioplasm, until pus results, and although universal suppuration is, of course, impossible, we do actually meet with cases in which fever runs high and lasts long, and has actually led to suppuration over a great part of the body.

TREATMENT.

But in this lecture I wish to direct your attention to the question of treatment of the feverish condition, in the hope that we may be able to decide upon the principles which should guide us in the management of cases of fever.

In the feverish state the appetite is bad, and there is a disinclination to take food, sometimes amounting to an actual loathing, and the sight or smell of food is disagreeable. Now, there is no use in introducing food into the stomach of a person who is just attacked with fever, for if it remains it only occasions distress, while in most cases it is soon rejected by the stomach in the same state as it was when swallowed. In fact, the process of digestion is very imperfectly performed, or is altogether suspended, for some time after the accession of the feverish condition.

In slight feverish attacks, lasting only for a few hours, the introduction of food is, of course, of no importance, and abstinence for four-and-twenty hours may be actually beneficial. If, however, the feverish condition exists for any length of time, it is absolutely necessary to introduce nourishment, and our object should be to give those substances which are easily absorbed by the stomach and intestinal surfaces, and which require little change to convert them into matters ready to be appropriated by the living matter of the blood and tissues. Milk and beef-tea are valuable foods in the prolonged feverish condition. Some stomachs will not, however, bear pure milk, in which cases the milk must be diluted with water, and the addition of a little lime-water, or a few drops of liquor potassæ, is of advantage. In other instances milk is altogether refused, and for nourishment we must depend upon simple nutritious soups, eggs cooked in various ways, beef-tea, or the extracts of meat now so largely sold. The digestion of any animal soups is promoted by putting into each cupful three or four grains of pepsine and twenty drops of dilute hydrochloric acid. If the mixture be allowed to stand in front of the fire for a couple of hours, artificial digestion will actually have occurred, and the mixture will be in a state favourable for absorption, the weakened digestive power of the stomach not being taxed in any way whatever.(c)

But, as I have already hinted, in the temporary feverish condition, the treatment of which alone is now under consideration, little food is really required. Not only is there oftentimes thirst and actual desire for fluid, but the feverish condition is often much relieved by taking water alone. In this way the action of the skin and kidneys is promoted, and many substances which have unduly accumulated in the blood are thus eliminated. Mutton broth, weak beef-tea, camomile-tea, and infusion of many herbs, some of which are nauseous enough, have been very strongly recommended. The German brod-suppe and butter-suppe are very celebrated. Such preparations really contain very little nutritious matter, and their usefulness is almost entirely due to the water they contain. Domestic Practitioners often praise one or other of these highly aqueous beverages, little thinking that its advantages are due, not to the small quantity of matter in which the virtue is supposed to reside, but only to the large quantity of water in which the medicament or nourishment is suspended or dissolved. Weak tea is praised by some authorities, while others proclaim in most forcible language the superiority of linseed-tea, gruel, barley-water, and other diluents. Some Practitioners advise the aqueous solution of carbonic acid, commonly called soda-water, or Vichy, Seltzer, Vals, or other alkaline mineral water. It would not be judicious to advise plain cold water, while few patients could be persuaded even to taste warm water unless some sapid substance or other were added to it.

(b) See my Report on the Cattle Plague, 1866; and "Disease Germs: Their Real Nature," 1871.

(c) Concerning the "Preparation of Pepsine," see my *Archives of Medicine*, vol. i., pp. 269, 316.

Everyone knows how pleasant is the sensation produced when moderate perspiration is induced in the early stage of a common feverish cold. Even placing the feet in very hot water relieves in a few minutes the unpleasant feeling of tension about the head, nostrils, throat, and neck which we have all experienced. The blood is diverted from these parts to the lower extremities. An ordinary warm bath or a vapour bath, which everyone can have in his room ready for use, is still more efficacious. The hot-air bath or the Turkish bath is now much used. Basking in the heat of a good fire wrapped up in a rug, or lying in a warm feather bed, will have the same pleasant effect. In short, free sweating will often cure the slight feverish state. A glass of hot spirits, or wine and water, a dose of sulphuric ether and sweet spirits of nitre, spirit of Mindererus (our liq. ammon. acet.), or a little ipecacuanha, a small dose of Dover's powder or of antimonial powder have been found to work wonders. Even a tumbler of hot water, or a basin of hot gruel or arrowroot, will relieve the feverish symptoms for a time. Certain diuretic medicines also enjoy a high reputation for curing feverish attacks: nitre, bicarbonate of potash, bitartrate of potash, acetate and citrate of potash, and a number of others which will occur to you, have been given. I have found the solution of acetate of ammonia very useful. It may be given in doses of three or four drachms every three or four hours with a little compound spirits of ammonia, chloric ether, or sweet spirits of nitre and water. Some Practitioners think it better to administer purgatives—castor oil, various preparations of senna, jalap, or scammony; and a few are bold enough to administer the now too much neglected dose of rhubarb and grey powder or calomel, and thus effect the "cure." In some cases, perhaps by judicious interference at once, the occurrence of more prolonged illness, particularly among the youngest and least judicious of patients, may be prevented.

But a slight feverish attack may be cured by simple rest and warmth. Very often twelve hours' uninterrupted rest is the only remedy that is required to cut short many an attack of feverishness—indeed, healthy constitutions frequently "sleep off" their feverish ailments, and many children who go to sleep in a feverish state get up twelve hours afterwards perfectly well.

Now, you will perhaps be surprised when I tell you that all these different remedies and proceedings act beneficially by bringing about the same changes. By all of them the removal from the blood of fluid holding in solution various substances is promoted. Neither perspiration, nor diuresis, nor purgation can occur without the escape of much fluid from the blood. The removal of fluid is soon followed by thirst—a demand for the introduction of more fluid, which, in its turn, is got rid of. In this way, various soluble and some imperfectly soluble substances which had accumulated in the blood in undue proportion are gradually removed, and the feverish condition ceases; in other words, the healthy state is restored. The illness consists in the non-removal of these substances, and their gradual accumulation until the normal action of many tissues, and particularly that of nerves and muscles, is disturbed. By rest and by withholding food for four-and-twenty hours the same result may be obtained quite as effectually as by the administration of remedies, though perhaps less pleasantly, and oftentimes more slowly. If time be allowed, the excreting organs will resume their work, and thus the various substances whose presence disturbed several parts of the nervous system are removed from the body. By the increased action of several secreting organs, the balance of action is restored, and the normal healthy condition of the several tissues and organs is resumed. The proper treatment of a common cold or slight feverish attack is based upon sound physiological principles, which, if well understood, will often safely guide us in the management of far graver maladies.

ON THE USE OF THEINE AS A THERAPEUTIC AGENT.

By LEWIS THOMPSON, M.R.C.S.

I would wish, through your columns, to direct the attention of the Medical Profession to the use of a valuable agent which has hitherto escaped notice, although its powers are most unquestionable, and its cost price very trivial. The article to which I allude is theine, a substance existing in tea and coffee, and, as I believe, in many other vegetable products. As a medicine, theine is powerfully tonic and stimulant, and appears to possess the tonic virtues of the disulphate of quinia united to the stimulating power of wine, but with this difference, that the stimulus from theine is not followed by any depression, as in the case of wine and alcohol.

Theine seems to act chiefly on the great sympathetic or ganglionic system of nerves, and but slightly on the brain. I have used it in doses of from one to five grains, with very marked advantage in the low stage of typhoid fevers, confluent small-pox, and that form of mortification of the toes which is so singularly fatal to old people. But, in addition to this, different Medical friends of mine have found it useful in hemicrania, neuralgia, and what has been called relapsing fever; and in the case of an overdose of opium, it appeared to relieve the narcotic symptoms speedily. With regard to the cost of this medicine, I have discovered that in the ordinary process of roasting coffee the whole of the theine is driven off before the torrification of the coffee is completed, and this theine may be cheaply collected by making the axis of the coffee-roaster tubular. If, instead of a solid axis, we employ at one end of the roaster a tube passing away to the distance of about three feet, the theine is condensed in this tube by the refrigerating power of the atmosphere, and may afterwards be easily dissolved out by a little water, and purified in the manner about to be indicated. As the result of much experience, I have obtained, on an average, seventy-five grains of theine from the roasting of one pound of raw coffee; and when we reflect that in Great Britain alone there are more than 13,000 tons of coffee roasted annually, we see that about 140 tons of theine are wasted and lost every year by sheer ignorance. It may, perhaps, be thought that the saving of the theine will damage the flavour of the coffee, but from experience I know that it has no such effect; and, in point of fact, it is an advantage to the flavour of the coffee to make both the axes of the roaster tubular, and to cause a gentle current of air to pass through the apparatus during the roasting of the coffee, so as to expel the empyreumatic products as they are formed. I will now relate the fact upon which the purification of theine depends; and when this is once clearly understood, the manufacture of theine from either tea or coffee becomes an extremely simple matter. Theine is absolutely insoluble in a concentrated solution of the carbonate of potash, and thus we may precipitate it from its admixture with sugar, mucilage, and vegetable extract. If, then, by means of the subacetate of lead, we have removed from a vegetable infusion the tannin, malic acid, etc., we have only to evaporate the filtered solution to a small bulk, and add to it its own weight of dry carbonate of potash, and the whole of the theine becomes at once insoluble; so that, having collected this insoluble product, and boiled it in rectified spirit of wine, we have a solution of pure theine, which, after distilling off the spirit, furnishes crystals fit for immediate use. In conclusion, I will merely mention a distinctive test for theine, sufficiently delicate to detect the one-thousandth of a grain of that substance. Dissolve the theine in a small quantity of water, and pass through this a stream of euchlorine, then allow the fluid to evaporate at a steam heat; a blood-coloured substance will remain, which, on the application of a few drops of cold water, forms a beautiful scarlet solution like red-ink. It is, I apprehend, almost unnecessary for me to say that euchlorine gas is formed by the action of hydrochloric acid upon the chlorate of potash.

I ought, perhaps, to add that theine, collected as a waste product from coffee, and purified by myself, has cost me less than threepence per ounce troy.

REPORTS OF HOSPITAL PRACTIC

FURTHER HOSPITAL EXI

By T. SPENCE

Surgeon to the Queen's Househo

(Continued from V

THE NUMBERS IN ORDINARY TYPE (301) GIVE THE CASES IN MR. WELLS'S ENTIRE PRACTICE, BOTH HOSPIT

No.	Medical Attendant.	Date of Operation.	Age.	Condition.	Duration and Progress of Disease.	Previous Treatment and Tappings.	Measurements:— 1. At umbilical level. 2. From ensiform cartilage to umbilicus. 3. From umbilicus to symphysis pubis.	Uterus: Situation, Displacements, Mobility, and Length of Cavity. Catamenia.	Diagnosis.
301 .... (cxxxix.)	Dr. Junker	Jan. 27, 1869	49	Married 28 years; 8 children; eldest 27, youngest 4 years	Fourteen years ago noticed a tumour of the size of an egg in left iliac region, which increased very slowly until after confinement, 4 years ago; pain and numbness of both legs; very rapid growth during last 6 months; distinct fluctuation in fluid around nodulated movable tumour; liver pushed up to fourth rib; pressure on bladder and rectum; dyspnœa; great emaciation	Twice tapped—Dec., 1868: 15 pints fluid, albuminous, colloid corpuscles, alkaline; sp. gr. 1018. 2nd. Jan. 1869: 10 pints alkaline fluid, sp. gr. 1020, containing clots of fibrogen and colloid corpuscles	1. 44½ inches 2. 10 inches 3. 11½ inches	Uterus low, movable laterally; cavity 5 inches; cervix short; os soft, patulous; posterior wall of vagina prolapsed (rectocele). No tumour in pelvis. Catamenia ceased 6 months ago	Fluid free in peritone cavity surrounding movable tumour; pr lapse of uterus ar vagina; after tappin and replacing uteri and vagina, the tu mour appeared to l ovarian, as moving did not affect cervi uteri
302 .... (cxl.)	Dr. Livy, Bolton	Feb. 3, 1869	40	Married 21 years; 2 children; eldest 20, youngest 17 years	Six years ago began to swell gradually; pain in sacral and left lumbar region; occasional bearing down of uterus; morning sickness; rapid growth during last 2 months; emaciation	Tapped 6 times—Feb., 1868: 22 pints viscid fluid. June, Aug., Oct., Nov. 1868, Jan. 6, 1869: 36 pints alkaline fluid, sp. gr. 1024; colloid corpuscles	1. 49 inches 2. 14 inches 3. 12 inches	Uterus low, laterally movable; cavity 4 inches; pressed backwards; anterior lip elongated; os open. Tumour hard, closely pressed against, or adhering to, posterior surface of uterus; posterior vaginal wall prolapsed. Catamenia regular	Large cyst in abdomen hard tumour in pelvi
306 .... (cxli.)	Mr. Freer, Stourbridge...	Feb. 13, 1869	29	Married 12 years; 7 children; eldest 11 years, youngest 11 months	Eight months ago noticed a swelling in pubic region, afterwards in left groin, right hypochondrium, and both lumbar regions, rapidly increasing during last 3 months; very anæmic, but well nourished; liver pushed upwards	Tapped twice—Dec. 5, 1868: 16 pints viscid fluid; Jan. 8, 1869: 16 pints of semi-transparent alkaline fluid, sp. gr. 1016, rich in colloid corpuscles	1. 52 inches 2. 12 inches 3. 13 inches	Uterus high; lateral mobility; cavity 6 inches; os patulous; anterior lip thickened; cervix hard. Elongated tumour felt through fornix and rectum, high up in pelvis. Continual menstrual discharge during last 8 weeks	Ovarian tumour
307 .... (cxlii.)	Mr. Brown	Feb. 17, 1869	48	Widow 8 years; no children	Began swelling in left iliac region 8 years ago; increased very slowly; more rapidly during last 12 months; œdema of both legs; great emaciation	None	1. 43½ inches 2. 13 inches 3. 11 inches	Uterus normal, free; os closed. No tumour in pelvis. Catamenia ceased 3 years ago	Free ovarian cyst; right lumbar region clear, left dull
308 .... (cxliii.)	Dr. Shorthouse, Carshalton	Feb. 24, 1869	49	Married 25 years; two children—eldest 21, youngest 17 years	Nine months ago, commenced with bearing down pain in both groins and pubic region; increased very gradually; great emaciation	None	1. 37 inches 2. 9 inches 3. 8 inches	Uterus normal; limited mobility; os open, anterior lip thickened; cervix elongated, soft. Offensive discharge from vagina. Tumour felt high up in pelvis through rectum. Menstrual flow continual during last 6 months	Ovarian colloid tumour; lear lumba sounds

N MEDICINE AND SURGERY.

ENCE OF OVARIOTOMY.

ELLS, F.R.C.S.,

to the Samaritan Hospital.

1870, *p.* 269.)

PRIVATE; THOSE IN ROMAN NUMERALS (CXXXIX.) GIVE THE SERIES OF HOSPITAL CASES ONLY.

OPERATION.								PROGRESS AFTER OPERATION.										General Result.	Date of Discharge and Subsequent History.
								Temperature, Pulse, and Respiration during After-treatment.								Therapeutics.			
								Highest Range.				Lowest Range.							
Anæsthetic.	Situation and Length of Incision.	Adhesions.	Pedicle.	Hæmorrhage.	Which Ovary Removed.	Method of uniting Wound.	Description of Tumour.	Day.	Temp.	Pulse.	Resp.	Day.	Temp.	Pulse.	Resp.	Medical.	Surgical.		
ro- hyl,	Midway between umbilicus and symphysis pubis; 6 inches	Extensive parietal	Broad, short pedicle, secured by large clamp; afterwards removed, and pedicle transfixed, tied, and kept outside	4 to 6 ounces of blood	Left; the right healthy; a clot of lymph adhering to its surface was wiped off	Silk sutures	Multilocular fibro-cystic tumour; a portion trabeculated, containing extravasated blood and 15 pints of colloid fluid; weight, 12 lbs. 4 oz.; total, 27 lbs.	Morn of 1st day Eve of 2nd day	102·8	140	32	Morn of 13th day	98·2	92	...	ʒj. laudanum. Tinct. nucis vom., ♏x. on 20th day	Stitches removed 4th and 6th days; pins and ligature came off 5th day; carbolic acid dressing	Recovered	Left Hospital 34 days after operation, still in a delicate condition. Went to Brentwood, and returned April, 1869, in excellent health. Died subsequently at home Oct. 6, 1869. No post-mortem. Said to have had bronchitis.
ro- hyl,	Midway between umbilicus and symphysis pubis; 6 inches	Extensive and firm in front and left sides	Twisted pedicle, about 3 inches long; large clamp; no traction	Considerable oozing from adhesions and incision; 5 to 6 vessels tied, and ligatures cut off; 3 others tied, and ligatures brought out by wound	Right; the left healthy, close to enlarged uterus (as large as in 4th month of pregnancy)	Silk sutures; used also to vascular shreds of separated adhesions close to abdominal wall	Enormous thin-walled cystoid, partly trabeculated, containing 40 pints of fluid, and weighing 8 lbs. 15½ oz.; total, 49 lbs.	Eve of 4th day Eve of 1st day	103·4 102·6	112	28	9th day Metrostaxis, 2nd to 5th day	98·6	86	...	ʒijss. laudanum	Stitches removed 4th day; clamp 6th day; suppuration from stitches; last ligature came off 20th day	Recovered	Left Hospital perfectly well 24th day after operation.
ro- hyl, .	Between umbilicus and symphysis pubis; 7 inches	Parietal and omental, and to healthy (left) ovary	Short pedicle, secured by clamp; the pedicle afterwards transfixed and tied in two portions, and the Fallopian tube and large vessel close to it in a separate ligature	From adhesions; several omental shreds and a vessel near left ovary tied, and shreds and ligatures cut off	Right	Silk sutures	Cystoid; vascular stroma, softened by fatty decay; a portion trabeculated, containing 30 pints of colloid fluid; weight 9 lbs. 8 oz.; total 39½ lbs.	Eve of 1st day Eve of 3rd day	101·2	138 148	28	Afternoon of 2nd day	98·8	128	...	ʒj. laudanum; enema of assafœtida, ℥iv.; turpentine, ʒj.; tinct. nucis vom., ♏x., 6 doses; oxalate of cerium, gr. vi.	...	Died 99 hours after operation	Post-mortem 18 hours after death.—Slight tympanites; 1 pint of serum in cavity of pelvis; effusion of lymph at separated adhesions; coils of intestine adherent to each other, and canal perfectly obstructed by adhesions of the curves; fatty liver; several ounces of dark serum in pericardium; heart flabby, containing soft dark clots.
ro- hyl, s.	Between umbilicus and symphysis pubis; 4 inches	None ...	Short pedicle; large clamp; some traction	Scarcely any	Right	Silk sutures	Large thin-walled cyst, with a multilocular cystoid at base; contained 39 pints of colloid fluid; weight 2 lbs. 5 oz.; total 41 lbs.	Eve of 4th day Eve of 3rd day	100·8 100·6	... 98	... 22	1st night 6th day	98·6 98·8	84 92	... ...	ʒiiss. laudanum; citrate of potash	Removed stitches 4th day; clamp 11th day	Recovered	Left Hospital 40th day after operation; made a rapid recovery, but was kept in Hospital on account of swelling of right leg.
ro- hyl, .	Between umbilicus and symphisis pubis; 5 inches	To abdominal wall and omentum	Right Ovary: Long pedicle; small clamp; no traction. Left: Tied with whip cord, avoiding Fallopian tube; ligature returned	From shreds of omentum, which were tied and cut off	Both	Silk sutures. Between clamp and pedicle rather a free opening left for drainage	Multilocular, proliferous cystoids of both ovaries, very soft and broken up to pieces, weighing together 2 lbs. 13 oz., and 13 pints of fluid	Eve of 1st day	102·0	128	28	10th day	98·8	100	22	ʒij. laudanum; chloric ether; beef-tea enemas	Removed stitches 4th, 5th, and 6th days; clamp 6th day	Recovered	Left Hospital 31 days after operation, perfectly well.

No.	Medical Attendant.	Date of Operation.	Age.	Condition.	Duration and Progress of Disease.	Previous Treatment and Tappings.	Measurements:— 1. At umbilical level. 2. From ensiform cartilage to umbilicus. 3. From umbilicus to symphysis pubis.	Uterus: Situation, Displacements, Mobility, and Length of Cavity. Catamenia.	Diagnosis.
309 … … (cxliv.)	Dr. Barker, Brighton …	March 3, 1869	40	Married 15 years; 6 children; eldest 13, youngest 3 years; one abortion in 1867	In July, 1867, violent pains in abdomen below umbilicus; got bigger; miscarried in November, and increased more rapidly afterwards; frequent sickness; very anæmic and emaciated	Eighteen tappings between June, 1868, and March, 1869. Last tapping day before ovariotomy: 16 pints of neutral colloid fluid, sp. gr. 1008	1. 43 inches 2. 8 inches 3. 11 inches	Uterus normal; lateral mobility; cavity 3½ inches; os open; cervix hard, elongated. No tumour in pelvis. Catamenia ceased June, 1868; leucorrhœa	Much free fluid in a dominal cavit around a movab tumour, which ca be moved withou any effect on cerv uteri
310 … … (cxlv.)	Dr. Shorthouse, Carshalton	March 31, 1869	59	Married 35 years; 7 children; eldest 33, youngest 18 years; 7 miscarriages	Two years ago began to increase slowly, with pains in pubic region and bearing down of uterus; more rapidly during last 2 months; dyspnœa; inguinal glands enlarged; varicose veins of both legs; abdominal wall œdematous	Tapped March 17, 1869: 10 pints alkaline colloid fluid, sp. gr. 1012	1. 39 inches 2. 9 inches 3. 9 inches	Uterus normal, high, free; os open; cervix short, soft. No tumour in pelvis. Catamenia ceased 10 years ago	Free ovarian tumour ascites
312 ……… (cxlvi.)	Dr. Lucas, Brecon …	April 21, 1869	54	Single	After cessation of catamenia (5 years ago) suffered pain in left iliac region; 14 months ago, began to enlarge gradually, and lose flesh	None … …	1. 39 inches 2. 9 inches 3. 10 inches	Cervix rather high and to right; os closed. No tumour in pelvis. Catamenia ceased 5 years ago	Multilocular ovaria tumour; some doub whether it might no be a soft fibroid; n distinct fluctuation cervix absorbed; coul not get sound int cavity; no bruit; o moving the tumou upwards, it does no affect uterus
313 ……… (cxlvii.)	Mr. Blythman, Swinton	April 29 1869	35	Single………	In February, 1869, was seized with severe fever; increased suddenly and rapidly since; much pain in right iliac region; semi-elastic tumour; crepitus around umbilicus, and severe pain on pressure; very anæmic and emaciated.	Tapped April 4: 3½ pints thick, reddish fluid	1. 35 inches 2. 8 inches 3. 8 inches	Uterus anteflexed; restricted mobility; cavity 3½ inches; os large, hard, open, uneven; base of tumour felt through fornix and behind cervix. Catamenia ceased 7 weeks ago; regular before	1. Multilocular ovaria cyst, anteflexing uterus 2. Peritoneal cance involving ovary
319 ……… (cxlviii.)	Mr. Elliott, Chichester…	May 26 1869	21	Single ……	Two and a half years ago commenced with swelling of legs, especially left, and of abdomen, without pain; increased very gradually, more rapidly during last 12 months. Occasional sickness, and pain and fulness of breasts; distinct fluctuation; lumbar sounds clear; looks healthy and well nourished	None … …	1. 33 inches 2. 5 inches 3. 9 inches	Uterus high, slightly anteverted; os closed; cervix elongated, hard. No tumour felt in pelvis. Catamefnia regular	Ovarian cyst, left side; probably a close connexion with uterus in front and to left

OPERATION.								PROGRESS AFTER OPERATION.											
								Temperature, Pulse, and Respiration during After-treatment.								Therapeutics.		General Result.	Date of Discharge and Subsequent History.
								Highest Range.				Lowest Range.							
Anæsthetic:	Situation and Length of Incision.	Adhesions.	Pedicle.	Hæmorrhage.	Which Ovary Removed.	Method of uniting Wound.	Description of Tumour.	Day.	Temp.	Pulse.	Resp.	Day.	Temp.	Pulse.	Resp.	Medical.	Surgical.		
hloro- nethyl, üjss., fter un- uccess- ul trial f ether	From 2 inches above to 7 inches below umbilicus	Parietal	Short pedicle, transfixed by whipcord and tied in two portions	Some oozing from adhesions	Left	Silk sutures	A semi-solid trabeculated fibro-cystic tumour, weighing 6 lbs. 6 oz.	Morn of 2nd day	102·8	Not countable	32	Eve after operation	98·4	120	26	ʒj. laudanum; enema, with beef-tea and brandy,	Injection of ammonia, ♏l., in veins of arms and right saphena 2nd day	Died 50 hours after operation	Post-mortem 17 hours after death. —No tympanitic distension; right ovary concealed by adhesions between rectum and uterus; about one pint of serum in pelvic cavity; no blood nor clot; red granular thickened peritoneum; liver adherent to stomach and abdominal wall; clot in heart.
loro- nethyl, iv.	From one inch below umbilicus downwards; six 6 inches	None ...	Short pedicle; large clamp; little traction	Scarcely any	Left	Silk sutures	Multilocular, proliferous cystoid, partially trabeculated; soft wall; cavities coated with lymph; 9 pints of fluid; weight 1½ lbs.; total 10½ lbs.	Eve of 3rd day Morn of 1st day	100·4 99·6	... 99	... 22	6th day Metrostaxis 2nd to 6th day	98·6	78	18	♏lxxv. laudanum; citrate of potash	Removed stitches 4th and 7th days; clamp 10th day	Recovered.	Left Hospital well 26th day after operation.
loro- nethyl	Between umbilicus and symphysis pubis; 6 inches	Recent parietal and omental, and low down in right iliac fossa, close to pedicle	Short pedicle; large clamp; no traction on uterus, but some tension of right broad ligament	Very little bleeding, but a considerable quantity of serum oozed from the peritoneal cavity; five shreds of omentum were tied and cut off	Right	Silk sutures	Very vascular, multilocular, partly trabeculated cystoid; fatty degeneration of, and apoplexy in, walls; hæmorrhagic cysts, containing 10 pints of colloid fluid and lymph; weight, 1 lb. 8½ oz.	Eve of 3rd day	101·2	130	32	Eve of operation	98·8	80	20	ʒij. laudanum; citrate of potash; pills of extract belladonna gr.¼, opium gr.ss.	3rd day: purulent discharge beside pedicle; removed clamp and separated adhesions of intestine behind pedicle; introduced elastic tube. 4th day: the same proceeding, and punctured transverse colon to give escape to gas	Died 5th day after operation	Post-mortem.—Several ounces of dark serum in pelvis; coils of intestine adherent around pedicle and to each other; rectum empty and contracted; an obstruction near the ileo-cæcal junction, where the small intestine was bent in a small short curve, and adherent to posterior surface of pedicle; heart contained much dark coagulum and separated fibrin.
loro- ethyl, ijss.	Between umbilicus and symphisis pubis; 5 inches	Parietal, and to a loop of intestine with its mesentery	Pedicle 3 inches broad; middle-sized clamp	A good deal from pedicle and adhesions; vessels tied and ligatures cut off	Left	Silk sutures	A soft-walled fibro-cystic tumour, partly trabeculated; extensive fatty degeneration; weight, 3 lbs. 4 oz., and 10 pints fluid	6th day	102·8	150	28	7th morn	100·4	120	24	ʒvss. laudanum; sulphate of quinine 6th day; beef-tea enemas	Removed stitches 5th and 6th days; clamp 6th day. Shortly before death punctured Douglas's space through rectum, and removed 3 oz. of purulent, not fetid, fluid	Died 6th day after operation	Post-mortem.—Abdomen distended and tympanitic; adhesion of coils of intestine to each other and to abdominal wall; effusion of lymph; 6 to 8 oz. of turbid, not fetid, serum in pelvis
loro- ethyl ijss.	Midway between umbilicus and symphysis pubis; 4 inches	None ...	Right secured by circular clamp; left transfixed by whipcord ligatures, fastened to clamp, and kept by a pin outside	Scarcely any	Both	Silk sutures	Right: Unilocular cyst connected with part of tube and Wolffian body, weighing 5½ ounces. Left: Unilocular cyst; internal surface studded with papillary growth; part of Wolffian body and tube attached; weight 3¾ozs.; fluid of both cysts 10 pints	2nd day	103·4	124	24	9th day	98·6	88	18	ʒiv. of laudanum; citrate of potash	Venesection from arm—20 ozs. of blood 2nd night; removed stitches 5th and 9th days; clamp and ligature 15th day	Recovered	Left Hospital perfectly well 31 days after operation.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 18, 1871.

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THE SMALL-POX EPIDEMIC.

We learn from the last return of the Registrar-General that the deaths registered in the week ending February 11 were 211. The average small-pox mortality in the first five weeks of the year was 151. Distributing the deaths in the Hospitals among the several districts of London, we find still the East districts furnishing the largest number—namely, 80 deaths. The other districts follow this order—viz., the West districts 45 deaths, the North 39, the South 33, and the Central 14 deaths. The Registrar-General makes the following remarks upon the age of the persons who have died :—

> "The mortality from small-pox varies with age. Thus, in the last week the annual rate per 1000 in children under 5 years of age was 10·7 ; in young persons of 5 and under 20 it was 3·2 ; in persons of the age of 20—40 it was 2·7 ; in men and women of 40—60 it was 0·8 ; and after 60 the rate was nominal. This has an important bearing upon the question, Does the protective power of vaccination wear out with time? The persons who die in 1871 at the age 20—40 must have been born about the years 1831-51 ; while those who die at the age 40—60 must have been born about 1811-31. Now, it is not likely that the numbers born in 1811-31 were vaccinated in any larger proportion than those born twenty years later ; the balance is probably on the other side, yet the mortality at the advanced age 40—60 was only one-third of the mortality at the age 20—40. The danger of dying from small-pox diminishes rapidly as age advances, which could not be the case if the effect of vaccination wore out with time. The facts of the ten years 1851-60 over all England bear out this deduction.

This line of argument must be accepted with caution. It goes upon the assumption that the mortality among all the ages mentioned was that of a vaccinated population. The correction it seems to require is a similar statement as to the mortality at the same ages at a time when vaccination was not practised. So far as we can judge by published figures, it would appear that even unvaccinated persons now are very much less liable to take small-pox between the ages of 40—60 than between the ages 20—40, although when they do take it they are more likely to die.

There has never in our experience been a time when greater activity was manifested in London in performing primary and secondary vaccinations. The public stations, thanks to the efforts being made to look up unvaccinated children, are crowded with applicants ; and a similar demand for vaccination is observed in private practice. Especially, it would appear that the public mind is being roused to the necessity of revaccination—somewhat roughly indeed, but efficiently. Guardians who hesitated about paying for revaccinations among the poor, and who were in the habit of discouraging the practice on this account, have been rudely wakened up to their duty in this respect, and throngs of persons are induced by the dread of the epidemic to secure their protection. To such an extent, indeed, is revaccination being sought, that private Practitioners are in many cases at their wits' end for primary lymph from which to perform it. On application at Whitehall to the National Vaccine Establishment they get only a few charged points, and loud and frequent have been the complaints upon this score. People say that, as usual, the national arrangements for lymph-supply have broken down just at the time when they ought to be most efficient. Yet this is very unreasonable. The National Vaccine Establishment is only one out of a hundred sources from which Practitioners may supply themselves, supposing even that every man was not bound to do his utmost to keep up a continued supply of lymph by primary vaccinations in his own *clientèle*. Mr. Simon has very properly, in a memorandum issued by the Medical Department of the Privy Council, pointed all this out. Starting from the assumption that all revaccinations should be performed directly from arm to arm, the lymph being taken from a primary vaccinifer, he directs those who have no infants on their hands with primary pocks to the public stations established by law, where a fresh batch of children is to be found week after week. It is unfair, under these circumstances, to call upon the establishment which has to supply the army, the navy, and the colonies, as well as to answer demands at home, to furnish lymph for the revaccination of the thousands who are now seeking it. He says—

> "No central depôt can pretend to give such separate supplies as will enable each individual Practitioner to vaccinate at once large numbers of persons. The principle on which the National Vaccine Establishment proceeds (and has always proceeded) in its distribution of lymph, whether to public or to private vaccinators, is as follows :—*It furnishes each applicant with a sufficiency for the performance of a few first vaccinations, and it expects that the recipient*, so far as the circumstances of his practice render necessary, *will exert himself to vaccinate in series from the beginning which he is then enabled to make.* . . . If the vaccinator, on receiving his packet of preserved lymph, does not use it for starting primary vaccinations, from which, afterwards, his revaccinations could be performed, but, instead of so doing, expends the preserved lymph on some of his claimants for revaccination, he must not rely on being able to satisfy other claimants with new supplies from the central depôt."

A little method will enable private Practitioners, and those who have to revaccinate schools and large establishments, to perform all their operations from arm to arm. When it is not essential that such revaccinations should be performed immediately, in consequence of positive close exposure to small-pox contagion, a Medical man might bring all his candidates for revaccination together at one time, and then a trifling remuneration would usually suffice to induce a mother to bring her infant vaccinifer to the Practitioner's house. The chief inconvenience we have heard of in this respect is, that, in some parishes, vaccinations at all the public stations are performed on one day in the week ; in some, public vaccinations are only performed twice a week, although three or four stations are in existence. In such places, the local Practitioners who have to revaccinate without delay on the outbreak of small-pox in an establishment or school have very great trouble in obtaining an infant, or are driven to the use of preserved lymph. It is to be regretted that, until the emergency arose, no announcement was made that the burthen of supplying local needs would be laid upon the parochial stations. Had this been recognised distinctly beforehand, it would have been the duty of guardians, where several stations were established, to see that they were open on different days in the week.

Two important circulars have been issued by the Poor-law Board. In one, the Medical officers of districts and workhouses are urged to exercise discrimination in the cases of small-pox which they may recommend for removal to the

Hospitals. This circular has originated out of the observation that "some patients have been sent to the Asylum Boards' Hospitals in so advanced and aggravated a state of disease as to offer but little hope of recovery, and to render the danger of removal especially great." On this, the Poor-law Board announces an intention to "fully investigate all cases in which the patient, on his admission into the Hospital, may be found in a moribund condition." We should have thought this threat as unnecessary as we are sure it is impertinent. The circular was issued on February 2—that is, the very day after the Hospitals at Homerton and Stockwell were opened—so that the observations on which the circular is founded must have been made at the Hampstead Hospital. Does the Poor-law Board think that no share of the blame rests with them or the Asylum Board if patients arrived moribund? Whose fault was it that small-pox patients had to be carried from even the Eastern parishes of London several miles to Hampstead? We can well conceive such a journey leaving a small-pox patient moribund at its termination, who might have been carried a moderate distance with impunity. To lay all the blame of the evils generated by their own delays and bad management, up to the full development of the epidemic, upon the shoulders of men who do, as a rule, discriminate, and not one of whom, we are convinced, would send a patient on a journey to Hospital without reasonable grounds for believing that he could perform it, is an exercise of power which, in the case of any other public authority, would be called by another name. Is it to be understood that none but mild cases are wanted at the Asylum Hospitals? Are none to be sent there but those of whom there is a good hope of recovery? If so, we hope the Poor-law Medical Officers will pay no attention to the circular further than to abstain from doing that which, as Professional men, they certainly would not have done, even without the minatory exhortation of the Poor-law Board. Our advice would be—if you meet with a small-pox patient in a place where the disease is likely to spread, send him off immediately, if you think that he has power enough to perform the journey to the Hospital without injury. Never mind whether the case is likely to recover or not—think only whether the danger of the removal is such as to prohibit it. In thus doing your duty to the patient and the public, you may defy the "investigations" of the authorities at Gwyder-house.

The other circular, issued on February 9, is so far reassuring, that we learn from it that the guardians of the metropolitan parishes invariably send their cases in vehicles appropriated exclusively to contagious cases. But we gather further, that all such vehicles are not constructed so as to admit of the patient's being placed in a recumbent posture. Possibly, some of the cases admitted moribund at Hampstead might have travelled very well had they not been compelled to undergo a jolting in an upright posture through the paved streets of London. Why did not the Poor-law Board threaten the guardians with an "investigation" should cases thus brought in future arrive dying or dead?

Although Mr. W. E. Forster believes that the Vaccination Act of 1867 could not be altered for the better, he has moved in the House of Commons for a committee to inquire into its operation. The first reason which he assigned—namely, that the inquiry would tend to disabuse the minds of the few who conscientiously object to vaccination of the errors on which their objections rest—is to our mind of little force. It will be mere waste of time to reopen the question of the harmlessness of vaccination. The persons whom it is hoped to convince are of a class not to be influenced by additional Parliamentary inquiries, from which, moreover, nothing not already thoroughly established can possibly issue. The second reason adduced has more validity. We think it is due to the public at large and to the Profession that an opportunity should be afforded for all parties to express an opinion as to the mode in which the law can be made more effective than it is at present. One point especially we hope the committee will take into consideration—namely, whether, assuming that *re*vaccination is held by all persons qualified to give a judgment in the matter to be nearly as important as infant vaccination, and particularly important in view of the recurrence of an epidemic season, some plan might not be devised by which all persons, on arriving at puberty, might be subjected to the operation. Another good result of the committee might be that it may be shown where and by whom the public duties imposed upon local vaccination-authorities have been neglected. The question of compulsory registration of births, as a necessary condition of success for a compulsory Vaccination Act, is one which must arise.

BHANG- AND OPIUM-EATING IN INDIA.(a)

The saying that every race finds out for itself some stimulant—alcohol for Northern Europe, coffee for Arabia, bhang for India, opium for China—is trite enough and, on the whole, true enough. In India, where the common hemp plant (*Cannabis sativa*) grows freely and acquires properties unknown here, its use as a stimulant and narcotic is of high antiquity. It is prepared in various modes, and is swallowed or smoked—as churrus (the concrete resinous juice of the plant), as gunjah (the dried plant retaining its resinous juice), and as bhang (the larger leaves and capsules without the stalks). So different are the effects of these from those produced by the home-grown plant, that it has been customary to speak of the Indian variety as *Cannabis Indica*, as if the species were different; but it is not so. The name "bhang" is also given to a narcotic liquor prepared from the hemp, which in this form is largely consumed. From it is prepared a sweetmeat called *majoom*, which also contains ghee and sugar. The bhang-drinking is had recourse to because alcoholic beverages are forbidden by both the Hindu and Mohammedan religions, and gunjah-smoking is used for a like purpose. Gunjah is never smoked alone, but is kneaded with tobacco in the palm of the hand, and when lighted in the pipe the smoke is inhaled in long whiffs. As usual, under such circumstances, a speedy renewal of the dose is necessary to prevent subsequent depression, and so the hemp-eater, like the opium-eater, soon becomes confirmed in the use, or rather abuse of the drug. Whilst it lasts, the intoxication produced by hemp is of a pleasant kind—a feeling of lightness, and as if the spirit was no longer connected with the dull body, is common. It was the drug employed by the Old Man of the Mountains to give his followers a foretaste of Paradise, and thus secure their infallible obedience. As his orders usually were for the murder of some offender in cool blood, his followers, in course of time, acquired the name of Haschischi, modified into our modern word assassins.

The effect of the drug on the constitution is marked, but not so great as that of opium. The gunjah-smoker is dry and rickety in his appearance, his eyes sunken, his cheeks flattened, and of a generally faded look. These effects are in a great measure obviated or, at least, mitigated by the use of a diet containing an abundance of fat; but a hemp-eater or smoker is never stout. Dr. Chevers tells us that in practice he has found that an opium-smoker, when sick, must have his dose, or he dies, but that the gunjah-smoker may have his drug cut off with impunity, except in cases where every means of alleviating pain is necessary. In connexion with this subject, it may be interesting to note that long ago this substance, in the form of majoom, was used as a kind of anæsthetic, especially in making eunuchs and in circumcision.

One would have expected that, in a country like India, the intoxication produced by the drug would frequently have been seized upon by the criminal classes for the purpose of robbery;

(a) "A Manual of Medical Jurisprudence for India, including the Outline of a History of Crime against the Person in India." By Norman Chevers, M.D., Surgeon-Major H.M. Bengal Army; Principal of the Calcutta Medical College; Professor of Medicine, and Senior Physician, in the College Hospital, etc. Calcutta: Thacker, Spink, and Co. Pp. 861.

but this does not seem to be often the case, although in a former article we pointed out that the drug was occassionally mixed with datura for that purpose. As a result of the prolonged and continuous use of the drug, complete loss of speech is sometimes noted, but is not very common. Much more frequent as a result of the practice is the insane condition in which the individual is prompted to acts of savage violence. A few days' quiet generally ends in restoring the mental faculties, but many become permanently insane. It is in the intoxication produced by hemp that running a-muck seems most frequent—not that it follows that hemp is the cause of the violence, but the native, excited by some wrong, real or imaginary, fortifies his determination to be revenged by a dose of gunjah or bhang.

Opium-eating and smoking are very prevalent in many parts of India; but the drug does not seem to be very often used as a poison, except in those parts where it is produced in abundance. But it would seem to have been very extensively employed for the destruction of female children. To this end, it was either introduced into the infant's mouth or the mother's nipples were anointed with it; so that it was insensibly taken in with the milk. Drugging older children, by their nurses, to keep them quiet, is common enough, and opium is used for this purpose also. Opium-eating seems to be most prevalent among the Rajpoots; with them, eating opium together is the most sacred pledge of friendship; and upon festivals and high days the chiefs solemnly partake of it in company. The practice was encouraged, because opium was supposed to strengthen their courage in warfare, and to increase their aptitude for business. Finally, it would seem that in certain parts nux vomica is eaten to the extent of as much as twenty grains a day, in the same way as opium, and the hakeems give it to supersede the use of opium.

THE GENEVA CONVENTION.

At the conference of the Geneva Convention held at Berlin on April 22, 1869, it was decided that the next assembly of delegates should take place at Vienna, in May, 1871. It is now hardly likely that the projected meeting can take place at the time fixed. The proposals of the Convention for securing the neutrality of persons and equipages engaged in the relief of the wounded have, meanwhile, been put to a practical test under which they have completely broken down. We had so frequently intimated our doubts as to the feasibility of the philanthropic schemes of the Convention, that the result has not in any way surprised us.

The communication which appears in another column, from M. Giraldes, expresses in impassioned terms the mood in which the French view the conduct of the Germans with reference to the rules of the Geneva Convention. Count Bismarck, on his side, has made equally grave charges against the French, and our contributor who supplies the History of the First French Volunteer Ambulance sums up, in a severely judicial manner, the facts, showing that the Geneva Convention has become a complete farce during this war, that both parties have violated it, and the less that is said about the matter the better.

When the next meeting of the Convention does take place, let us hope that the bitter experience of the recent war may not be without its results. There should not be much difficulty in defining the limits within which the neutrality of those employed in aiding the wounded shall be inviolable. Within the same limits, this neutrality, in order to be *sans peur*, must be *sans reproche*. On battle-fields, during the heat of action, all who are present must be content to take their lives in their hands, and share all risks. It is simply absurd to expect that trains of ambulance waggons can be discriminated by the enemy from artillery or ordnance stores, which they resemble so strongly as frequently to embarrass even the friends for whose succour they are intended. We have no doubt whatever that, in many of the instances in which complaints have been made on both sides of a treacherous misuse of the flag or badges of the Geneva Convention, or of parties bearing them having been fired upon by the enemy, the infringement of the terms of neutrality has been accidental. Well-authenticated cases of wilful neglect or misapplication of the "red-cross flag" have, however, been too frequently recorded by completely impartial observers for us to entertain any doubts as to their occurrence. But even these we would be inclined to consider as the results of individual rather than national disregard of moral obligations, and as instances of that "human futility," the burden of which we must bear—

"Till, in eternity,
Love is alone."

THE WEEK.

TOPICS OF THE DAY.

Our contemporary, the *Times*, has suddenly awakened to a great interest in the subject of Medical reform. In Wednesday's paper appeared a leading article, the gist of which was that it was incumbent on the Government to guarantee the public that all legally-qualified Practitioners should be well qualified to practise in all branches of the Profession, and that the machinery for effecting this was provided by the Bill of last year, which ought to be reintroduced at an early period of the present Session, and passed *nem. con.* by both Houses of Parliament. The writer or inspirer of the article has taken care to pay a sufficient tribute of approbation to the Privy Council, or rather its Medical department, and to the General Medical Council. The latter body, indeed, seems in the writer's opinion to be as near perfection as possible, and the clamourers for an alteration in its constitution and its election by a kind of universal suffrage are put out of court as a faction in the Profession which is simply beneath contempt. Now, with much in the article we may at once say we thoroughly agree. We hold with the writer that all legally qualified Practitioners should be presumably well qualified to practise their Profession in its various branches, and that the General Medical Council is the proper body to superintend the licensing and examinations of the Profession. But we maintain that these are the advantages which the Bill of the Government, in the form in which it reached the House of Commons, would entirely fail to procure. By the alterations which Lord De Grey weakly introduced into his Bill, it became simply a measure which added one more to the nineteen existing examining bodies, and which made it incumbent on the General Medical Council to legalise the practice of mesmerism, homœopathy, hydropathy, and every other species of quackery. The writer in the *Times*, moreover, carries his admiration of the General Medical Council a little too far. We have never joined in the wholesale abuse of the General Medical Council, nor have we the slightest faith in the panacea of direct representation. Nevertheless, we believe that even the General Medical Council might be altered for the better. It might be made more really representative; it might be made smaller, more compact, and less expensive, with great advantage both to itself and the Profession. The Profession will not accept Medical reform piecemeal. It does not want a succession of Medical Bills—in fact, it is showing the desire to work out its own reforms in its own way, without appeal to Parliament. The combination which is being matured between the examining bodies in England will leave little need or room for reform, as far as this division of the kingdom is concerned. In time, Scotland and Ireland, it is to be hoped, will follow suit, and the Profession having been the author of its own remodelling, will have no need of submitting to the constructive experiments of a Minister of the Crown or a Medical officer of the Privy Council.

The meeting on Wednesday at the United Service Institution, Whitehall, on the subject of the employment of old soldiers and sailors in those civil services of the country which require good health, habits of obedience, and a steady execution of orders, rather than any extraordinary intellectual acquirements, reminds us that there are many offices which are held by Medical men wherein the habits of discipline, the talents for organisation, and the varied experience of retired Medical officers of the army and navy would be specially useful. After five-and-twenty years in the public services, few Medical men are fit for the wear and tear and all the petty annoyances of private practice; but their previous training and experience would render them most admirable public servants as Medical officers of gaols and other government establishments, inspectors of factories, workhouses, and the like. Retired Medical officers are subject to *ennui* and all sorts of fancied ills. Far better let their talents and experience be obtained for the service of the country than allow them to oscillate in constrained idleness and continual grumbling between the sleepy hum-drum of a country village and the less healthy atmosphere of a London club.

We are glad that Dr. Dalrymple has determined that his Bill for taking care of habitual drunkards shall at least have a fair start in the present session. He has introduced it early, and the manly and earnest words with which he deprecated the mirth with which the first mention of the Bill was received by the House of Commons, will, we should think, obtain for it a fair hearing and examination.

The death is recorded of a young man on the morning of his intended marriage, from an overdose of prussic acid. The deceased was in easy circumstances, and there was no assignable reason for the commission of suicide; but he had suffered from a cough, and was in the habit of taking prussic acid and ammonia in seltzer water. The jury found that death was caused by an overdose of prussic acid, taken by deceased for medicinal purposes, and arose from misadventure. Prussic acid, we may add, was found by Professor E. Rogers in the stomach. We presume no Medical man would recommend a patient to take prussic acid in seltzer water in necessarily uncertain doses. His death must, therefore, have been the result of that little knowledge which is so dangerous, or must be chargeable to the advice of some ignorant and unqualified person. But the question remains—How came the prussic acid in the young man's possession? What has recent legislation on the subject of the sale of poisons done to protect the public from their own ignorance or criminal designs?

Mr. Fairlie Clarke has been elected by a large majority Assistant-Surgeon to the Charing-cross Hospital.

SIR W. FERGUSSON'S HUNTERIAN ORATION.

The Hunterian Oration, of which we publish the text, will be read with the greatest interest, both by those who formed part of the crowded auditory at the College on Tuesday, and by those who were not so fortunate. The oration was eminently characteristic of the gifted author. Practical tact, great shrewdness, with unmistakable kindness of heart, no ambitious oratory or turgid declamation, wide Professional knowledge, a thorough appreciation of all that belongs to the progress of Surgery, and—may we add?—just a little of that conservative feeling which is jealous of all unauthorised innovation, and which dislikes the idea that physiology shall trace development beyond the sphere of the circulation, or that a Physician-Accoucheur should meddle with Surgical fever. The tribute paid to the lately deceased worthies of our Profession was just, feeling, and couched in unaffected and nicely weighed language, which evidenced that the speaker's head and heart were warmed to his task. The peroration was particularly well done, and the rapid glance at the career of Hunter, beginning at the modest farmhouse in Scotland, and ending with Westminster Abbey, breathed a moral, which is enforced by Sir W. Fergusson's living example, and will not be lost upon the younger members of the Profession.

REVACCINATION IN THE NAVY.

We understand that orders have been issued for the vaccination of all boys and cadets in her Majesty's vessels. We have before remarked upon the omission of this precaution in the navy, and we hope that its introduction during the present epidemic of small-pox will lead to the practice of revaccination of all classes entering that service, as has been the invariable rule for some years past in the army.

INFLUENCE OF RECRUITS IN SPREADING SMALL-POX AMONG SOLDIERS.

We are informed that several cases of small-pox have appeared among the troops in London, Woolwich, and other stations throughout the country. In many instances the patients have been unvaccinated recruits, who have been attacked so soon after enlistment that there has been no opportunity for the operation of vaccination, which, according to the rule of the service, is invariably performed whether the recruits do or do not bear marks of previous vaccination or small-pox. We understand that in Ireland especially very marked instances of importation of the disease into that country by unprotected recruits from Westminster district have occurred. During the present epidemic, and, indeed, under any circumstances, it would certainly appear advisable that recruits should not join their regiments until they have passed a reasonable period in separate barracks under close observation, during which, also, vaccination should be carefully performed.

SMALL-POX IN MALTA.

Small-pox has appeared in Malta among the civil population, and a few isolated cases have occurred among the troops.

THE ARMY ESTIMATES.

The army estimates for the ensuing year provide for an increase of twenty-six Medical officers—namely, seven Surgeon-Majors or Surgeons, and nineteen Assistant-Surgeons. The former do not actually represent an increase to the establishment, being composed of merely those withdrawn from India, or specially promoted and classed as supernumeraries. The nineteen Assistant-Surgeons are an actual addition to the strength, in consequence of the increased number of batteries of Royal Artillery. Notwithstanding the increase in the number of Medical officers, the amount estimated for on account of the pay of the Medical Department is £94 less than for the preceding year. This curious result has been attained by a reduction in the estimate for supernumeraries of more than £9000, and by a redistribution of several items of the vote—an analysis of which would occupy more time and space than we have at our disposal. There is a net increase of £766 on the whole Medical establishment and services. The cost of medicines, etc., is £1050 less than the sum voted for the preceding year—rather a remarkable result, considering the increase of the army by 20,000 men; and, if it be attributable to the more careful revision lately exercised in the expenditure of medicines, it shews now necessary such revision must have become, however irksome it may have appeared to Medical officers. The estimate for the military branch of the establishment at Netley again includes the allowance for the Assistant-Commandant, the omission of which in the estimates for 1870-71 was considered an indication that the control and administration of military Hospitals were about to be entrusted to the Medical officers themselves. For the Medical School at Netley an increase of £2318 appears, composed chiefly of the pay and allowance to the mess establishment for sixty-six probationers, of whom there were none during the preceding year. The strength of the army Hospital corps has been increased from 862 to 1000 of all ranks.

NEW HOSPITAL FOR BIRMINGHAM.

A PRELIMINARY meeting, which is shortly to be followed by a town's meeting, has been held to consider the advisableness of establishing a special Hospital for diseases of women. A long statement was read showing the need for such an institution, from which we learn there is not sufficient provision in the existing Hospitals for the proper treatment of these cases. We have no love for special Hospitals—in the main we strongly object to them; they are too often made the media by which certain individuals are brought into notoriety, and are intended merely to be their own stepping-stones into fame and position, the weal of the public being a minor consideration. They also tend to weaken the confidence of the community in the Medical staff of the general Hospitals, which is supposed to be capable of dealing with every kind and phase of disease, which belief should be rather confirmed than weakened. We understand that at the Queen's Hospital, in the resuscitated midwifery department, arrangements have been made to provide for these special cases, and that its Medical officer—a man of large experience in the treatment of diseases of women—is prepared to meet all the demands which may be made upon his *spécialité*. This being the case, we fail to perceive the special necessity for this new Hospital: instead of which, we would suggest the bringing of the interest and influence which the discussion of it has evoked into the common channels of the General and Queen's Hospitals, wherein might be set apart wards for the appropriate treatment of diseases of women, under the supervision of a "special" Medical officer. Birmingham has already far too many special Hospitals, and we should be sorry, indeed, to see specialism running mad in our hardware metropolis.

CORONERS AND MAGISTRATES.

A VERY important decision has been arrived at by the magistrates at Bath, which will be the means of affording considerable benefit to Medical witnesses. Hitherto it has been the custom, when a verdict has been given by a coroner's jury, to take the accused person before a magistrate previously to his committal for trial. The Medical witness has therefore been compelled to attend two preliminary examinations, often at great inconvenience, and with very inadequate remuneration so far as the attendance before the magistrate is concerned. It appears that a girl of the name of Pillinger was committed for trial by the coroner's warrant for causing the death of her illegitimate child. Mr. Bruce was communicated with by the judicial authorities of the city on the subject, and, in consequence of the nature of his reply, the bench determined not to have the case brought before them. The coroner's warrant, therefore, is now held to be a sufficient commitment to the assizes without any intermediatory committal by a magistrate.

FROM ABROAD.—BLOODLETTING IN OBSTETRIC MEDICINE.

AN interesting discussion took place recently at the New York County Medical Society upon the question of "Bloodletting as a Therapeutic Resource in Obstetric Medicine." It arose from an able paper read by Dr. Barker, Professor of Clinical Midwifery in the Bellevue Hospital. This he commenced with a curious anecdote, in which he stated that, wishing to bleed a patient, he sought in vain for a lancet at a Surgical instrument maker's shop, although this was "the only shop for the manufacture and sale of instruments within two miles and a half of the centre of residence of the population of this great city." He naturally regards this as a very significant indication of the change of practice that has taken place of late years, and adds: "In all the consultations on obstetric practice with members of the Profession during the last fifteen years, I cannot recollect a single instance where bloodletting had been resorted to, or even alluded to, as a therapeutic measure to be discussed, except in a few cases of puerperal convulsions." Contrasting this with the almost general practice of bleeding recommended by all the standard British and American writers, he asks whether the reaction against what had become an almost routine practice may not have been carried somewhat too far. At all events, under that belief he has found himself of late, with an increasing clinical practice, resorting more frequently to the lancet; and his growing conviction that this had been too much neglected by himself and others has just received a new impetus from the perusal of Dr. Richardson's suggestive and practical paper on "Bloodletting as a Point of Scientific Practice."(a)

Professor Baker endeavours to appreciate the true value of this means as applied to diseases of pregnancy, complications of labour, and puerperal diseases.

1. To Cazeaux, Dr. Baker believes, is the chief merit due of establishing that so many of the diseases of pregnancy, formerly always attributed to plethora, to be treated by bleeding, really arise from an impoverished condition of the blood, calling for tonic treament. But are not cases of true plethora now overlooked?

> "We occasionally see those who have not been remarkable for vigorous health, and who have been accustomed to menstruate freely, exhibit a wonderful renovation of functional activity during a first pregnancy, gaining flesh rapidly; and in such it may occur that real plethora may follow to such a degree as to jeopardise the continuance of the pregnancy, if not the life of the woman. In these cases the fœtal circulation becomes oppressed in consequence of the troubles of the maternal circulation, and the appearance of the motions of the fœtus are retarded, if they have not yet been perceived, or they become weaker, diminish in frequency, and may cease altogether. That this is the result of local congestion is demonstrated by the prompt reappearance of the motions of the fœtus after the mother has been subjected to a moderate loss of blood. Even in hydræmia, there may be an excess in the quantity of blood—a kind of serous plethora, resulting in great disturbance of the circulation and local congestions, which will be overcome by moderate venesection, followed by a more nutritious diet, and the use of iron and other tonics."

Uterine congestions, although arising for the most part in feeble and anæmic women, when not disappearing under the action of revulsives, diuretics, and moderate cathartics, are usefully treated by the loss of a few ounces of blood, followed by the use of medicines calculated to improve the condition of that fluid, and especially chlorate of potass and iron. The occurrence of renal congestion and secondary cerebral congestion in pregnancy is well illustrated in the production of temporary albuminuria, and Dr. Barker says:—

> "Within a few years I have had a success in warding off the danger attending this condition, which culminates in puerperal convulsions, by venesection, proportioned in amount to the urgency of the symptoms, which I have never before attained by other prophylactic means. . . . It has seemed to me that there is some liability to err in the neglect of bloodletting, from the feeling that it should never be resorted to unless the patient is in a sthenic condition. But some of the most striking instances of its usefulness have occurred under my observation when the patient was extremely anæmic."

2. Bloodletting is now rarely resorted to as a means of overcoming rigidity in labour; and its importance is chiefly evident in cases of threatened or developed convulsions. Although it is here a means of great value, it was formerly used too indiscriminately. It becomes, however, in these cases a powerful sedative of spinal action when there is great fulness of the vascular system, and is of cardinal importance when the convulsions are due to uræmia.

3. Its use in *post-partum* inflammations is much more questionable, and Dr. Barker has not for some years resorted to it in these cases, although sometimes doubting as to the propriety of omitting it. "I have often asked myself," he says also, "whether from our fear of *post-partum* hæmorrhage we may not have sometimes carried too far our precautionary measures to secure the immediate and permanent contraction of the uterus." In some rare forms of puerperal mania, bloodletting

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(a) See *Medical Times and Gazette*, vol. ii., 1870, p. 693.

may be of great service; but a large majority of such cases are undoubtedly associated with, or result from, defective nutrition and nervous exhaustion. As regards bleeding in puerperal fever, a more prolonged experience has only confirmed the opinions maintained by Dr. Barker some years since, that this is often of great utility.

Dr. Peaslee, in allusion to a quotation made from him by Dr. Barker, that in plethoric women he was an advocate for allowing a certain loss of blood after parturition, on the principle that in such subjects, at least, as much blood should be lost as was constantly circulating prior to delivery, observed that seventeen years' additional practice had confirmed this opinion. If in such women he found, upon inquiry, that in previous deliveries they had had but little hæmorrhage, and had suffered from subsequent inflammation, he would allow them to bleed a pint or quart before attempting to arrest the hæmorrhage by the usual means if these were required. "The pregnant uterus weighing from 2½ lbs. to 4 lbs. should contain in its vessels more than a pint of blood. If the woman is plethoric, and has in every part of her body probably more than the normal amount of blood, I can see no reason for retaining this extra quantity." As to bleeding in eclampsia, he has no doubt of its immense value. Dr. Taylor was glad to find that Dr. Barker had not wholly adopted the idea of Cazeaux, that the condition of pregnancy is one of anæmia. The great difficulty in regard to bleeding in pregnancy is the distinguishing between cases of active congestion and those of hydræmia; and, although himself by no means an advocate of frequent bleeding, he believed that, if these two conditions could be distinguished, no treatment of greater value could be employed in those cases indicating its use. He wished that Dr. Barker had entered into the subject of the diagnosis between these two states. Dr. Barker replied that the distinction between active sanguineous plethora and the serous plethora occurring in anæmia constitutes one of the most difficult points in practical Medicine, often only to be settled by the nicest discrimination; yet he regards the decision as to the question of bleeding as comparatively easy, believing, as he does, that, in certain cases of anæmia or hydræmia, the deficiency of red corpuscles may be accompanied with excess in the quantity of blood capable of producing local congestion of the kidney, of the uterus, or of the brain (as a result of puerperal convulsions).

> "In these exceptional cases, bloodletting may be necessary, though during gestation the amount of blood taken must be small, and strictly limited to the relief of the local congestion, the general condition of the patient being met, at the same time, by the most nutritious meat diet and ferruginous tonics. Bleeding in the convulsions of parturition comes under a different category. There we bleed only to prevent lesion of the brain, in consequence of the convulsion—to prevent apoplexy. The apoplexy, when it occurs, is not the cause of the convulsion, but its consequence. . . . In convulsions after labour, wherein much blood has been lost—in a case of placenta prævia, for example—no sensible man would think of venesection. There the convulsion is due to the hæmorrhage, to loss of muscular and nervous power, and our grand effort must be to restore the exhausted nerve-force. Opium is the great remedy here, and even alcoholic stimulants may be required."

Dr. Lente thought that the reopening of the question of bloodletting is useful; for it is hardly to be supposed that the host of eminent men of the last generation who so unanimously approved of the practice should all be utterly wrong.

> "These men were, perhaps, even closer observers than we are at the present day; for the multiplication of the instruments of physical diagnosis would seem rather to have blunted our observing faculties. In an obstetric practice of twenty years, the speaker has seen many cases benefited by bloodletting. There were some instances where this measure seemed to force itself on the Physician, though he might be unable to assign the definite reason for it. He was speaking especially of cases of uræmic convulsions, which probably constituted nine-tenths of those in which the question arises. But he had seen many more patients benefited by other remedies than bleeding; and to discuss the question properly we should consider the effect of bloodletting, not by itself, but in comparison with that of the other powerful measures now at our command. Doubtless the disuse of venesection could be ascribed in no small degree to the introduction of other means having a similar immediate effect, without the remote ill consequences of the spoliative treatment. Veratrum viride, though scarcely to be employed in pregnancy, was little inferior to bloodletting in the certainty with which it reduces pulse and temperature. Specially applicable to the pregnant and parturient conditions were the inhalation of chloroform and the hypodermic injection of morphia. The speaker had seen patients saved by these means in cases where in former times bloodletting would have been the only remedy, and the Physician would have been accounted a murderer if he had failed to employ it."

Dr. James Brown, speaking in the name of the younger Physicians, and having, during the fifteen years he has been in practice, never seen venesection employed, was disposed to believe that the eminent men of past days were mistaken in their advocacy of venesection, seeing that they recommended it in the most opposite cases, in some of which, at least, we now know that it is mischievous. The absence of definite indications for its employment renders its practice very difficult for those who have never put it into force. Dr. Hubbard, on the other hand, has bled in every case of puerperal convulsions that has come into his hands, and has seen its good effect in these, both *ante-* and *post-partum*. Dr. Prince had witnessed both extremes of practice, and he was prepared to endorse all that Dr. Barker had said in favour of the practice. In convulsions he had seen morphia fail to produce the slightest benefit, and even chloroform cannot always be depended upon; and in his own practice bloodletting had proved more efficacious than any other treatment—the cases for its employment requiring, however, to be carefully selected, and the effects it produces needing close watching. Dr. Austin Flint, sen., observed—

> "I found myself, in the early part of my Professional life, an opponent of bloodletting. I have found myself for the last few years an advocate of it to a certain extent; and have ventured the prediction that not many years will elapse before we shall find the Profession practising it, though in a very different way from our predecessors. I feel surer of nothing than this: the lancet is again to find its place in our armamentarium; and it becomes a question of the greatest import, as we resume its use, What are the indications and contraindications for it?"

Into this question he could not enter on the present occasion, but he is of opinion that, while we must admit that much harm was done heretofore by excessive and indiscriminate bleeding, it would be quite unphilosophical to put aside all former experience as worthless. One of its great advantages, as compared with other remedies, is the promptitude of its action; and this in some cases, as in uræmic coma, may be of vital consequence. With the older Practitioners, Dr. Flint believes, also, that it will sometimes arrest the course, or, at all events, shorten the period, of acute inflammation. However mischievous in asthenia, energetic bleeding may be most useful in apnœa, as, for example, in acute laryngitis. Dr. Jacobi, although very seldom resorting to venesection, now and then meets with cases in which he deems it indispensable. He believes with Dr. Flint that by its means inflammation can be prevented or cut short in the first stage, it acting by removing one of the requisites for inflammation—dilatation of the blood-vessels, or local congestion.

> "Its mechanical action in relieving the blood-pressure is of inestimable use, also, in meeting another class of symptoms. For instance, I am quite positive that many a case of pulmonary œdema will die without prompt venesection. I have seen such cases, and have performed venesection where I was certain that the patient would have been dead in fifteen minutes but for that. But pulmonary œdema is not disease. It is a symptom which may appear in the course of a number of diseases. We see it after fevers—scarlet fever, and others. We see it in the same degree, and presenting the same danger, in acute pneumonia. . . . The same holds true of œdema of the brain. No matter whether this is the result of local disease—as, for example, apoplexy, with consecutive inflam-

mation—or of an essential fever, we shall, in all probability, as soon as we are satisfied that there is œdema, first draw blood, and relieve the patient, then look for the diagnosis."

PARLIAMENTARY.—OPENING OF PARLIAMENT—SIR D. CORRIGAN—RAILWAY ACCIDENTS—ADULTERATION—SELECT COMMITTEE ON VACCINATION—CORONERS BILL—BILL FOR THE EDUCATION OF THE DEAF, DUMB, AND BLIND—OPEN SPACES AND ENCLOSURES—HABITUAL DRUNKARDS—RATING OF CHARITIES.

PARLIAMENT was opened by her Majesty on Thursday, February 9. From our special point of view the most interesting fact in the day's proceedings was that one of the most distinguished Physicians in Europe took the oath and his seat as Member for the capital city of one of the three divisions of the realm. Sir Dominic Corrigan goes into Parliament with the best wishes of the Profession. He is an able and practised speaker, a ready debater, and may prove a great acquisition to the strength of the Medical phalanx in the House. On entering the House for the first time he was warmly received by Dr. Brady and the other Irish Liberal members.

On Monday, February 13, in the Commons,

Mr. Headlam asked the President of the Board of Trade whether it was the intention of her Majesty's Government to introduce a Bill during this Session to carry into effect the recommendation of the Select Committee of last Session on the subject of compensation for railway accidents.

Mr. Chichester Fortescue said he was not prepared to introduce any measure precisely such as that indicated; but he was making inquiries upon railway questions generally, and was anxious to see the Bill of the hon. baronet opposite (Sir H. Selwyn-Ibbetson).

Lord Eustace Cecil asked the Secretary of State for the Home Department whether, in conformity with his statement to the House last year, he was prepared to bring in a measure this Session to remedy the state of the law as to the use of false weights and measures, and the adulteration of food, drink, and drugs; or, failing that, whether he would introduce such clauses into his proposed Licensing Bill as would effectually meet the evil.

Mr. Bruce said, with reference to the use of false weights and measures, a Bill was now in preparation by his right hon. friend the President of the Board of Trade, who authorised him to say that he hoped in the course of the present Session to be able to introduce it. As to the adulteration of food, drink, and drugs, he apprehended that the Licensing Bill, which he himself would bring in, would deal very stringently, and he hoped, also, effectually, with the adulteration of drinks. But it was not his intention in the present Session to legislate with reference to food or drugs.

Mr. W. E. Forster, in moving for a Select Committee to inquire into the Vaccination Act of 1867, explained that his motive was not doubt of the value of vaccination—as to which he gave some interesting statistics—but to prove to those who did object to the practice how unfounded were their allegations. He expected, too, that the inquiry would strengthen the hands of the guardians and others to whom the administration of the law was entrusted, and also would furnish some valuable practical suggestions from the experience of the present epidemic.

Sir C. B. Adderley strongly objected to an inquiry which would throw doubt on the practice of vaccination at a time when complete confidence ought to be expressed in it. All that was needed was to carry out the existing law.

Mr. W. H. Smith was in favour of a committee, which he expected would show how defective and unsystematic was the administration of the law.

Professor Playfair, who last year opposed the committee, lest the public confidence in vaccination should be weakened when the small-pox epidemic was close upon us, was now in favour of it, in order to ascertain why the practice had not been so successful in England as in the other parts of the kingdom.

Mr. Candlish, Lord R. Montagu, and Dr. Brewer also spoke in favour of the committee, which was then agreed to.

A first reading was given to the Coroners Bill (Mr. Goldney), and a Bill for the Education of the Blind, Deaf, and Dumb (Mr. Wheelhouse).

On Tuesday, February 14,

Mr. Shaw-Lefevre brought in a Bill for the amendment of the Enclosure Law, which is identical with the Government Bill of last year, with the addition of Mr. Cowper Temple's Bill for the Preservation of Open Commons, which is to be incorporated with it.

Mr. Dalrymple, in moving for leave to bring in a Bill to amend the Law of Lunacy, and to provide for the management of habitual drunkards, said the measure differed in a very slight degree from the one he proposed last year; and that difference was caused by the desire to surround the liberty of the subject with somewhat greater safeguards. As the Government did not object to the introduction of the Bill, he would not now detain the House with any observations further than to remark that he trusted that the hilarity with which the notice he gave of the measure was met on Thursday last would vanish when the gravity of the subject came to be considered by the House. The hon. member concluded by moving for leave to bring in the Bill, which was granted him.

The Bill was read a first time, as also was Mr. Muntz's Bill for Exempting Charities from Local Rates.

THE HUNTERIAN ORATION FOR 1871.

DELIVERED AT THE

ROYAL COLLEGE OF SURGEONS OF ENGLAND,

ON FEBRUARY 14,

By Sir WM. FERGUSSON, Bart., F.R.S.,

President of the College, and Serjeant-Surgeon to the Queen.

MR. PRESIDENT AND GENTLEMEN,—We are met to commemorate the hundred and forty-second anniversary of the natal day of John Hunter.

Although Hunter's death, which occurred in 1793, was lamented, owing to its tragic character, and the prominent position he held as a Surgeon and man of science, there was a somewhat tardy recognition of those great qualities for which he has been subsequently eulogised. There were varied opinions among his contemporaries and survivors; and, for seven years after, it seemed doubtful what might become of the palpable remains of his life-long labours in science and Surgery. The chief of these—his museum and manuscripts—were in confusion; and there was great danger that they might be so scattered and subdivided that the grand objects of his researches might never have been comprehended. Happily, through the sound judgment of his executors, and the enthusiasm of an apprentice-boy, William Clift, the precious relics were held together until purchased as a whole by the Government, and finally placed under the care of this College. In the year 1800 the collection first came under the protection of the Royal College of Surgeons. The proved abilities of young Clift were still devoted to its service; but considerable time elapsed before it acquired more than a beginning to the great reputation subsequently attached to it.

The absence of proper catalogues seems to have been much felt. Hunter had delayed this part of his work, doubtless trusting to leisure time in later years. A gentleman, who might be considered equal to Clift himself in knowledge of the contents and characters of both, undertook the duty, and for that purpose had the manuscripts removed, for convenience, to his own residence. A cartload—literally a cartload—of these was taken possession of, but never again saw the light of day. Years rolled on; trustees, council, and Mr. Clift alike failed to regain possession of the papers, or of the semblance of a catalogue. At last, in 1823, it was announced that these papers had been committed to the flames! It was not until 1813, and after much expense, towards which Parliament liberally contributed, that the museum was open for public inspection. Catalogues have been prepared under most proficient skill; the Council has spared neither pains nor expense to enhance its character; and at this date it is indisputably the finest of its kind in the world. The progress of increase seems never to cease; year after year large acquisitions are made by purchase and from donations; and since we last met, on on occasion like the present, a collection specially illustrative of dermatology has been added, by the munificence of a member of our Council, which augments in a remarkable degree the value of the whole.

About twenty years after Hunter's death, two of his connexions and most distinguished pupils, Dr. Matthew Baillie and Sir Everard Home, made arrangements for the permanent commemoration of his birthday, and since the year 1813 a ceremony like the present has, with few intermissions, taken place.

A member of the Council of this College is required by the terms of the deed of arrangement to pay tribute to Hunter's memory, and to make passing record of recently deceased members of our Profession, whose deeds in life may have had association with the works in which Hunter himself had been interested.

Seventy-seven years have elapsed since the death of Hunter, and his memory is at this date cherished in a greater degree than it was sixty, or even forty, years ago. In the progress of time his works have become more and more appreciated, and with all familiar with them the impression increases in force, that he has left indications of industry and intellect such as have rarely been associated in one individual. In addition to his great museum, portions of his writings have carried his reputation far beyond the sphere in which that collection is placed, and it is interesting to consider on which his future fame will most depend.

It was specially characteristic in Hunter so to associate the labours of head and hand that it may with many be difficult to determine in which he most excelled. A glance at his museum fills the mind with wonder that it should have been the work of one man. The few volumes of his collected writings seem small in proportion; but before coming to a conclusion, the contents of each volume, the quality and original thought contained in that small compass, should be well considered; and if, in addition, the enormous quantity of manuscript which he left be taken into the estimate, hesitation may arise in deciding as to the field in which his labour was greatest. The proofs on behalf of his pen, now extant, are small in comparison with the mass of papers unhappily destroyed, including the famous ten folio volumes so much lamented by Mr. Clift. When that gentleman was examined on the subject in 1834, by a Committee of the House of Commons, he enumerated a list of papers and treatises, so extensive in number, and so rare and original in quality, that apparently there had been destroyed much more than enough to have founded an imperishable name and reputation in science and natural history.

It has been rare among Physicians and Surgeons, considering the numbers of eminence who have flourished, to leave long-standing memorials of their greatness. Their works of skill and art have perished with themselves in a generation. Great statesmen, architects, engineers, and painters have left enduring, palpable proofs of their qualities, and they are known to fame almost solely by such proofs. No writings remain to attest their scientific skill, or to diffuse their individual knowledge to mankind.

It would be too much to expect at this date palpable memorials, such as I refer to, of Hippocrates or Galen; but to come to more recent times, since the study of anatomy has been zealously pursued, how small is the number of great men in our Profession whose fame can be traced otherwise than in association with written works. History is quiet regarding any preparations left by Mundinus, the founder of systematic anatomical teaching. No evidence remains of the hand-labour of Vesalius, Albinus, Cheselden, Cowper, and a host of the bygone great. Only a few proofs of William Harvey's dealings in anatomy are preserved in the College of Physicians of London. Happily, the greater part of Ruysch's celebrated first collections is still, I believe, in good condition in St. Petersburg.

The industry of Ruysch as anatomist and writer was marvellous; but our English anatomist had a shorter life by a quarter of a century; and, all things considered, there has probably been no such combination of work in one man as that centred in John Hunter. There may have been more voluminous writers in so far as printed works attest, but the untoward fate of his manuscripts must be borne in mind. In respect of work, in the development of a great museum, it may be fairly said that he stands unequalled; and in the combined qualities of writer and practical anatomist, he is alone in a field where a competitor cannot be named.

It is not, however, in mere industry that Hunter's position is to be estimated. There was an originality of thought and action in all that he did which put him far above the rank of ordinary men in his own department of science. His museum was not a rambling collection of curiosities in natural history, anatomy, and pathology. It was specially designed to illustrate his own favourite pursuits—the study of life in all its phases; its causes, nature, and development, from the lowest stage of organisation up to the complex structure of man—from the seeds of vegetables to the eggs of animals—from vegetable sap up to human blood and its products.

An anecdote related by Sir Benjamin Brodie in the Hunterian Oration for 1837 is indicative of Hunter's originality and scope of observation. Sir Benjamin says: "When I was formerly giving lectures as Professor of this College, I found in a drawer in the museum what appeared to be some pieces of dried sticks. Mr. Clift said that he did not know what they meant, but he was sure that they meant something, and therefore he had preserved them. When I examined them, I found that they were the result of some interesting experiments in vegetable physiology. It appeared from one of them that he had made the first and most important of the experiments made many years afterwards by Mr. Andrew Knight, proving the descent of the sap through the vessels of the bark. Yet these specimens had no ostensible place in the museum, and they would have been swept away as rubbish but for the care of Mr. Clift."

Many illustrations of a like kind might be collected to show how Hunter was ahead of his time, and the conviction is strong that, had his manuscripts been preserved, the value and originality of his museum labours would have been greatly enhanced.

Happily for the character of Hunter and his museum, the silent testimonies of many of his labours have been admirably deciphered by those who have had the principal care of the preparations. It was, indeed, fortunate that Clift should have devoted his life-labour on behalf of his master's works and fame. Equally fortunate was it that such a man as Owen should have appeared on the scene so opportunely. Nor should the zeal, talent, and industry of Stanley, Quekett, Paget, Morris, Taylor, and others be forgotten in association with Hunter's museum. To all these gentlemen is chiefly due the merit of those compendious catalogues which throw so much light on Hunter's works and thoughts. It is, in addition, gratifying that the collection is at present under the curatorship of one distinguished alike as anatomist, Surgeon, and naturalist, whose work already done gives anticipation of a glorious further career, that shall place his name in association with the Hunters and Cuviers of bygone years.

Few have thought seriously of the time, labour, and expense of developing museums in association with our Profession. It seems doubtful if there was any collection in this country worth speaking of prior to the time of the two Hunters. All the senior part of my Professional hearers must remember how, in their earlier days, there was a kind of fashion in regard to the formation of museums. Everyone who devoted himself to teaching anatomy, Medicine, or midwifery, set his heart upon such work, and some may have lively and possibly peculiar feelings in regard to the labour, time, and money expended. Happily, by the modern system of aggregation of teachers into schools, such custom has fallen into abeyance. Instead of individual exertion, the effort is made by the whole school, and wealth in this way, pecuniary and scientific, has gradually been accumulated, which only the Hunters could have appreciated.

It is said that William Hunter's collection, now belonging to the University of Glasgow, was made at the cost of one hundred thousand pounds. John Hunter's is said to have cost seventy thousand. Through the apathy of a British Minister, who thought that shot and shell were, at the time, of more value to the country than anatomical and pathological specimens, the collection of William Hunter was refused a home in the locality where it had been made. At a subsequent date better feeling prevailed in regard to the younger brother's great works. The purchase-money paid by Government was small compared with the original outlay; but Parliament has again and again responded liberally to appeals for pecuniary aid to extend the buildings for the accommodation of the museum; and the Royal College of Surgeons of England, dependent solely upon its popularity with the Profession and the public, has been enabled so to cherish the original collection of Hunter, so to add to it, and so to associate it with accessories and adjuncts, particularly with a magnificent library, that it is displayed in its present magnitude at a cost of a quarter of a million sterling. This grand possession may be said to be the property of the Surgical Profession and of the public of England. The trustees and the Council of this College are its guardians appointed by law. It is freely open, under reasonable regulations, to all comers, of all quality; and an enthusiast might say, with truth, that it is the heart and soul of British Surgery.

Without discussing minutely whether Hunter's future fame will depend chiefly on his museum or on his printed works, it may be admitted that he is most extensively known by the latter. It is the lot of few, comparatively, to have it in their power to visit the museum, but his writings extend over the earth, and his doctrines may be said to constitute a large portion of the science of the best practical Surgery of the day.

There are mysteries in nature which Hunter did not pretend to explain, and it might be well if some modern philosophers held in mind that the result of life-long study should not be disturbed by the passing idea of a moment, or by the reckless ambition of upsetting or ignoring doctrines emanating from a brain wherein thought had, for more than forty years, assumed a favourite place.

Of all Hunter's printed works, the treatise "On the Blood and Inflammation" is generally admitted to be the most profound. To my mind, there are no parts so replete with interest as those devoted to development and absorption. Yet these, if not forgotten, have been well-nigh smothered in modern verbiage. Separate centres of life, new formations and growths, arrestments and changes of action, irrespective of blood and circulation, are among the fashionable doctrines of the day. "Molecular disintegration" now takes the place of Hunter's "disjunctive absorption." Crude statements about veins doing what Hunter described as being done by absorbents—doing what he positively showed by experiment that they could not; about pus circulating in the blood; about secondary deposits (as they are called) being the direct result of primary deposits—ignoring the power of nature to make another, and yet another, deposit when she has already made one; rough experiments which have no semblance to nature's actions; modern methods of accounting for malignant disease in various distant parts of the body, as being secondary deposits; are among the recent ways of tampering with the beautiful and philosophic views of Hunter.

A great living philosopher, one who is specially great in facts, has suggested that when the microscope fails to detect the elementary particle, imagination may legitimately be permitted to bridge the gap, and mentally extend our vision. But such philosophy is, after all, far from being new. Shakespeare speculated with imaginary histology. He makes Hamlet, at a prior date, deal with it, as thus:—"Why may not imagination trace the noble dust of Alexander till he find it stopping a bunghole?" Or, again—

> "Imperial Cæsar, dead and turned to clay,
> Might stop a hole to keep the wind away."

If imagination is to be a future legitimate course in this direction, let *us* imagine something more noble for the "dust" of our hero than the "base uses" to which that of Alexander, or of Cæsar, was consigned by Hamlet.

If I have thus, in good humour, and, I hope, without offence, ventured to question the superiority of certain modern doctrines over those of Hunter, yet I do not fail to bear in mind how little will occasionally arrest or turn aside the tide of events in our Profession. The current is naturally slow, and easily obstructed. More than half a century elapsed ere Davy's suggestion regarding anæsthesia in Surgical operations was carried into effect. The progress of ovariotomy was retarded for full thirty years by a simple song of local and personal humour. Who can say what may have been the influence of the sarcastic wit of Rabelais, of Butler, and of John Bell on the doctrines of Taliacotius? Du Hamel and John Hunter were the great animal transplanters (if I may so call them) of their days. Here are the celebrated preparations, from Hunter's own hands, of cockspurs and human teeth, taken from their natural locality, flourishing in the cockscomb. Death abruptly cut short Hunter's Surgical career; but may we not claim for him, with all deference and honour to Reverdin, Pollock, and others of the day, that he anticipated, by a hundred years, the scientific data on which the present system of human grafting or transplanting is conducted? Here [pointing to a picture] is a representation of portions of skin, each, originally, not bigger than a pin's head, taken from what Butler would have called the "brawny" part of a boy's arm, flourishing on an ulcer of the leg of an old lady above 60! What would John Bell, were he now alive, say to this?

But time warns me that I have still other duties to perform within the hour, when my allotted task must be accomplished.

The grave has recently closed over the mortal remains of James Wardrop, Sir William Lawrence, Joseph Hodgson, Sir James Young Simpson, and James Syme. It has seldom happened that so many distinguished men have had claims for notice on occasions similar to this.

James Wardrop possessed great natural abilities, and was an original thinker and actor. His essays "On the Morbid Anatomy of the Human Eye" were much esteemed in their time, and his "Observations on Fungus Hæmatodes," published at an early period of his career, forms to this day the standard work; I may say the only one on the subject worthy of special note. Some of his published didactic lectures were models of power and simplicity, and his last great work "On Diseases of the Heart" evinced the sagacity acquired by experience and age—a simplicity of practice, and a reliance on nature, which might be expected from a Hunterian disciple. The fact that he was the first Surgeon in England who, after the example of Dupuytren, removed a tumour in the lower jaw by total vertical section of the bone, places his name on the list of high-class practical Surgeons; and his modification of Brasdor's operation, his original distal operations, and the effect that all have had on this department of practice, bring his name in association with Hunter's as closely as that of any other in the history of British Surgery.

Of Sir William Lawrence it seems almost a work of supererogation to speak in this theatre. His intellectual head and brow, expressive features, and manly form, can never pass from the rememberance of those who saw him in his prime. A pupil of Abernethy, and an admirer of Hunter greater than his master, if that were possible, he, of all English Surgeons, excelled the most in developing the labours of Hunter in comparative anatomy. The currency which he gave in England to the works of Blumenbach; the taste, eloquence, and ability with which he inculcated the study of comparative anatomy—a subject little more than in its infancy in Lawrence's early days; his mental capacity as anatomist, scholar, and orator; his polemical energy in supporting his favourite views, whether these were scientific or Medico-political, marked him in early years as one of the foremost men of the day in the walk of life which he had chosen. He rose, as we all know, to the highest honours to which a Surgeon can aspire in this country; but it has often been said, and assented to, that, had he been a member of another Profession, he might have risen to the highest rank which a subject in England can reach. His treatise "On Hernia," originally a Jacksonian prize essay, may be considered as the first compendious work on this most important subject which ever came from British Surgery; and, although published more than sixty years ago, may, in its fifth edition, be considered the standard of reference at the present day. His treatises "On Diseases of the Eye" gave him great and well-grounded reputation in Ophthalmic Surgery. His "Introduction to Comparative Anatomy and Physiology," and his "Lectures on Physiology, Zoology, and the Natural History of Man," added largely to his fame in early life. His position as Surgeon to the greatest of English Hospitals with which our Profession is in alliance, his acquirements, his oratorical powers, his repute with the Profession and public at large, all made him a man of great note. It gives me much pleasure to state that, on some familiarity with the Hunterian orations that have been delivered in this theatre, the two specially devoted to the subject by Lawrence seem to me among the most eloquent which the occasion has ever called forth.

Joseph Hodgson received a considerable part of his education under Abernethy and Lawrence. He distinguished himself in early life by his treatise "On the Diseases of the Arteries and Veins," containing the pathology and treatment of aneurisms and wounded arteries. The work, which in its first stage had secured the Jacksonian prize, was more elaborate than any that had appeared since the Hunterian doctrines on the subject had been recognised and approved. It was comprehensive and practical. The language and composition were simple and easily understood. It was much esteemed at the time, having been translated into German and French, and it forms a worthy companion to the first-class treatises on Surgical subjects which have come from many of his contemporaries—such as Scarpa, Astley Cooper, Charles Bell, Brodie, Samuel Cooper, Travers, Colles, Guthrie, Porter, and numerous others. Mr. Hodgson commenced Professional life in London, but soon after was induced to settle in Birmingham. In the extensive opportunities afforded for practice in that populous town and surrounding district, he acquired the esteem and confidence of the public and his Professional brethren; and for many years no man among the Surgeons of Britain was held in greater respect. After a most successful career, he withdrew from the scene of his active labours, and settled in London in dignified retirement. His mind still clung with fondness to the subjects with which it had been most engrossed, and for years his opinion was eagerly sought by his admirers in the Profession and among the public. So highly was he esteemed by the Fellows of this College, that he was elected to a seat at the Council Board, and in due time placed by that Board on the Court of Examiners. It must be in the recollection of many here how zealously, honestly, and ably he performed all the varied and often most onerous duties pertaining to such distinctions, and also how gracefully he filled the presidential chair before finally retiring from public life. It was his fortune to be a Hunterian orator. Few others more clearly and zealously appreciated the Hunterian philosophy; and it was a pleasing combination of circumstances which finally brought him out in that character, after he had been long recognised as the chief authority on the operation with which Hunter's name is indelibly associated.

The name of Sir James Young Simpson is deeply impressed on the history of Medicine and Surgery. His example is one among many in our Profession, as well as in others, of what may be called a self-made man. Possessing even fewer advantages than most beginners in life, his individual industry made up the deficiencies. He rarely, if ever, neglected an opportunity of acquiring knowledge. He worked in schoolboy days whilst others played. In early Professional life he attracted the notice of Dr. John Thompson, the able expounder of Hunter on Inflammation, and was selected by that distinguished man as a special asistant. The scientific atmosphere in which Thompson lived must have had great influence on Simpson's youthful, I may say latent, talent. The connexion, I have no doubt, went far to favour his claim for the chair of Midwifery in Edinburgh. Once fairly fixed in that position, it became the stand-point whence emanated all his subsequent multifarious and brilliant intellectual work. In his own special department I do not presume to be a judge, but I imagine that since the days of Smellie, William Hunter, and Denman, he has never been surpassed. In scholarship, in antiquarian lore, and in extent of practice he has had few equals in our Profession; and rarely have men earned such distinction as he did out of their ordinary walk in life. The zeal with which he investigated any subject, Professional or otherwise, was unbounded, and it has been, I venture to say, fortunate for modern anæsthesia that Simpson lived. Whilst recognising his remarkable discovery and development of the peculiar influence of chloroform, it may in after-time be questioned whether he does not deserve equal, if not greater, credit for the persistence with which he advocated anæsthesia in woman's most trying hour. Sulphuric ether is still by many thought equal, if not superior, to chloroform, and other agents are in high repute in Surgery and Dentistry; but Simpson's practical vigour in anæsthesia has never been surpassed, and his name must always remain associated with one of the most remarkable discoveries connected with our Profession. Although Simpson's path was more as a Physician than a Surgeon, he had remarkable proclivities for Surgery. These were evinced in every imaginable way in his own special department, but chiefly in his discovery, as I may call it, of acupressure, and the remarkable zeal with which he recommended this mode of closing divided arteries. His forensic powers in advocating the advantages of this practice have never, I imagine, been sufficiently appreciated. His abuse of the ligature would have gratified Paré's most violent enemies, and his modern artillery, consisting in suppuration, absorption, blood-poisoning, pyæmia, and secondary deposits, might, if used in former times, have blown the doctrines of the great Ambrose into thin air. It was in association with this subject that his powers as a special pleader were remarkably displayed; for here he revived, and made to appear in a new and original aspect, under the name of "Surgical fever," all those doctrines regarding symptomatic, sympathetic, or inflammatory fever, which had been in a manner orginated by John Hunter, and elaborated by Thompson, Travers, and others. Yet in regard to these matters we must claim Simpson as a genuine disciple of Hunter. His object was to further adhesion by the first intention, and to avert constitutional irritation. He entertained the idea that needles were less of foreign material, less offensive to nature, than ligatures. This is neither the time nor opportunity to discuss these interesting matters in association with Surgery or Simpson's memory; but I cannot resist the opportunity of paying my humble tribute of personal commemoration to one who, in the combined character of physiologist, archæologist, obstetric Physician and Surgeon, and the giver of the greatest possible good to the greatest possible number, has perhaps never had an equal.

My last tribute in this way shall be in memory of James Syme. Like most who have specially distinguished themselves in Surgery, Mr. Syme began his brilliant Professional career as a teacher of anatomy. His destiny, however, had been Surgery, and he soon relinquished the scalpel of the anatomist for the knife of the Surgeon. His success in his newly-assumed duties was remarkable. His zeal, earnestness, and ability were speedily recognised; and although at this time he was comparatively quiet, modest, and of retiring habits, he gained hosts of admirers and friends, who foresaw in him the future chief of Surgery in Scotland. He had to work his way, I may say stand his ground, in a department already occupied by distinguished teachers—Allan, Turner, Liston, and Lizars; yet the numbers of his pupils speedily became nearly as large as those of the whole of his contemporaries. At this period, before taking office in the Royal Infirmary, he, almost on his single responsibility, instituted a small Surgical Hospital, which he managed in all its departments with prudence and indomitable energy. Cases of special interest were sent to him from all parts of Scotland, which enabled him to display that great diagnostic power, clear judgment, rare manual dexterity, skill in design, and Surgical courage, for all of which he afterwards became so distinguished. It was here, also, that he speedily evinced those remarkable qualities which made him the ablest clinical teacher of Surgery of the day. I remember well the effects of his labours on his immediate pupils. He was their prophet in Surgery, and inspired them with entire confidence in his powers. The great tact which he had in making a trivial case in Surgery appear almost as interesting as one of the most complicated, was remarkable. Although in reality he had a keen relish for all the great things in Surgery, he could clothe the story of a carbuncle or a whitlow with the romance of a diseased elbow—a theme rendered at that time, through his individual exertions, of surpassing interest. The migration of Liston to London left Syme on the well-won throne of Practical Surgery in Edinburgh and Scotland; and how he held sway, and increased his renown, is well known to all who have watched our schools during the last thirty or forty years. There is scarcely a subject in Surgery which he has not touched, and thereby adorned. Besides his standard works "On the Principals of Surgery," "On Excision of Diseased Joints," "On Diseases of the Rectum," "On the Pathology and Practice of Surgery," and his remarkable papers on stricture of the urethra and perineal section, he has written more voluminously in the shape of isolated papers on Surgical subjects than any practical man that could readily, perhaps possibly, be named. His operations on the jaws, when they were little known in Britain, his revival of excision of the elbow, his special amputation at the ankle-joint, his ingenious plastic operations on the face, his operations on the great arteries for aneurism (on Hunterian principles, and notably on the old principle), and his bold removals of the entire upper extremity, will indelibly associate his name with the grandest deeds in practical Surgery with which we are acquainted. Mr. Syme was in every sense an accomplished Surgeon. His preliminary education was good; he had knowledge and skill in modern languages, and inborn taste for science and natural history, which he cherished throughout life. But a passion for Surgery seemed to dominate in his temperament. Happy for himself that it was so, for it may be justly said that he was king among his fellows; and happy it has been for Surgery that such a man should have devoted his great abilities to the embellishment of that department of art and science in which the disciples of John Hunter are so deeply interested.

Such themes are apt to attract too much attention from one in my present position. It must be admitted, however, that they were, at least, the second object of the founders of this ceremony.

Before making my bow of conclusion, I shall revert to the memory of the great man in whose honour we are assembled. In as far as we can make out, his life was happy as it was brilliant, and peculiarly so in that he was enabled, without hindrance, to indulge, to a greater extent than most men ever did, in a natural, useful bias of mind. His Professional gains were estimated by himself chiefly in proportion as they enabled him to pursue his studies and increase his accumulations in natural history; and he gratified his desires in this way to an extent as fabulous as history records. Men have given thousands for single pictures, or objects of art; but who, excepting John Hunter, enthusiast above all other anatomists, ever paid five hundred pounds for a human skeleton? That his pursuits were more pleasurable to him than any other work in the world must be undoubted. Look at the results. He, in the course of years, and at the age of 65, accumulated a treasury of facts in his museum and writings, which, from the time of his death to the present day, may be said to have been the fountain-head of modern science in our Profession. The streams from thence have flowed in largely varied directions, and no man yet can span the course they may take! Truly his example may excite to emulation. Even the length we may lag behind should induce us to think more highly of the lofty pinnacle where he stands, alone among Surgeons! The question between genius and industry is not worth discussion in his case. That he had industry no one can dispute; he has left evidence of it unparalleled among Surgeons. I am a firm believer in his genius, but am of opinion that it was so tempered, so overspread, with the spirit of industry, that there was the just balance, so rarely combined in one man, which gives him a pre-eminence among mortals, and a rank in place with the greatest of human beings. He was born, the tenth child of his parents, in a modest country house in Scotland. He seems to have led the idle life of a wayward, petted boy, until twenty years of age, when his action changed, and the dawn of his future greatness appeared. He had neither wealth nor influential friends to further his worldly prospects, yet he rose to be the foremost Surgeon and physiologist of his day. He read nature more closely than most other men, and thereby came nearer in communion with the Divine Author of all. Parts of the proof of his physical labour are treasured within these walls; portions of his mental labour are, in printed form, the property of the world at large; his mortal remains rest beside those of many of England's greatest sons within the hallowed shrine of Westminster Abbey.

Such is, in brief, the story of John Hunter!

In the evening, the President, Vice-Presidents, and Council entertained a large and distinguished party to dinner, at the Albion Tavern, amongst whom were observed the Lord Chief Justice, Sir Wm. Bovill; the Lord Mayor; the Lord Chief Baron, Sir F. Kelly; Vice-Chancellor Sir R. Malins; Mr. Justice Keating; the Presidents of the Medical Council and of the Royal College of Physicians; Sir C. Locock; Sir R. Alcock; Sir Dominic Corrigan, M.P.; Mr. Gregory, M.P.; Dr. Brady, M.P.; Mr. H. Lewis, M.P.; Mr. Dalrymple, M.P.; Dr. Brewer, M.P.; Colonel Beresford, M.P.; the Master of the Society of Apothecaries; the Treasurers of St. Bartholomew's, King's College, St. Thomas's, and University College Hospitals; Professors Owen and Tyndall; the Prime Wardens and Masters of some of the City companies. About 100 guests sat down to a splendid entertainment, and, owing to the length and number of speeches, did not separate until a late hour.

INAUGURAL ADDRESS

DELIVERED BEFORE THE

OBSTETRICAL SOCIETY OF LONDON.

By J. BRAXTON HICKS, M.D., F.R.S.,
President of the Society.

GENTLEMEN,—The pleasure which I feel at the honour you have done me in electing me your sixth President, for which I return you my best thanks, is by no means unalloyed; because I feel, as those who have preceded me in this chair have felt, the responsibility which attaches itself to those holding the position of the head of a Society which, instead of meeting for the discussion of theory or hypothesis, devotes itself to the accumulation of facts, and to the extension of improvements in practice, based on the information so obtained; and because it deals with the questions of life and death, it behoves it on all occasions to act with the serious thoughts such responsibilities demand, and to pursue with an earnest honesty of inquiry the important truths which it is its object to secure.

The anxiety which fills me at the present moment is not decreased by the remembrance of the crises through which your former Presidents have guided you; it is not diminished by the consideration of the importance of the subjects which you undertake to advance, and which already within the lifetime of the Society have been so rapidly and successfully carried forward; but when I look onward, and see how vast a field still remains—I will not say altogether untilled, but capable of much higher cultivation—when I see the want of proper recognition of our department by many of the examining bodies, I feel I shall require all your assistance and all your kind considerations to overlook my failings on the one hand, and to give me your support on the other.

There is no need, after the remarks which fell from your late President at our last meeting, to allude to the past progress of the Society, let me rather direct an Association pledged to advance, to examine and reconnoitre the country well in front. And not only has each department in science and art to make absolute progress, but it has constantly to acquaint itself with the progress of kindred sections, and simultaneously to adapt all its parts to the changes and advances incessantly occurring. For I need scarcely add that nothing can tend more to cramp the mind than constantly to pursue one object, alone and unassisted, with one's eye directed neither to the right nor the left of one's own track.

The Medical Profession is strictly one and entire; the only excuse for its division into departments is that its field is too vast and entire for individual exertions to cultivate it up to the perfection required by modern discoveries. Each branch is so intimately connected with the other, that serious loss is suffered if but imperfect communications be promoted between them. Woe to that branch which, while journeying its own way, though apparently advancing, forgets to make use of the discoveries of its fellow-workers!

Let us, then, individually as workers, and this Society as the hive, earnestly endeavour to gather whatever is useful to us from every field. Our labour will be sooner or later recognised. Let us forget to do this, and we shall justly be regarded as "specialists" in the sinister sense of the term.

It is well to call to mind the object and value of a society. As I understand them, the objects proper to such a Society as this may be comprised under three heads—the scientific, the practical, and the political. I place the scientific and practical first, before the political, because the latter object will nearly cease when the department has received its due attention in the Profession and the State; and, indeed, strictly speaking, a Society like ours should give far greater attention to the acquirement of knowledge and improvement in practice than to the external *status* of the subject, because it is by true advance in the former that the liberal recognition of the importance of obstetrics will be ultimately secured, though it may be but tardily. Now, the value of a society embracing scientific and practical sections is this:—

1st. That it gives all those joining it a certain amount of interest in the subject. To some it is a strong stimulus—and this is particularly important as regards the younger members, for in them we find the greatest energy and capacity for work; so that, a definite direction being given, a result is obtained which would have been wholly wanting had no such excitement been present.

Then, in the second place, a society forms a means of intercommunication of ideas, and I would appeal to any Fellow of this or any other society whether the attendance on a single meeting had not in some way or other tended to enlarge his own knowledge by the information thus obtained; or had his reflective powers stimulated by the hints and suggestions thrown out informally by the various speakers.

There is another and third way in which societies of this kind act beneficially—namely, in enabling us to acquire knowledge by joint labour. It seems to me that the learned societies have not sufficiently availed themselves of the power that association gives them. It is true that some do make efforts in this direction; but it is questionable whether any society has carried out this principle to the extent it might have done towards the acquisition of knowledge. How many facts are there, the collection of a sufficient number of which is impossible by one person, but which would be easily gathered by many? Take, for instance, the effect of zymotic diseases in the puerperal woman. We want information from those engaged in general as well as in consulting practice. The information derived from one will supplement that obtained from the other; but as these cases occur to too limited an extent in any single practice, the collection of the experience of a number, by means of a society, is a most efficient and ready method of bringing together facts sufficient to enable us to arrive at a safe conclusion. Numerous similar instances will readily occur to your minds. If you but carefully consider the vastness of the subjects embraced in our department, of which we have at present only an imperfect knowledge, you will, I am sure, agree with me, that it argues but a partial acquaintance with the facts to say the "mine" of any Medical subject is at all "worked out."

But although I would place the political aspect of this Society last, this is not because it is not important; on the contrary, the position which obstetrics take in the Profession is of great importance, both to the Profession and the public; because if the subjects it embraces are considered merely as an appendage to the Medical education, to be followed or not according to taste, and not as an integral portion of that education, it is not likely that those entering the Profession will consider it of any importance, at least not worth the trouble of additional work. As a matter of fact, students attend to those questions likely to be put at the examinations; it is only a few who have the foresight to recognise its subsequent advantage to them in their after career, and it is not everyone of those who have the energy to add to their other studies one which is not absolutely required. It might be thought by many not concerned with the real state of obstetrics, as shown by the position it holds at the examinations, that this branch of Medicine had of late at least been fairly represented in the requirements of examining bodies. Let them, therefore, judge from the following statement:—The only compulsory examination in Obstetrics is given by the Society of Apothecaries. The College of Surgeons, although it has a separate examination for the licence of midwifery, does not examine in the subject for the diploma of Member. It is true that candidates for membership are required to attend a three months' course of lectures on midwifery, but this is all. It requires no attendance of cases of labour, nor does it require any general knowledge of diseases of women. Thus it will be seen that it is only through the Societies of Apothecaries that any requirement is made of knowledge of obstetrics.

But none of the examiners, though gentlemen of excellent report, hold any appointment of an obstetric character in any branch, while the requirements on the schedule are only a three months' course on midwifery and diseases of women, and the attendance on twenty cases of labour. But what is a "three months'" course of midwifery and diseases of women? As a lecturer myself, I can answer that it requires a considerable amount of ingenuity to condense even midwifery proper into three months. It is quite impossible to do justice to the subject of dystocia in so short a time, and as for the diseases of women, it is never attempted in the three months' course. To treat of the perilous operations of midwifery in a manner suitable to their importance would alone require a three months' course, taken in conjunction with the description of the cases requiring them. It may thus be seen how much time can be spared for the diseases of women; and the chance of a student obtaining any knowledge of the subject depends entirely on the few clinical lectures his teacher may be enterprising enough to give, and to his own energy in attending the out-patients and the gynecological ward (when his Hospital possesses one),—for there are Hospitals at present in London without any separate ward for diseases of women, and some even without beds. Indeed, at the present moment one Hospital has no obstetric teacher at all.

Is it to be wondered at that the student, as a rule, takes less interest in this department than in many others, when he sees the subject so little regarded by the leaders of the Profession? And thus it is that gentlemen go into practice deficient in that very branch of which, of all others, he will earliest find the want, and in which the public expect him to be the best informed. Those who present themselves for the voluntary examinations of the College of Surgeons—I mean for the licence in midwifery—do, of course, prepare themselves more thoroughly, and, as the examiners are obstetricians, it will be no fault of the College if the candidates slip through. The same may be said of licentiateship and membership of the College of Physicians and the University of London. But to what number will this apply? Only between fifteen and twenty pass the L.M. of the College of Surgeons. The College of Physicians cannot pass many more for their two degrees, and the University about twenty per annum. Supposing we allow seventy for the three bodies a year, you will see that not one-fourteenth part of those entering the Profession have any higher examination than that of the Society of Apothecaries.

But it may be asked—and, indeed, it has been asked—What is there in obstetrics which entitles it to claim the third department in the healing art? I would answer—For the same reason that it was found advisable to separate Surgery, or the study of those diseases which require the use of the hand, from those which do not require manual interference. There is no reason derived from the nature of the thing why the two should be separated mentally or physically; but it is found, in order to develope each to the utmost of human power, that a more separate study of them was advantageous to the perfection of practice. The one is not really inferior to the other, although they exercise different and, to a certain extent, opposite qualities of the mind. The Surgeon employs his senses of sight and touch in excess, his mind is exercised rather on the concrete; while the Physician employs his senses of touch and hearing, his mental powers are exercised rather on the general, and there is a greater demand on his inductive powers, in consequence of the difficulty of reaching the deeper organs of the body except by inference. But, in truth, these two branches of the healing art, although conveniently separated in the larger towns and Hospital practice, cannot rightly be practised separately without the practitioner of the one possessing a very extensive knowledge of the state of the other. In practice they constantly are intercurrent; and much and serious detriment would occur to the patients of either section if the attendant of the one were neglectful of the state of the other.

For the same reason it is argued that obstetrics should be divided from what is called Medicine and Surgery so far as these latter are from one another, but no farther. Each at certain points overlaps the other, but at the same time each takes a ground not occupied by the other. Obstetrics takes a position antagonistical to neither; its own ground is defined as clearly as that of Medicine or Surgery, not quite so extensive in its grasp, but enough, and more than enough, to occupy the attention of those who study it. And it is notorious that it is found, and practically acknowledged to be, so great an addition to the work and researches of the Physician and Surgeon practising purely that these have given up its practice to others.

But is the work thus handed over to others so small that it may rate with ophthalmic or dental Surgery? Let anyone regard its scope—its application to a large portion of half of the race, and to each one of these many times during her life; to the process by which the race of man is sustained, involving changes in the uterus, having no parallel in any other organ—let anyone consider the important questions which arise in consequence of any interference with Nature's arrangements, and that not one life only, but two frequently are at stake; let him further observe the influence the organs, both in the pregnant and unimpregnated state, possess on the general health of the individual, both morally and physically, to an extent not at all approached in the other sex. The large sympathy which these organs hold with the other organs, and with the nervous system in general, the high exaltation of the emotions in women, as well as the influence these possess over the sexual organs, and *vice versâ*, combine to make it highly important that the study of the influence which the uterus has upon these other parts should be accurately known, so that, on the one hand, the sexual organs should not be unduly blamed, nor, on the other, their enormous influence more or less ignored. Nothing but thorough study can place this on its true basis, and this study legitimately falls under the province of the obstetrician. It may, I think, be safely affirmed that a woman, whose uterus and appendages are in a state of perfect quietude, tending to the asexual condition, is very like to the other sex in general character, if we add a slightly increased susceptibility of the emotions; but she is almost a different being to one whose uterus and appendages have, for a long time, been in a state of highly-excited sensibility. The investigation of this state and of its cause is best carried out by those who have had numerous opportunities of seeing woman under all the vast disturbances she is subjected to in consequence of pregnancy and parturition.

Then there occur, in the neighbourhood of these organs, tumours, the resemblance to which is not found about other organs, requiring great care and skill in diagnosis—I mean extra-uterine fœtation (than which few things are more difficult of detection), hæmatocele, and inflammatory swellings of great size. The diseases of the other viscera are not so complicated; their number is definite, and, therefore, in diagnosis one has only to discriminate between a known series. Not so with the uterine organs; and as the tumours of the sexual organs and the adventitious enlargements about them attain a size which brings them into contact with the abdominal viscera, and into contrast with their diseases; and as the uterus during the various stages of pregnancy, and its abnormalities, also rises more or less into the abdomen, it is clear that a knowledge of the diseases of the various abdominal viscera is indispensably requisite to make an accurate diagnosis.

Again, inasmuch as parturition is liable to be attended by various lesions, such as rupture of the uterus and of the perineum, each of which is best treated (if at all) directly after the accident, it is needful for him to know how to perform gastrotomy, and to close the ruptured perineum.

Besides these requirements, it may be necessary to perform Cæsarian section, and as the operation requires a practical knowledge of the anatomy and habits of the pregnant uterus, it is clearly more advantageous that the operation be undertaken by the obstetrician. The management of the external wound is by far the most simple portion of the process. Besides, if it be performed jointly by Surgeon and obstetrician, there is always an opportunity for mutual blame. These arguments would be gratuitous were it not that the rigid line marked out between the divisions in the healing art in this metropolis renders it necessary to explain where one would think, *à priori*, no explanation would be required.

And, forasmuch as hæmorrhage may be fatal, it is also necessary that obstetricians should be able to transfuse; indeed it is principally by them that transfusion has attained its present position.

Then, there is the disputed land of ovariotomy, which, after the external incision, is as much obstetric in the knowledge required as any portion of the department; and the detachment of the adhesions, etc., is more after the manipulation practiced by obstetricians than of Surgeons, imitating closely the mode of detaching the placenta when adherent.

Besides, there is another reason, and I think of much importance, applicable to this operation, and probably capable of general application—namely, the disadvantage to the patient for the operation to be undertaken by a person not responsible for the diagnosis. Now, as the diagnosis is on all sides best made by the obstetrican, and the suitability of the performance settled by him, it is much better that the same person should operate. In all cases of equal severity there are, when things are nearly evenly balanced, small circumstances which would have much influence upon ourselves in determining whether we should do the operation or not, but which we should feel to be probably insufficient to guide another's action. For instance, the diagnosis may have a degree of ambiguity about it, and yet the patient may be sinking rapidly. We might consider an exploratory incision justifiable, and would carry it out ourselves; but another might not think so, or would not care to run such risks. This objection to divided responsibility holds good in all cases, though the instances are less severe generally than ovariotomy; but the removal of the fœtus through the abdominal parietes is perhaps even a more marked example of the dangers of double direction.

Of course, in ovariotomy the Surgeon could study obstetrics, so far as it bears upon the diagnosis, but he would have to go farther into obstetrics than the obstetrician would have to learn of Surgery.

Besides, the existence of suppurations in the pelvis, and their difficult diagnosis, must require a knowledge of the pelvic organs under all their varying conditions, mainly seen by the obstetrician; he is, therefore, obliged to pay attention to the habits and treatment of abscess elsewhere; but his obstetric knowledge is as necessary here as in other cases.

Thus it is that, although it has essentially a separate ground from Medicine and Surgery, yet obstetrics requires both Medical and Surgical knowledge, the cultivation of all the senses, particularly of touch, combined with manual dexterity, carried out with extreme gentleness and endurance; and it demands the exercise of the inductive faculties to the same extent as is required by the Physician, but perhaps not so frequently. For these reasons, and many others, it is argued that obstetrics holds a distinctive position from Medicine and Surgery, sufficiently great in extent and importance to rate along with them, and it is but a logical conclusion that, so far as these two are held separate, so should obstetrics be held, but no farther. If these two are placed together, either in a society or in the examinations, then, logically, should this be conjoined; if, however, it is considered advisable to separate them, for perfection of study and convenience of examinations, then the three should be separated; but always united in spirit.

What an advantage would be gained if each section would remember that it exists, not to exalt itself, but to contribute to general progress! What advantage can it be to depress any one of the sections? The depression of one is by so much the depression of the whole—the enrichment of one the exaltation of the whole.

Can neither Medicine nor Surgery gain anything from the facts observed by obstetricians? If they have not, then it is because they have not looked. The aspects of nature in health and disease are so various, and human knowledge, unfortunately, so imperfect, that we can afford to lose nothing in the way of information; and our progress is quickest when we stimulate each branch to its highest point of attainment.

I hope, gentlemen, that this Society will not be a loser by placing the Presidency in my hands; I should have great misgivings did I not recollect that, after all, the progress of a society depends far more on the enthusiasm of the individual Fellow than on the assistance given by its President—the former is a constant stream, the latter only intermittent at best.

WHAT 'S IN A NAME?—The *Boston Journal of Chemistry* reports as among its subscribers—Dr. Death, Dr. Slaughter, Dr. Dye, Dr. Coffin, Dr. Toombs, and Dr. Graves. This sombre list is lighted up by Dr. Life, Dr. Strength, and Dr. Joy. Dr. Drinkwater just balances Dr. Rumn on the liquor question.

NEW BOOKS, WITH SHORT CRITIQUES.

1. *Does it Pay to Smoke?* 2. *Does it Pay to Drink?* Pamphlets. William Tegg, Pancras-lane.

⁂ Mr. Tegg has rendered good service to the public by the reproduction of these two "*brochures*" from American periodicals. They will, no doubt, be extensively read in this country, and no one can deny that they contain a vast amount of information written in a pleasant manner. They are additional examples to the many we have of the way in which the above subjects—"smoking and drinking"—are treated; they form no exception to their predecessors in taking a one-sided view on the matter in question. We still require a work that will deal broadly and impartially on a very important problem. Unfortunately, writers upon "smoking and drinking," as a rule, have treated on the abuse and not the use of "alcohol" and the "weed." To denounce either generally when properly used, is quite as absurd and impracticable as to advocate an excessive use of either. The writers of the above can see no good except in "water" and no "smoke." They tell their story well—indeed, powerfully and graphically. We cannot, however, accept the moral they draw without very grave and very large modifications.

A Treatise on Localised Electrisation, and its Application to Pathology and Therapeutics. By Dr. G. B. DUCHENNE. (Translated from the third edition of the original by HERBERT TIBBITS, M.D., L.R.C.P., Medical Superintendent of the National Hospital for the Paralysed and Epileptic. Part I. London: Hardwicke. Pp. 322.

⁂ The present part of Duchenne's valuable work is, in a great measure, occupied with notices of the various means of producing galvanic and electric currents, and of applying them to the living subject. But there are also some very important hints as to the value of electrisation by reflex action, on localised faradisation, on the therapeutic value of galvanisation by interrupted and continuous currents. The part of the work to be next published promises to be of more immediate use to the practical man. It will deal with traumatic paralysis, fatty atrophic paralysis, subacute general spinal paralysis, progressive muscular atrophy, pseudo-hypertrophic paralysis, progressive locomotor ataxy, and labio-glosso-laryngeal paralysis. We would note that the translator's work seems well done.

The American Journal of Syphilography and Dermatology. Edited by M. H. HENRY, M.D., Surgeon to the New York Dispensary, etc. New York: Christern.

⁂ This magazine, which is a quarterly production, has just entered on its second year. It is well managed, and its articles are fairly good. The present number contains, among other useful matter, the conclusion of an article on "Vaccino-Syphilitic Inoculation," by Dr. Frank P. Forster, House-Physician to the New York Dispensary, which gives a very fair summary of the whole subject. The two other original communications are on "Dactylitis Syphilitica" and the "Tertiary Affections of the Genito-Urinary Passages."

The New York Quarterly Journal of Psychological Medicine, for January. New York: Appleton and Co.

⁂ The number before us contains some most interesting material beyond that to which we have already alluded. Dr. Hammond's lectures on Diseases of the Cerebral Nervous System are especially worthy of attention. It also contains, besides a great variety of selected material, an interesting case of Hydrophobia, narrated by Dr. S. G. Cook.

DR. JOHN BREAKEY, R.N., who has proceeded to sea in the *Enchantress*, in attendance on Mr. Childers, entered the navy in April, 1854, on board the *Penelope*, 16, and proceeded to the Cape of Good Hope, and in July, 1857, removed to the *Emperor*—steam yacht—intended as a present from her Majesty to the Emperor of Japan. He became a Surgeon in July, 1863, served in the *Bull Dog*, 6, on the North American and West Indian Station, from 1864 to 1867, and from the latter date until August, 1870, served in the *Serapis*, troopship.

STAY AT HOME.—Several Russian Physicians have warned their patients not to travel abroad, as already some Russians, including the Ambassador at the Hague and another diplomatist have died in consequence of infectious diseases contracted by travelling in railway carriages which had been used by the sick and wounded in the war.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

February 14.

In the return which I made three weeks ago of the cases of small-pox, 147, which, up to the 8th ult., had been received into the Ashfield-street Temporary Hospital, the number of deaths was stated to be 37, or 1 in 4. Since that time, 8 others of the patients had died; of whom 5 either stated that they had never been vaccinated, or presented no evidence in the shape of the slightest cicatrix of the operation having been performed, 2 had each only one slight mark, and of 1 there was no report as to the state of the arm.

From January 9 to February 9, both inclusive, there have been received into the same institution 177 additional cases, the returns for 163 of which I have been enabled to examine, through the courtesy of Mr. Hagger, the Vestry Clerk. Up to the 9th inst. there had been 33 deaths out of the 163, or about 1 in 5. This proportion will doubtlessly require modification in consequence of mortality in some of the more recently admitted cases. The distribution of the deaths bears the same conclusive testimony to the general value of vaccination as it did in my last reported series. A tabular statement will perhaps make this more readily appreciable than any other method. In the subjoined table, the first column contains the report as to the state of the arm, or whether vaccination had been performed or not; the second, the numbers with such a state of arm who were under treatment; and the third, the number of deaths.

Condition as to vaccination.	Cases treated.	Deaths.
Not vaccinated, or presenting no trace of cicatrix	35	16
No cicatrix, but said to have been vaccinated	6	1
Having one small cicatrix	18	6
„ large „	19	0
„ two small cicatrices . . .	8	2
„ „ large „	52	4
„ three „ „	17	0
„ four „ „	4	2

Concerning two, no report as to the state of the arm was given. One of these died. Another had been vaccinated six days previously, the vesicles from vaccination and the variolous eruption going on together. Of the two who died, having four large cicatrices, I observe that one was sent from the Fever Hospital, and presumably, therefore, had recently been the subject of another epidemic disease. It is more than probable that the debilitated condition in which many of the patients are left by a recent attack of relapsing fever contributes to the high mortality which characterises the present outbreak. This high mortality chiefly affects adults, or at least those above the age of infancy. So markedly is this the case that, in the week ending February 4, in which the highest number of deaths from small-pox was registered during the present epidemic, the percentage of infant mortality, which in Liverpool is usually very high, fell from 24·1 in the previous week, and 26·9 for the last entire quarter of 1870, to 19·1. It will scarcely be doubted that the comparative immunity of those under 2 years has some relation to the increased efficiency with which vaccination has been performed during that time. Out of the 163 whose cases I have tabulated, only 20 were under 10 years of age, and of these 20 there were only 2 under a year; while 2 also had reached their third year, the rest being older. In the week ending February 4 there were 90 deaths from small-pox, the numbers in the three preceding weeks having been 35, 65, and 51, respectively.

The most prompt and energetic measures have been taken by the authorities. Vaccination stations are opened daily, and every facility is given for the revaccination of those over 12. In the West Derby district the paid inspectors continue to make a large number of visitations daily, with the result of bringing up many defaulters, though the number of these is rapidly decreasing.

A Surgeon's Gift.—At the meeting of the Governors of the Queen's Hospital, Birmingham, last week, the chairman announced that Mr. West, one of the honorary Surgeons, had, as "a feeble expression of his goodwill to the institution," sent a donation of £20.

GENERAL CORRESPONDENCE.

BOMBARDMENT OF THE PARIS HOSPITALS BY THE GERMANS.

Note from M. P. Giraldes.

[To the Editor of the Medical Times and Gazette.]

Monsieur le Rédacteur,—Le siége de Paris a permis de constater comment les armées allemandes remplissent les conventions internationales. Pendant le siége, ces armées se sont fait remarquer par le mépris le plus complet de la Convention Internationale de Genève.

Le drapeau parlementaire à Croix Rouge—drapeau de Genève—a *souvent* été employé à couvrir des wagons et voitures des munitions et des vivres.

Les chirurgiens et les ambulanciers ont été très-souvent fusillés par ces messieurs, plusieurs ont été blessés, et l'un est mort de ses blessures.

Le képi brodé des chirurgiens était une mire pour ces messieurs.

Les chirurgiens pris étaient renvoyés en arrière, sans leur permettre de rentrer; cela c'est vu plusieurs fois au Bourget, en particulier dans la personne de l'Aid-Major Gonthier.

Enfin, pour couronner l'œuvre, du consentement de M. le Chancelier de la Confédération de l'Allemagne du Nord, le Chef de l'Etat-Major Général des armées de la même Confédération, a fait *intentionellement* bombarder les ambulances et les Hôpitaux.

L'Hôpital Militaire de Val de Grâce, très-reconnaissable par son dôme élevé, couvert du drapeau à croix rouge, a reçu dans son enceinte 92 obus de 14 à 22 centimètres de diamètre.

Les ambulances du terrain du Luxembourg, furieusement bombardées pendant la nuit, ont du être evacuées à la hâte pendant une nuit froide, au milieu d'une pluie de projectiles.

L'Hôpital de la Pitié a reçu 100 obus. On a du l'évacuer—l'hôpital n'était pas tenable.

Le'Hôpital de la Salpétrière a été bombardé. Il en est de même de l'Hôpital des Enfants, le Necker, et l'Ambulance des Jeunes Aveugles: ces établissements, très-visibles des batteries de Meudon, malgré le drapeau qui devait les garantir, n'ont pas trouvé grâce devant ces sauvages. Ces dignes Enfants de la Germanie, aujourd'hui en plein armistice, volent et pillent les maisons des environs de Paris, complétant ainsi leur caractéristiques sauvages et voleurs.

Tels sont les faits qu'il est bon de faire connaître au monde médical, afin de leur permettre d'apprécier le degré de civilisation de ces germains. P. Giraldes.

Paris, ce 5 Février, 1871.

[translation.]

Mr. Editor,—The siege of Paris has enabled us to judge how the German armies fulfil international agreements. During the siege, these armies have been notorious for setting completely at nought the International Convention of Geneva.

The flag of truce with the Red Cross—the Geneva flag—has often been used to protect waggons and carriages of ammunition and stores.

Surgeons and ambulance men have often been fired at by these gentry; many have been wounded, and one has died of his wounds.

The embroidered *képi* of the Surgeons was a mark for these gentry.

Surgeons, when captured, were sent to the rear, and not allowed to return to their own lines; this happened many times at Bourget, particularly in the person of Aid-Major Gonthier.

Lastly, to crown the work, with the consent of the Chancellor of the North German Confederation, the General-in-Chief of the armies of that Confederation has wilfully caused Hospitals and Ambulances to be bombarded.

The Military Hospital of Val de Grâce, very distinguishable by its lofty dome, and surmounted by the red-cross flag, has received within its enclosure ninety-two shells, of 14—22 centimetres in diameter (about 6 to 10 inches).

The ambulances in the Luxembourg grounds were furiously bombarded at night, and obliged to be hastily emptied during a cold night, amidst a hail of projectiles.

The Hospital of La Pitié received 100 shells. It was obliged to be emptied; the Hospital was not tenable.

The Hospital of La Salpétrière was bombarded. It was the same with the Hospital of the Enfants Malades, the Necker, and the Ambulance of the Blind Asylum. These institutions, easily visible from the batteries at Meudon, found no mercy with these savages, spite of the flag that ought to have protected them. These worthy sons of Germany, now, in the face of an armistice, rob and plunder the houses in the neighbourhood of Paris, thus fulfilling their savage and thievish characteristics.

Such are the facts that ought to be made known to the Medical world, in order that they may estimate the degree of civilisation of these Germans.

P. Giraldès.

⁂ It is not the English custom to condemn without hearing both sides; therefore, we must suspend our verdict as to the charge of selecting Hospitals as special marks for German shells. The whole English nation is profoundly penetrated with the sufferings of the French; but we may ask, Why did not the educated classes (of whom our estimable *confrère* is one)—the Physicians, lawyers, clergy, and men of property—raise their voice seven months ago against the idea of the war? It was Paris that made the war; the political agitators, newspaper scribes, traders in sedition, the most luxurious, most thoughtless, and politically incapable people in the world, who then, in the midst of a vast national disaster, upset the government which had given France twenty years of unexampled prosperity; and to what end?—in order that they might fall into the hands of the imbecile Favre, the half-monkey, half-Jew Gambetta, and the half-dervish, half-brigand Garibaldi! We hope our French friends will wake up, establish a strong government and be loyal to it, and cultivate the resources of their magnificent country, and leave their neighbours alone.—Ed.

REPORTS OF SOCIETIES.

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THE PATHOLOGICAL SOCIETY.

Tuesday, February 7, 1871.

Mr. Hilton, F.R.C.S., President, in the Chair.

Mr. Balmanno Squire pointed out certain cases of Skin Disease of rare occurrence. One was a case of pemphigus of the mouth—a very rare form of the disease. Its nature was confirmed by a similar eruption on the scrotum. The next patient was a woman, between 50 and 60, suffering from eczema. She had had several attacks, the last one persisting for a year; for the last two months, cauliflower excrescences had been developing themselves on various parts of the surface. There was no history of syphilis. The case resembled eczema when it attacked the lower lip, but there was no scab here. The third case was one of herpes zoster of the right forearm and hand, stopping short at the elbow. The case was opposed to the view that herpes zoster followed the course of nerves. In point of fact, the eruption often covered several ribs and intercostal spaces. Here, both the outer and the inner aspects of the arm were affected.

Mr. Holmes (for Dr. Martin) exhibited a photograph and sketch of a young man whose hands and feet were affected in an extraordinary manner. The patient, though 28, was only four feet in height. His legs were very short, and there was hardly any growth in three years. He was born quite perfect, and remained so for eighteen months, after which the first phalanges of his fingers began to enlarge and to grow steadily from their bony centres. They in time became globular, the right hand being larger than tho left. They were so unmanageable as to require support. The thumbs were but little deformed. Fissures existed between the various phalanges. The larger hand weighed 10 lbs. He thought the origin lay in expanded exostoses. The patient would not submit to any operation, and died of gangrene of the right hand. The feet, which in this case were also affected, but less so than the hands, rarely suffered, and so also of the thumbs. He had exhibited a case somewhat similar some years ago. The disease looked enchondromatous, but contained no cartilage cells.

Mr. W. Spencer Watson exhibited a small Ivory Exostosis, which he he had removed from the upper and outer quadrant of the left eyeball, where it lay attached by a cartilaginous base to the sclerotic, midway between the external and superior recti. No similar case is on record, but it is possible that some of the recorded instances of ivory exostosis of the orbit of large size may have originated in small growths similar to the one exhibited.

Mr. Hulke exhibited some preparations and drawings of Rodent Ulcer of the Face. It had been said that such were made up of connective tissue only. He had found something more, for in most of the hardened masses he had found bodies like the cells of the rete-mucosum in some parts assuming a scab-like appearance. One occurred in a female, aged 69, who had an ulcer of the cheek presenting the usual characters, but having no glandular enlargement or constitutional cachexia. In the hardening material was a good deal of corpuscular matter. The next occurred in a male, aged 52. The disease was of long duration, and extended from the mouth to the ear. There was no glandular affection, and no cachexia. The parts were cauterised after removal of the diseased tissue.

Mr. De Morgan considered these remarks of great importance, as many had tried to separate these tumours, or rather ulcers, from cancers. Mr. Moore had considered them cancerous, and Mr. Hulke had shown that they partook of the nature of the epithelioma. They act similarly. It would be well, he thought, to examine the subject more fully. The observations already made tended to show that cancer is one of a great series, of which other malignant diseases may be phases.

Mr. Hulke next showed a specimen of Polypus of the Rectum, differing much from ordinary samples. The polypus was removed from a young woman. It seemed to consist in the centre of a fibrous stroma, outside of a papillary growth, covered by several layers of squamous epithelium. They generally looked glandular.

Mr. Sidney Jones had been struck with the scanty number of such polypi recorded. He had removed fifteen or twenty during the last five years. He was of opinion that they were often overlooked, and that they might be spontaneously cured. He had examined about six of those removed. Some were fibro-cellular merely, others glandular.

Mr. Arnott said he was present when Sir W. Fergusson removed an unusually large one, last year. It was the size of a cricket-ball, and had a long pedicle. Its central portion was fibro-nuclear; outside this were branching papillæ, and the whole was covered by epithelium. Another of the same kind had been removed by Mr. Quain.

Mr. Holmes said a similar specimen had been exhibited by him. This had been partially removed several times. He did not think villous masses were very uncommon in that situation.

Mr. Hulke, in reply, said the papillæ in his case were like those of the skin.

Mr. Arnott next proceeded to exhibit a Blood Tumour of the Scrotum, of doubtful origin. It had been removed by Mr. Quain from a Spanish gentleman, who could only speak English imperfectly. It seemed of slow growth, from the bottom of the scrotum upwards. When seen, there was a large swelling, very heavy, tense, and with a smooth skin. When tapped, a small stream of thin, brown fluid came away, and when the whole was removed it was seen to consist of a chocolate-coloured material, surrounded by a thick-walled cyst. On examination after removal, the testis was found perfectly healthy in the midst of the mass.

Mr. Weeden Cooke thought it well to draw attention to the fact that, as matters were now arranged, it was impossible to see specimens in time to speak on them.

Mr. Holmes pointed out that they might be exhibited a quarter of an hour before the time of meeting. It rested with members themselves to carry out this arrangement.

Reports from the Committee on Morbid Growths were read by Mr. Pick; one on Dr. Payne's specimen of cancerous thyroid, quite agreeing with the description given by the author; also on Dr. Dickinson's tumour from the lumbar glands. The advanced growth was complicated with the existence of cysts.

Dr. Allbutt then proceeded to show certain Microscopic Specimens of Spinal Cord, illustrative of the morbid anatomy of tetanus. They were taken from four cases, all traumatic. The first patient suffered from laceration of the skin and injury to the ankle. The cord was soft in many parts, especially in the upper portion of its course. The posterior tibial nerve was removed, and its sheath found full of pus. The second was a girl, who lacerated her finger. The nerve of the forearm was not examined. The third patient had been operated on by Chopart's method. The cord was soft in the dorsal region, and a clot was found in the lumbar enlargement. The sheath of the posterior tibial was full of pus. The fourth case was one of compound fracture of the leg. The cord was soft chiefly in the dorsal region, and there were some hæmorrhages throughout. Dr. Allbutt said that in all the cords changes were observed, especially softening. In two there were hæmorrhages, the bloodvessels were distended, thickened, varicose, and plugged, and there were spaces round these vessels, either full or empty. There was also proliferation of epithelium in the central canal, which was stuffed with it. There were changes in the connective tissue of the cord, and washing out of cells in the anterior cornua, where also small yellow lumps were to be seen, as of motor cells degenerated.

Dr. **Dickinson** had found the same condition of bloodvessels. The thrombosis was difficult to make out after soaking in chromic acid.

Dr. **Moxon** had never seen anything like inflammation; the vessels were often full, but there was never anything like thrombosis in the specimens he had seen. The cord was often anæmic. There was no thickening of the membranes or anything like lymph in those he had examined, but he had seen epithelium proliferated in the central canal. He thought the tetanic condition due to irritation, not to any distinct change, as in the cases which recovered no paralysis was left, and death resulted from over-action, not from impaired action.

Mr. **Hulke** had seen a softened condition and hæmorrhages.

Dr. **Dickinson** had also seen undoubted histological changes. In one case there were large swellings, and in their centres effused blood. He had never seen inflammation, but venous congestion merely or outbursts of blood, causing injury to the cord. He thought the bad cases all died.

Dr. **Moxon** said the swellings might be produced in removal of the cord.

Mr. **Holmes** asked if inflammation might not give rise to tetanic symptoms, and cited a case of inflammation following operation on spina bifida as an example.

In reply to reply to Mr. Barwell, Dr. **Dickinson** said that chromic acid tends to cause swelling rather than contraction of the cord.

After a few words of reply from Dr. **Allbutt**, the meeting adjourned.

NEW INVENTIONS.

MESSRS. GEORGE W. FOX AND CO.'S PATENT PALATABLE COD-LIVER OIL, PALATABLE COD-LIVER OIL WITH QUININE, AND PALATABLE CASTOR OIL.

We have tried these preparations on rather an extensive scale in a public institution for the reception of the consumptive. Our experience leads us to believe that they are fully equal to the best natural cod-liver oil in nutritious and medicinal qualities. Some patients have taken the palatable cod-liver oils for a month together, and have steadily improved under their use. The cod-liver oil with quinine we have found to be a valuable preparation. Its taste does not disgust the patient, it agrees thoroughly well with the stomach, and we have seen that it tends to increase appetite and to give strength and flesh. We think that patients who have got accustomed and inured, so to speak, to the taste of ordinary cod-liver oil, are not in the most favourable condition to appreciate the palatable oils. But for patients by whom the strong fishy taste of cod-liver oil is thoroughly abhorred, the palatable oils will be likely to prove a boon. As we have hinted, the cod-liver oil with quinine has been most approved by those patients on whom we have tried it. It rises but little, and it undoubtedly is an excellent form in which to prescribe two of the most useful curative agents in the modern Materia Medica. The palatable castor oil is a useful, not disagreeable, and safe laxative.

Compulsory Vaccination of the Police. — On Tuesday, Colonel Henderson issued an order that all the officers and constables in the Metropolitan Police Force should be immediately revaccinated by the Divisional Surgeons. In case of any individual declining to comply, he would be at once called upon to resign.

Nursery Footstool.—Upon the principle of a spring bed, a useful footstool has been invented by Mr. Burnell, of the United States. As motion is dear to infant life, a nurse with a baby upon her knee can dance a child with great facility by the use of the spring footstool. No doubt the idea will soon be adopted in England.

Imprudent.—Promising your Doctor a legacy !

MEDICAL NEWS.

Royal College of Physicians of London.—The undermentioned gentleman passed his Primary Professional Examination on February 7:—

Coffin, Richard James Maitland.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 9, 1871 :—

Cooper, George Joseph, Dacre-park, Lee, S.E.
Robinson, John Desborough, Syston, Leicestershire.

The following gentlemen also on the same day passed their First Professional Examination :—

Dunn, William Allison, St. Bartholomew's Hospital.
Jenkinson, Harold, Leeds Hospital.

MILITARY APPOINTMENTS.

16th Foot.—Surgeon William Armstrong, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 20, 1870.

23rd Foot.—Staff Assistant-Surgeon James Bennett Kelly, to be Assistant-Surgeon, *vice* Florence Theobald M'Carthy, who exchanges.

66th Foot.—Surgeon William Sim Murray, M.B., having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

84th Foot.—Staff Assistant-Surgeon Edward Denham Tomlinson, to be Assistant-Surgeon, *vice* Christopher Armstrong, M.B., who exchanges.

Medical Department.—Assistant-Surgeon Nicholas Ffolliott, from the 20th Hussars, to be Staff Surgeon, *vice* Staff Surgeon-Major George Saunders, C.B., who retires on half-pay. Staff Assistant-Surgeon James Greig Leask, M.B., to be Staff Surgeon, *vice* Staff Surgeon-Major William Frederick Torcato Ivey, who retires upon half-pay. Assistant-Surgeon William Curran, from 88th Foot, to be Staff Assistant-Surgeon, *vice* Alexander Minty, M.B., appointed to the Rifle Brigade. Assistant-Surgeon Florence Theobald M'Carthy, from 23rd Foot, to be Staff Assistant-Surgeon, *vice* James Bennett Kelly, who exchanges. Assistant-Surgeon Christopher Armstrong, M.B., from 84th Foot, to be Staff Assistant-Surgeon, *vice* Edward Denham Tomlinson, who exchanges. Staff Assistant-Surgeon George William Barroll has been permitted to resign his commission.

Brevet.—Staff Surgeon-Major William Frederick Torcato Ivey, who retires upon half-pay, to have the honorary rank of Deputy Inspector-General of Hospitals.

Staff Surgeon-Major George Saunders, C.B., who retires upon half-pay, to have the honorary rank of Deputy Inspector-General of Hospitals.

Frederick William Blake, M.D., has been promoted to the rank of Staff Surgeon in Her Majesty's Fleet, with seniority of November 2, 1870.

In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Assistant-Surgeon Jeremiah A. Hatch has been placed on the retired list of his rank from the 9th inst.

Bengal Army Medical Officers.—To be Surgeon-Majors: Surgeons Joseph Fayrer, M.D., C.S.I.; William Henry Adley. To be Surgeons: Assistant-Surgeons Daniel Wright, M.D.; Henry Charles Cutcliffe; Thomas Edwin Burton Brown, M.D.; Henry Potter, M.D.; Albert Mark Verchere; Charles Hatchell; John Charles Whishaw; Frederick William Alexander De Fabeck; John Berry White; Robert Brown; Archibald Fullerton Richmond; John Joseph M'Dermott, M.D.; Worsley Poulett Harris, M.D.

Bombay Army Medical Officers.—To be Surgeons: Assistant-Surgeons Henry Robert Laurence M'Dougall; Nathaniel Hopkins; Edward Morton; John Thomas Mackenzie, M.B.; Henry Talbot Daun, B.A.; Edward Raynsford Langley; Philip Wyatt Cockell; George Yeats Hunter; Henry Francis M'Grath; Edward Alexander Lawrence; Robinson Boustead; Frederick Hodgkinson Smith, M.D.

Madras Army Medical Officers.—To be Surgeon-Majors: John Miller; H. R. Oswald, M.D. To be Surgeons: Assistant-Surgeons John Massy Miller, M.D.; William Farquhar, M.D.; John Law, M.D.; George Hamilton Alexander, M.D.; Walter Fry; William John Busteed; William Farquhar Davis, M.D.; James McDonald Houston, M.D.; William Howland Roberts, M.D.; John Murray, M.D.

BIRTHS.

Clarke.—On February 10, at 1, Curzon-street, Mayfair, the wife of Wm. Fairlie Clarke, F.R.C.S., of a son.

Colbeck.—On February 3, the wife of Dr. Colbeck, Customs-quay, Dover, of a daughter.

Evans.—On February 11, at Drumeree Cottage, Drumcree, Westmeath, Ireland, the wife of Usher W. Evans, M.D., Staff Surgeon-Major, of a son.

Hulke.—On February 8, at Admiralty House, Deal, the wife of Dr. Frederick T. Hulke, of a son.

Robinson.—On February 7, the wife of Thomas Robinson, M.D., 35, Lamb's Conduit-street, W.C., of a daughter.

Thorne.—On February 8, the wife of Frederick Thorne, Surgeon, Leamington, of a son.

Woodhouse.—On February 8, at Ranelagh Lodge, Fulham, the wife of Thomas James Woodhouse, M.D. Lond., F.R.C.S., of a son.

MARRIAGES.

Anderson—Garrett.—On February 9, at the English Presbyterian Church, Marylebone, by the Rev. James Anderson, D.D., Morpeth, James George Skelton Anderson, son of the Rev. Alexander Anderson, Old Aberdeen, to Elizabeth Garrett, M.D., daughter of Newson Garrett, Esq., Aldborough, Suffolk.

Hilliard—Nicholls.—On February 9, at All Saints' Church, Dalston Robert Harvey Hilliard, M.D., to Elizabeth Isabella, eldest daughter of Thos. W. Nicholls, Esq., 258, Kingsland-road.

North—Fowell.—On February 11, at St. John's, Fitzroy-square, Henry William North, Esq., of Blackheath, to Ann, widow of the late Samuel Fowell, M.D., of Milverton, Somerset.

Tylecote—Hall.—On February 8, at St. James's Episcopal Church, Edinburgh, Edward Thomas Tylecote, M.D., Great Heywood, Staffordshire, to Rebecca, daughter of J. Lewis Hall, Esq., Wardie-avenue, Edinburgh.

Wood—Lewis.—On February 14, at St. Mary's Church, Cheltenham, W. E. Wood, late Surgeon in Her Majesty's Bombay Army, to Bessie, widow of the late T. E. Lewis, Commander I.N., and only daughter of the late Major-General James Durant, Bengal Army.

DEATHS.

Barnes, Ann, wife of Thomas Barnes, M.D., of Bunker's-hill, Carlisle, and Tring-park, Herts, on February 3, in her 70th year.

Kidd, Laura Isabella, wife of A. Napier Kidd, M.D., F.R.C.S., at Armagh, on February 7, aged 26 years.

Keith, Dr. William, of 263, Union-street, Aberdeen, on February 5, after a protracted illness.

Knowles, Frederick, the second surviving son of Edmund Yalden Knowles, Surgeon, at Farnham, Surrey, on February 9, aged 27.

Meade, Violet, the only daughter of Harry Meade, Surgeon, on February 14, aged four years and a half.

Pidwell, Samuel, Surgeon, Demonstrator of Anatomy at the Middlesex Hospital, and third son of the late Thomas Pidwell, Surgeon, Penzance, at Penzance, on February 12, aged 25.

Smith, Joseph, Surgeon, late of Clapham-road, at 9, Milford-place, North Brixton, on February 7, in his 79th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Alnwick Union, Northumberland.—Medical Officer and Public Vaccinator for the Embleton District. Candidates must be duly qualified in accordance with the requirements of the Poor-law Board. Applications and testimonials to J. A. Wilson, Clerk, Alnwick, on or before February 22. Election on the 24th.

Bristol General Hospital.—House-Surgeon; must be a Member of the College of Surgeons of London, Edinburgh, Glasgow, or Dublin, and be L.S.A. London or Dublin. Applications and testimonials to the Secretary on or before February 24.

Devon and Exeter Hospital.—House-Surgeon. Applications and testimonials to E. Force, Esq., at the Hospital, on or before the 23rd inst.

East London Hospital for Children and Dispensary for Women, Ratcliff, London, E.—House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Ashton Warner, Esq., Secretary, on or before February 21, on which date candidates may present themselves before a meeting of the Medical Staff.

Hospital for Women, Soho-square, W.—Physician; must be a Graduate in Medicine of some recognised University, and be a Member of the Royal College of Physicians of London. Applications and testimonials to H. B. Ingram, Esq., Secretary, on or before February 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

North Ormsby Cottage Hospital.—House-Surgeon. Applications to W. Skinnee, Esq., Coatham, Redcar.

Poplar and Stepney Sick Asylum District.—Resident Medical Superintendent for the New Asylum at Bromley, Middlesex. Candidates must be duly qualified and registered. Applications to be made on printed forms, which may be obtained of Mr. R. Foskett, Manager's Offices, Stepney Union Workhouse, Bromley, E., on or before February 24.

Royal Surrey County Hospital.—Honorary Medical Officer. Applications and testimonials to the Hon. Sec., the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before February 23.

University College Hospital.—Assistant Obstetric Physician. Applications and testimonials to John Robson, B.A., Secretary to the Council, on or before February 22.

York Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary at the Dispensary, on or before March 4.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Aston Union.—Mr. James H. Lakin has resigned the Sutton Coldfield District; area 14,260; population 4878; salary £42 per annum.

Belford Union.—Dr. Broadbent has resigned the East District; area 12,704; population 2869; salary £25 per annum.

Knaresborough Union.—Mr. James Walker has resigned the Knaresborough District; area 7380; population 5403; salary £55 per annum.

APPOINTMENTS.

Aylesbury Union.—George Gent, L.S.A., to the Seventh District.

Bishop Stortford Union.—John E. Morris, M.R.C.S. Eng., L.S.A., to the Bishop Stortford District.

Depwade Union.—Charles D. H. Drury, M.D., C.M., M.R.C.S. Eng., L.S.A., to the Fourth District.

Dudley Union.—James G. Beasley, L.F.P. & S. Glasg., L.R.C.P. Edin., to the First District of the Parish of Rowley Regis.

Garstang Union.—Robert H. Williams, F.R.C.S. Eng., L.R.C.P. Edin., to the St. Michael's District.

St. German's Union.—Angus Mackintosh, M.D. Univ. Glasg., L.F.P. & S. Glasg., to the Fifth District.

Tamworth Union.—Robert S. Bowker, M.R.C.S. Eng., L.S.A. Lond., to the Anstrey District.

Tavistock Union.—John F. Fletcher, M.R.C.S. Eng., L.S.A., to the Beerferris District.

Professor of Chemistry at Cambridge.—It is proposed to increase the stipend of the Professor of Chemistry, at Cambridge, from £300 to £500 per annum, and to appoint a Demonstrator of Chemistry with £150 per annum.

Rugby.—Dr. Farquharson, the Medical Officer of the School at Rugby, and late of the Coldstream Guards, has sent in his resignation. He was appointed by Bishop Temple in 1868.

The good-service pension of £100 a year, vacated by the death of Dr. John Wilson, has been awarded to Dr. James Wingate Johnstone, retired Inspector-General of Hospitals.

The Hon. Member for Birmingham, Mr. Muntz, introduced into the House of Commons, on Tuesday last, a Bill to Exempt Charities and Hospitals from Local Rates, which was unopposed.

Retirement of Professor Skoda.—This celebrated teacher has resolved, to the great regret of his numerous pupils, both Austrian and foreign, to resign his Clinical Professorship in the Vienna University. He is 65 years of age, and his determination has been come to in consequence of the prolonged annual absence from Vienna which the state of his health necessitates. He is to be succeeded by Professor Nièmeyer, of Tubingen.

Pension to a Chemist.—It is gratifying to record any recognition of scientific merits. Dr. Stenhouse, than whom few men have done more in chemical investigation, and in the practical application of discoveries, physical and chemical, to the useful purposes of life, has, by her Majesty's direction, been granted a pension on the Civil List of £100.

The Riberi Prize.—The subject for the fourth award of the Riberi Prize is "Nervous Diseases in general, or any of them in particular." The conditions of the *concours* are—1. The works must be legibly written or printed in the Italian, Latin, or French languages. 2. The printed works must have been published during the triennium 1871-73; two copies to be forwarded free of expense. 3. The works, whether manuscript or printed, must be delivered at the Royal Academy of Medicine, Turin, by December 31, 1873.

Small-pox and Vaccination.—A military Surgeon, on a recent examination of a large number of English recruits, found that 60 per cent. of lads unprotected by vaccination had been subjects of small-pox, as against 1·90 per cent. of protected recruits who bore traces of small-pox.

Dead at his Post.—Mr. Evans, one of the Dispensers of the parish of Bethnal-green, while performing his duties, now made perilous by the outbreak of small-pox, was seized with the disease, and, after eighteen days' suffering, died. His wife, worn out by tending him, took the malady, and is now lying ill in a state of great destitution. This is a case deserving of commiseration, for the unfortunate husband died at the post of duty. The guardians of the union have started a subscription for the desolate widow by a vote of £25.

A Useful Vaccine Station.—At the Great Northern Hospital, on Tuesday last week, 180 persons were vaccinated by Mr. George Cooper, F.R.C.S. We think Mr. Cooper's station a model one. His regularity and kindness attract large numbers of patients for vaccination, and the accommodation afforded gratuitously by the Committee of Management of the Great Northern Hospital is of a kind to facilitate greatly the work. Such a station is of the highest value in a poor parish such as Islington.

Death of Dr. Hill, Poor-law Medical Inspector.—We regret to announce the death of Dr. Hill, who for many years occupied the responsible and onerous position of Medical Inspector under the Poor-law Commissioners. Dr. Hill's death occurred on Saturday morning, at his residence, Donnybrook, after a short illness. The deceased gentleman was held in high esteem by the members of his Profession, and won the respect of all with whom he came in contact in the course of his public duty.

Woman's Voice.—Mr. Glaisher, the aëronaut, has noticed that the voice of a woman is audible in a balloon at the height of about two miles, whilst that of a man has never reached higher than a mile.

Mother's Milk.—Among the human secretions employed medically in China, woman's milk stands high, and is much used. Dr. Macgowan mentions the case of an opulent man who required 100 nursing women for supplying him with nourishment. On attaining his 100th year he was as "round and plump as a squash." 160 is the utmost point of longevity which man is known to have attained in the West.

Association of Medical Officers of Health.—The next meeting will be held on Saturday, February 18, at 7.30 p.m. The discussion on Dr. Robert Barnes's paper, on the question "How far is the present prevalence of small-pox to be attributed to the plan recently introduced of limiting the number of public vaccinators?" will be resumed by the President, Dr. Druitt, reading a short paper on revaccination. The adjourned discussion on Dr. T. Spencer Cobbold's paper, entitled "Entozoa in relation to the Public Health, especially as regards Sewage Irrigation," will be resumed by Dr. Letheby; previous to which Dr. Cobbold will read a supplementary paper "On Sewage and Parasites, especially in relation to the Dispersion and Vitality of the Germs of Entozoa."

Munificent Donations.—£1000, a second gift, has been received by the Small-pox and Vaccination Hospital from "D. V.," and a like amount by the Royal Infirmary for Children and Women, Waterloo-bridge-road, under the initials "E. F. S." The North London, or University College Hospital, has just received through its bankers, Messrs. Coutts and Co., the munificent donation of £1000 from "G. W. S.," being the second of the like amount from the same anonymous benefactor.

Hunterian Society.—At the annual general meeting of this Society, held on Wednesday, February 8, the following officers were elected for the ensuing year:—*President:* D. De Berdt Hovell, Esq. *Vice-Presidents:* Thomas Bryant, Esq., J. Hughlings-Jackson, M.D., Robert Fowler, M.D., Charles F. Maunder, Esq. *Treasurers:* Thomas Mee Daldy, M.D., Thomas Brown, Esq. *For the Oration of* 1872: J. Hughlings-Jackson, M.D. *Librarian:* Robert Fowler, M.D. *Secretaries:* John J. Phillips, M.D., James E. Adams, Esq. *Council:* Henry Berry, Esq., F. Gordon Brown, Esq., M. Brownfield, Esq., P. Lodwick Burchell, M.B., William Carr, M.D., Edward Clapton, M.D., William Clapton, Esq., Henry J. Fotherby, M.D., Jonathan Hutchinson, Esq., Sydney Jones, Esq., Walter Moxon, M.D., Walter Rivington, Esq.

Royal Society.—The following is an abstract of a paper on the "Effect of Exercise upon the Bodily Temperature," by T. Clifford Allbutt, M.A., M.D. Cantab., F.L.S., Member of the Alpine Club, etc., communicated by G. Busk, F.R.S.; received November 12, 1870:—The object of the author in carrying out the experiments recorded in the present paper was to inquire whether the regulating power of the organism held good under great variations of muscular exertion. For this purpose he made frequent daily examinations of his own temperatures during a short walking tour in Switzerland, and found that the effect of continuous muscular exertion upon himself was to sharpen the curve of daily variation, the culmination being one-tenth or two-tenths higher than usual, and the evening fall coming on more rapidly, and somewhat earlier. Charts of the daily temperatures were handed in with the paper. The author made reference, also, to some observations of M. Lortet, which differed from his own. These observations, which did not come into Dr. Clifford Allbutt's hands until his own experiments were partially completed, were adduced by M. Lortet to prove that the human body was very defective in regulating power under the demands of the combustion needed to supply the force expended in muscular exertion. Dr. Clifford Allbutt's results were very decidedly opposed to those of M. Lortet; for only on two occasions did he note the depressions of temperature which M. Lortet regards as constant. It would seem, however, that the body is more or less liable to such depressions when engaged in muscular exertion; but the cause of them is very obscure. Of the two low temperatures noted by the author, one occurred during a very easy ascent of lower slopes, and the second was observed during a descent. The author thinks that they may be due to some accidental deficiency in combustion, and inquires whether the capacity of the chest in different individuals may account for the varying influence of muscular effort upon them, and perhaps for the earlier or later sense of fatigue. The sphygmographic tracings added by M. Lortet to his temperature charts seemed to show a great inadequacy of the circulation.

Fever in Newcastle.—Dr. Philipson in his sixth report for 1870, states:—"During the year 1870, 161 cases of continued fever were returned in Newcastle, with 1 death; 579 cases of typhus fever, with 45 deaths, a percentage of 7·8; 68 cases of enteric fever, with 6 deaths, a percentage of 8·9; 12 cases of relapsing fever, without a death; and 193 cases of febricula, without a death. In Gateshead, 14 cases of continued fever, without a death; 128 cases of typhus fever with 6 deaths, a percentage of 4·7; 148 cases of enteric fever, with 13 deaths, a percentage of 8·9; and 144 cases of febricula, with 3 deaths."

Bath Royal United Hospital.—The Rev. Wadham Williams, Vicar of Bishop's Hull, near Taunton, the administrator of the effects of the late John Prankard, of Bath, has sent a donation of £5 to this institution. The donation was accompanied by a letter, which stated that Miss Kate Prankard, who had been in the Hospital for three weeks, desired to acknowledge the great kindness and attention received by her in the institution.

Health of Scotland.—2950 deaths were registered in the eight towns during the month, of whom 1441 were males and 1509 females. Allowance being made for increase of population, this number is 30 above the January average for the past ten years. A comparison of the deaths recorded in the eight principal towns shows that during January the annual rate of mortality was 20 per thousand persons in Perth, 26 in Leith, 31 in Edinburgh and in Aberdeen, 36 in Dundee, 39 in Paisley, 40 in Glasgow, and 41 in Greenock. Of the 2950 deaths registered, 1224, or 41 per cent., were of persons under 5 years of age. In Aberdeen and in Paisley, 30 per cent. of the persons who died were under 5 years of age; in Edinburgh and in Perth, 36 per cent.; in Leith, 39 per cent.; in Glasgow, 44 per cent.; in Dundee, 46 per cent.; and in Greenock, 49 per cent. Eight females had passed the 90th year of life, the eldest of whom was the widow of a master edge-tool maker, aged 100½ years. She was "in possession of her faculties all entire, but eight years since she had to use eye-glasses," and died from apoplexy, after an illness of thirty-four hours.

Dr. Gibbon on Small-pox.—"I believe that they will get through the distemper, provided they are not, about the twelfth or fourteenth day of it, when danger to life is greatest, hurried off to a small-pox Hospital, as has been the case with one young man at least, without any sufficient sanitary reason. In order to prevent unnecessary alarm, the public should bear in mind the fact that the populous parishes of St. Luke's and Clerkenwell are now annexed to what was formerly the Holborn Union. So that when they see in the public prints the Holborn Union credited with so many cases or deaths from small-pox, they must not conclude that all, or even a tithe of them, occur in the Holborn sanitary district. All told, as yet we have only had thirty-five cases since September 29 last, and these include about eight cases that occurred by importing a wayfaring lad affected with the disease into the local workhouse. The epidemic, as it occurs in this district, is sporadic; it has not spread from room to room, or house to house, except in Baldwin's-place, where a lad, after a fortnight's sojourn in the Small-pox Hospital, came home and ran about the house at a time the distemper was highly catching, and gave it to an unvaccinated child in another room, whose mother had been enjoined but was unable to take it to the station to be vaccinated. I feel some little confidence that it will not spread to any great extent, because I have always endeavoured to enforce the vaccination laws. Previous to the Vaccination Act 1867 coming into operation, the successful vaccinations performed by the public operators averaged about 750 yearly; in 1868 they rose to 837; in 1869 to 1535, when 1292 births were registered; in 1870 they fell to 639, when 1325 births were registered; this falling off was owing to the fact that the Privy Council reduced the three public vaccinators to one, and he was comparatively unknown amongst the poor. This diminution, however, is more apparent than real, because I find it was much more than counterbalanced by the vaccinations of private Practitioners. The new inspections relate to seventy-seven places, of which thirty-two require the orders of the Board for sanitary improvements in various particulars."

Indiscriminate Medical Advice. — Bath Royal United Hospital.—At a meeting of the subscribers of this institution, last week, Dr. Watson spoke very earnestly against the danger of allowing the institution to be swamped. He maintained that the rule should be strictly carried out that it only relieved those who were incapable of paying. He particularly referred to well-to-do people who came to the Hospital and obtained gratuitous advice and medicine. Quite by accident, a few days ago an applicant mentioned his occupation, and thereupon the Medical officer told him that he was not a fit person to make use of the Hospital, and that if he wished his advice he must call at his private residence. It was then stated that the fee would be a guinea, and eventually the patient agreed to the terms. Dr. Watson was convinced that the Hospital was taken undue advantage of, and something must be done to put a stop to the abuse. Mr. B. Bartrum quite endorsed Dr. Watson's remarks with respect to the improper admission of patients, and thought that unless they adopted the system of giving out-door tickets, and thus rendering the persons giving them in some degree responsible for their distribution, the abuse would not be checked, which was really a sore one. Dr. Falconer said that it would soon be twenty-two years since he became connected with the Hospital. When he first came to Bath the ticket system was in vogue, but it was complained of as the greatest nuisance; it entailed much inconvenience at the Hospital, for the majority that applied for relief had no tickets, and they were the most urgent cases. He did not know well how to prevent the evil. Some years ago, a clerk was employed to notify every Monday the social position of every patient admitted, but they found that the number of improper applications was not greater than 2½ per cent. He had frequently refused to admit unqualified persons who came from the country, and the consequence was, they abused him when they went home throughout their district. It was, therefore, a disadvantage to him to turn away the country patients who were in a good position, and yet he had always done so when he found they were unqualified. Dr. Watson was aware that being a Physician at a Hospital of this kind was sufficient to obtain a country practice. Dr. Watson remarked that the ticket system answered well in the dispensaries. There could be no doubt that one-third of the population of Bath were relieved during the year at charitable institutions. 18,000 people received gratuitous relief during the year at the various institutions. This was a startling fact. He applauded Dr. Falconer for his conscientiousness in sending away improper applicants, to his own private injury; at the same time, he did not think any one of the Medical staff would admit persons of this objectionable class if they were aware of their social position. Major Baker thought Dr. Watson must have forgotten, when he said that one-third of the population of Bath received relief from charities, that these institutions embraced a wide area beyond the city. Dr. Watson said there are 26,000 patients at the various Dispensaries and Hospitals, and under the Poor-law Medical Officers, and I think I am within the mark in reducing that number to 18,000 for the city. Dr. Falconer observed that the benefits of the Hospital are extended over an area embracing a population of 250,000. The Rev. Prebendary Kemble said it was sometimes a difficult matter to decide as to who were eligible and who were not to receive Hospital relief. It was very necessary to ascertain where the line should be drawn, and if anyone could give them a receipt for restricting improper patients, he was sure the committee would be very much obliged to him. At present no scheme for this purpose had been suggested, and they were as far from the solution of the difficulty as ever they were; but he was of opinion that any scheme that might be proposed would incur more expense than the unqualified patients themselves cost, and, therefore, he thought they had much better let things go on as they were, unless they could discover some very effectual remedy.

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon.*

Mr. Gaine's paper shall appear as soon as possible.

N. S. E.—Read "The relations of Physiology to Sexual Morals," by Prof. Francis W. Newman, published by Trübner, Paternoster-row.

Chemicus.—There are no Commissioners for counties. Dr. Arthur Mitchell, 5, East Claremont-street, Edinburgh, is Commissioner for Scotland.

VACCINATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Permit me to draw attention to one suggestion in the report by Drs. Munk and Marson, of the Small-pox Hospital, by which they recommend revaccination for "all who have not several (at least four) good marks testifying to the character and efficiency of the primary vaccination."

One good mark used to be considered sufficient, and vaccination from two points, one on each side of, and a little above the insertion of, the deltoid muscle. Inoculation was formerly only performed on one, and vaccination on two, to secure its security; but I cannot comprehend by what method of reasoning the learned vaccinators can advise four inflictions on a baby's little arms, when two are quite sufficient, and fulfil all the experience of Jenner. I still prefer the old plan of making a few slight incisions close together, then drawing them apart while rubbing in the lymph. An inch or more to the right of the first incisions a second set may be made, but never so close that the inflammatory vesicles can unite.

Another cruelty is that of doing both arms at the same time, which is quite uncalled-for, and gives much unnecessary pain and trouble to both child and nurse.

By giving a place to the above thoughts, you will oblige,

Yours truly,

17, Denmark-terrace, Brighton. R. T. MASSY, M.D.

*** Our correspondent should read the letter from Liverpool in another column.

A Pupil.—We understand that some such arrangement will be made in the new St. Thomas's Hospital.

H. M. S.—The appointment is in the hands of the Secretary for the Colonies.

Law Institution.—By ballot, which takes place periodically. Mr. Vincent, the Secretary, will afford further information if applied to.

In Eure.—It is necessary that he should be registered.

C.—The operation was performed at the North Staffordshire Hospital.

L.R.C.P.—There is no law whatever that could prevent him assuming the title.

Anxious.—The person is an advertising quack, and has no qualification whatever.

THE TREATMENT OF THE PITTING IN SMALL-POX.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Some thirty-six years ago or so, I had the honour, when in the Hon. East India Company's service, to treat a case of small-pox, specially with the object of arresting the spreading of the pustular eruption; and, I am happy to observe, with decided success, much beyond what was at first deemed practicable. Without more prefatory remarks, this was accomplished by means of applying locally the powdered charcoal of the mimosa-tree, after the wood had been well charred for the purpose. I was surprised to find that after its application to a patient affected with the confluent variety of the disease, it not only soon healed the eruption, but it also soon healed the pyretic symptoms, as the case quickly terminated most favourably. Another advantage of this treatment was, that the pitting of the disease disappeared, the pustular cicatrises all healing like common simple sores.

This remarkable case, in all probability, is even now in the Archives of the Bombay Medical Board. I am, &c.

Wallingford, February 9. WILLOUGHBY ARDING, M.D.

Hospital Beer.—Information as to Hospital diet and allowances is to be found in Squire's "Hospital Pharmacopœia." The ordinary or middle diet for men usually allows half-a-pint of porter at dinner every day. Full diet generally allows a pint. Stout, brandy, and wine are extras to be ordered specially for each patient by the Physician. "X." must specify the exact form in which he wishes further information.

Leicester.—In Dr. Clarke's yearly report of the Union Infirmary, Leicester, he says that about one person in twenty-four who died in Leicester, died in the workhouse. With respect to the prevention of scarlet fever, he makes the following remarks:—

"During the whole of the recent severe epidemic of scarlet fever, only one case last year was developed in the Union Schools, and that of the mildest character, in a child aged 5, who did well. A separate nurse was provided, the child was isolated five weeks, and every care was taken as far as practicable to prevent fresh cases. The result was successful.

"The reason why the schools escaped when the epidemic was so severe all around, is owing unquestionably to the fact that no children were allowed to visit friends in the town for several months, and to the fortunate circumstance that no mothers having children suffering from the disease have, so far, been sent in from the town during the whole period."

WHAT IS "POTT'S FRACTURE"?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Some time ago an accident in the vicinity of the ankle-joint raised the following question amongst myself and seven other Surgeons:—What, anatomically speaking, constitutes "Pott's fracture"?

I and one other were of opinion that fracture of the fibula, two and a half or three inches above the external malleolus, dislocation of the tibia inwards, with the tip of the internal malleolus broken off, constituted the injury in question, while the remainder stated that fracture of the fibula alone in the situation above indicated was "Pott's fracture," and reference to the Surgical works in our possession was not satisfactory towards settling the dispute, and I agreed to write to you for Mr. Pott's own description of the injury.

If you will kindly insert this letter amongst the correspondence, with the answer, you will much oblige. I am, &c. EXILE.

Allahabad, January 1.

*** *Vide* "Some Few General Remarks on Fractures and Dislocations, by Percivall Pott, F.R.S., and Surgeon to St. Bartholomew's Hospital, London, 1778," p. 57:—"There is a case," says Pott, "which, according to the general manner of treating it, gives infinite pain and trouble both to the patient and Surgeon, and very frequently ends in the lameness and disappointment of the former, and the disgrace and concern of the latter: I mean the fracture of the fibula attended with a dislocation of the tibia." He goes on to speak of the great importance of the fibula as a constituent of the ankle-joint; and avers that the perpendicular bearing of the tibia on the astragalus depends on its firm connexion with the fibula. "When by leaping or jumping the fibula breaks in the weak part, within two or three inches of its lower extremity, the inferior fractured end of the fibula falls inwards towards the tibia; that extremity of the bone which forms the outer ancle is turned somewhat outward and upward, and the tibia having lost its proper supports, and not being of itself capable of steadily preserving its true perpendicular bearing, is forced off from the astragalus inwards, by which means the weak bursal or common ligament of the joint is violently stretched, if not torn, and the strong ones which fasten the tibia to the astragalus and os calcis are always lacerated, thus producing at the same time a perfect fracture and a partial dislocation, to which is sometimes added a wound in the integuments made by the bone of the inner ancle." It seems clear, from this quotation, that Pott regarded the fractured fibula as the primary and essential injury produced by rash jumps, and the inward dislocation of the tibia as a consequence.

Southport.—It appears to be pretty clear that the paragraphs alluded to were more "sensational" than truthful. At all events, from the statements made, the small-pox has not been "epidemic" at Southport. There have been a few sporadic cases, which at the present time is not to be wondered at, in a town containing 20,000 inhabitants. The "sanitary movements" had commenced at least a month before the comments of our contemporary appeared.

COMMUNICATIONS have been received from—

Dr. Willoughby Arding; Dr. A. N. Kidd; Mr. W. P. Partridge, of Bombay; Messrs. Fraser Bros.; Mr. T. Piper; Mr. F. P. Staples; Dr. Philipson; Messrs. Comyn, Ching, and Co.; Dr. Clifford Allbutt; Mr. Lewis Thompson; Dr. McCormack; Chemicus; Mr. E. J. Southwell; Mr. Watkins; Mr. H. Bayden; Mr. J. Warren; Mr. Metcalfe Johnson; Dr. Gray; Dr. Seaton, Dr. Phillips; Dr. Lionel S. Beale; Mr. C. Allen Fox; Mr. Vincent Jackson; Dr. James Russell; Dr. B. W. Richardson; Dr. J. Burdon-Sanderson; Mr. J. Chatto; Mr. H. Sergeant; Mr. Gaine; Mr. T. Charters White; N. S. E.; Dr. E. Van Millingen; Dr. T. W. Evans; Dr. R. T. Massy; Messrs. Collingridge; Mr. John Milne.

BOOKS RECEIVED—

Transactions of the American Ophthalmological Society—The Constitution Violated; an Essay by the Author of the "Memoir of John Grey, of Dilston"—The Geographical Distribution of Heart Disease and Dropsy in England and Wales; with a large coloured chart—Report of the Manchester Medico-Ethical Association—City of London Directory, 1871.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—Southport Independent—Pharmaceutical Journal—Blarney—Bath Express—Chemist and Druggist—Brighton Chronicle—The Brewer's Guardian—New York Medical Gazette—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

February 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Jowett, "Socrates."

20. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Dr. Edward Crisp, "Two Cases of Inflammatory Croup." Mr. Spencer Watson, "Two exceptional Cases of Cataract." Dr. Prosser James, "On 'Chloral.'"

21. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Dr. Morell-Mackenzie, "Constriction of the Trachea, with Syphilitic Deposits in the Liver; Growth in the Larynx of a Dog." Dr. Moxon, "General Primary Colloid Cancer of the Skeleton; Syphilitic Inflammation of the Lung; Change of Grey to Yellow Tubercle of Lung." Mr. De Morgan, "Tumour of Lower Jaw; Tumour from the Axilla." Mr. Wagstaffe, "Fibrous Tumour of the Heart." Mr. Morris, "Femoral Hernia, Reduction *en masse*." Dr. Greenhow, "Cancer of Œsophagus, with a Fistulary Opening into the Trachea." Mr. Tay, "Contents of a Ranula." Dr. Marcus Beck, "Spindle-celled Sarcoma connected with Posterior Tibial Nerve." Dr. Dickinson, "Spinal Cord in Tetanus; Mesenteric Tumour." Mr. Weeden Cooke, "Medullary Sarcoma of Skull associated with Scirrhus of Breast; Scirrhus of Brain associated with Scirrhus of Breast."

22. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Hunterian Society. 7½ p.m.: Meeting of Council. 8 p.m.: Dr. Braxton Hicks, "On Intermittent Action of the Uterus throughout Pregnancy." Dr. Pye Smith, "On Syphilitic Phthisis."

Society of Arts, 8 p.m. Meeting.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

24. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Mr. Gant, "On the Process of Occlusion in Arteries after Acupressure, with its Relation to the Treatment of Surgical Hæmorrhage, and compared with Ligature aad Torsion."

Quekett Microscopical Club, 8 p.m. Mr. J. R. Leifchild, "On Sections of Coal and Fossil Woods." Mr. W. H. Furlonge, "On the Minute Anatomy of *Pulex irritans*."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 11, 1870.

BIRTHS.

Births of Boys, 1257; Girls, 1209; Total, 2466.
Average of 10 corresponding weeks, 1860-69, 2224·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	875	874	1749
Average of the ten years 1860-69	739·3	726·7	1466·0
Average corrected to increased population	...	...	1613
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	40	...	8	2	9	...	2	6	3
North ...	618210	56	2	15	4	16	8	3	1	1
Central ...	383321	11	1	1	...	4	1	1	3	1
East	571158	71	3	9	1	15	...	1	4	2
South	773175	33	3	13	3	7	4	7	2	7
Total	2803989	211	9	46	10	51	13	14	16	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·715 in.
Mean temperature	41·6°
Highest point of thermometer	52·2°
Lowest point of thermometer	25·0°
Mean dew-point temperature	36·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·72 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 11, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Feb. 4.	Deaths Registered during the week ending Feb. 4.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2466	1749	52·2	25·0	41·6	5·33	0·72	1·83
Portsmouth ...	125164	13·2	93	42	55·2	24·2	4·34	6·33	0·58	1·47
Norwich	81787	10·9	58	37	50·2	20·0	37·8	3·22	1·72	4·37
Bristol	173364	37·0	121	70	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	46	50	52·5	28·5	41·7	5·39	0·99	2·51
Birmingham ...	378574	48·3	259	174	52·8	28·4	42·5	5·81	1·02	2·59
Leicester	101367	31·7	65	44	51·5	26·5	40·9	4·94	0·95	2·41
Nottingham ...	90480	45·3	60	45	53·3	27·5	42·8	6·00	0·97	2·46
Liverpool	526225	103·0	317	455	51·0	27·9	41·2	5·11	0·77	1·96
Manchester ...	379140	84·5	275	235	...	...	...	...	...	...
Salford	123851	23·9	109	61	51·2	29·2	41·7	5·39	1·79	4·55
Bradford	148030	22·5	113	89	51·0	29·8	41·6	5·33	0·72	1·83
Leeds	266108	12·3	170	139	51·0	30·0	42·2	5·67	1·12	2·84
Sheffield	255247	11·2	185	129	51·0	28·6	40·6	4·77	1·01	2·57
Hull	135195	38·0	100	44	50·0	26·0	38·1	3·39	1·04	2·64
Sunderland ...	103037	31·2	67	50	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	134	77	50·0	28·0	38·8	3·77	0·36	0·91
Edinburgh	179944	40·6	113	113	50·7	36·0	42·8	6·00	1·30	3·30
Glasgow	477627	94·3	364	356	51·0	31·6	40·6	4·77	2·30	5·84
Dublin (City, etc.†)	322321	33·1	208	199	55·5	27·0	14·5	6·95	0·87	2·21
Total of 20 Towns in United Kingd'm	7336941	34·4	5323	4158	55 5	20·0	41·3	5·17	1·07	2·72
Paris—Week ending Feb. 11	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Jan. 28 ...	622087	68	...	370	...	...	27·7	−2·38	...	...
Berlin—Week ending Feb. 11 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·72 in. The highest was 30·03 in. on Tuesday morning, and the lowest was 29·06 in. on Friday afternoon.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

By Appointment.

DR. ANGOVE'S ACCIDENT CASE.

Extract from LANCET, May 21st, 1870.

"The advantages are that it will contain instruments enough for almost any accident, together with lint, plaster, bandages, tourniquet, &c.; and by keeping this stocked and hung up in a handy place, you are ready to be off at any moment. It is easily carried on horseback. By taking the instruments, &c., out, you have an oblong box, in which you can put what you like, the instruments being only kept in by a leather strap and an elastic band, which do not take up any room in the case. In a mining practice one scarcely ever knows the nature of the accident he is called to. I, therefore, find it invaluable, being, 'with my case,' ready for the smallest cut or anything else, including an amputation."

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From the MEDICAL TIMES AND GAZETTE, June 4th, 1870.

"In these preparations the Patentees have succeeded in making the Oils not only palatable, but easily retained upon the stomach without rising. We have tried them in several cases with marked benefit, and in some instances in which the Oil in its natural state could not be retained. The mode of preparation is such that the medicinal properties of the Oil are unimpaired. To children in particular the Oils as prepared by Fox and Co. will be highly advantageous." See also "The Lancet," June 18th, 1870, and Jan. 28th, 1871; "Medical Press and Circular," May 4th, 1870, and Dec. 28th, 1870; "British Medical Journal," Nov. 12th, 1870.

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ORIGINAL LECTURES.

LECTURES DELIVERED
IN THE
PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

Lecture IV.—On the Colouring Matter of the Blood.
(Continued.)

Before we proceed to the important subject, on the consideration of which we have to enter to-day—the physiology of the circulation—we must complete the examination of the colouring matter of the blood, with which we were engaged at the close of last lecture. Of the four observations we proposed to make, three only were accomplished. I have still to show you that solutions of hæmoglobin, when subjected to the action of acids or alkalies, undergo a peculiar change of colour, and that this is owing to the formation of a new colouring matter, of much more stable constitution than hæmoglobin, insoluble in water or alcohol when neutral, but soluble in both when slightly acid or alkaline. This body is called hæmatin.

Observation XVIII.—Action of Acetic Acid on the Blood Colouring-Matter.

All the methods of obtaining hæmatin (which has been much longer known than hæmoglobin, and was for years regarded as the true colouring matter of the blood), are dependent on the splitting-up of the latter into hæmatin and an albuminous substance, either by the agency of acids or alkalies. The readiest agent for the purpose is acetic acid, the addition of which to any solution of blood produces the change of colour above referred to. The nature of the change, as in the case of those changes we observed last lecture, may be in part made out without the aid of instruments. The red of a solution of blood colouring-matter, acidulated with acetic acid, appears to be mixed with brown if you view it by reflected light; whereas, if you place a thin layer of it between your eye and the window, it looks distinctly greenish. If it is placed before the slit of the spectroscope, we find that the two bands which distinguish hæmoglobin have entirely disappeared, and that a new band has become visible in the orange, which lies to the red side of the sodium line, separated from it by an illuminated interval. If, then, we add to the acid liquid a quantity of ammonia sufficient to make it alkaline, and again investigate its colour, we find that the band is still there, but that it appears to have shifted somewhat nearer the sodium line. On restoring the acid reaction, the band returns to its former position.

A much more remarkable change of colour occurs if we add a reducing agent, such as that first employed for this purpose by Professor Stokes, which is prepared by adding excess of ammonia to a solution of protosulphate of iron and tartaric acid. You will find that when you treat solution of hæmatin with this liquid the single band in the orange will entirely disappear, and two other bands will become visible on the opposite sodium line, which at first sight seem to be similar to those of hæmoglobin. These are the bands γ and δ of reduced hæmatin, and are easily distinguished by their relative breadth and position, as you will best judge by comparing them with the diagram.

If dried blood is rubbed down with common salt to fine powder, and the mixture treated with glacial acetic acid, a solution is obtained, which yields crystals of hæmatin in chemical combination with hydrochloric acid, the characteristic form of which may be readily recognised under the microscope. These crystals have been long known by the name of their discoverer—Teichmann. The process constitutes what is called the hæmin test for blood-stains, and is regarded by Medico-legal authorities as a most reliable one. The great value of it consists in the fact that it may be applied to the minutest fragment of dried blood, and that the whole process may be performed under the microscope. To insure success, the greatest care must be taken that the dry blood and salt are intimately incorporated with each other. The mixture must then be spread on an ordinary microscopical slide, and covered with a thin glass, under which glacial acetic acid must be allowed to enter from the edge. The whole must be gently warmed, until bubbles begin to form, and then left to cool. On examining the preparation, you find the whole field more or less beset with intense-coloured rhomboidal crystals, in addition to which there are minute, irregular-shaped masses of albuminous material, and, of course, crystals of common salt which have not been dissolved.

Fig. 11.

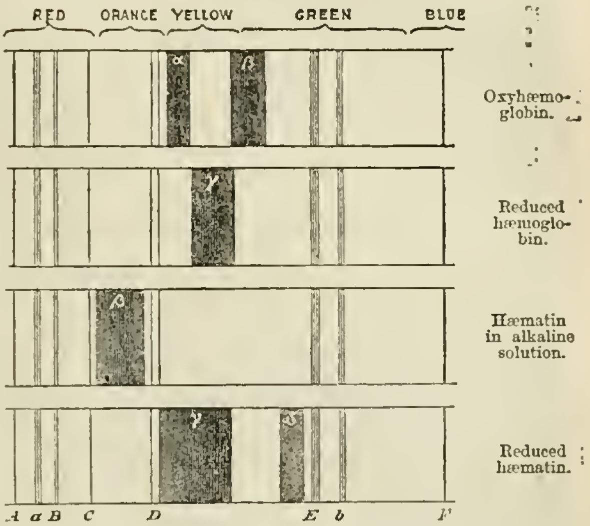

Fig. 11.—Diagram of the principal absorption spectra of the blood, showing the relation of the absorption bands to Frauenhofer's lines. The letters of the Greek alphabet on the bands are those by which they are usually designated.

Fig. 12.

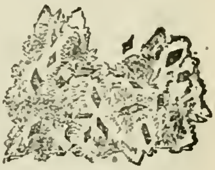

Fig. 12.—Microscopical hæmin crystals.

Hydrochlorate of hæmatin may be prepared in quantity by a similar process. For this purpose it is convenient to use blood corpuscles, collected by subsidence from defibrinated blood, diluted with 10 per cent. solution of salt, as you saw last week. The corpuscles must be freed as completely as possible from serum by repeated washing with salt solution, and then treated with a large excess of glacial acetic acid. The mixture is kept for several hours over a water bath till a purplish solution is obtained, which is then diluted with water, and left for weeks to crystallise. The crystals may be purified by again dissolving them in boiling glacial acetic acid, and adding water as before.

I show you here another remarkable derivative of hæmatin, first described by Hoppe-Seyler as iron-free hæmatin, and often called four-banded hæmatin, from the characters of its absorption spectrum. Its solution is obtained when hæmatin is treated with strong sulphuric acid, from which the colouring matter separates on the addition of water; it may then be dissolved in ammonia. It differs from hæmatin mainly in containing no iron, and in being insoluble in dilute acids. Although, to the unaided eye, the ammoniacal solution of this substance is indistinguishable from that of hæmatin, you will find that it acts on light very differently. Its spectrum shows three well-marked bands at various intervals between the lines C and E, and a fourth, less distinct, towards the violet.

On the Circulation of the Blood.

In commencing the study of the phenomena of the circulation of the blood, or in describing those phenomena, the order to be followed is to be determined on the same principle of relative simplicity to which reference has already been made. The circulation presents itself in its simplest form in the aorta and in the pulmonary artery. It is with them, therefore, that we must begin in our study of the systemic and pulmonary vascular apparatus respectively.

At the commencement of the period of relaxation of the heart—*i.e.*, of the period which intervenes between one contraction and its successor—the progressive movement of the blood in the aorta all but ceases. At that moment, and during the remainder of the time which precedes the bursting open of the aortic valve, the pressure exercised by the wall of the vessel on its contents is the only cause of the continuance of the blood-stream. During each ventricular systole this is aided and reinforced by the motion communicated to the blood by the contracting ventricle. Consequently, if—for the sake of facilitating our understanding of the matter—we assume the heart to be a mere pump, acting regularly, and discharging at each stroke an invariable quantity of liquid, we have the force by which the circulation is carried on at any moment expressed by the tension of the arteries; or if, on the other hand, we assume the tension of the arterial system to remain constant, then the quantity of work done varies with the velocity of the stream at the commencement of the aorta—in other words, with the quantity of blood delivered by the heart per minute.

This problem—the determination of the work done by the heart in a given time—is one of the most important in the physics of the circulation. To speak arithmetically, the work done is the product of the arterial reaction, and the quantity of blood discharged into the aorta by the heart in the same time. This being the case, it is evident that for the solution of the question two things are necessary; first, to measure the rate of flow of the blood through the aorta, and thereby (its calibre being known) the quantity of blood which passes through it in a given time; and secondly, to estimate the arterial tension by the measurement of the mean pressure existing in the arteries during the same period. As the experiments required for the first of these measurements are of great difficulty, I shall defer attempting to show them for the present, but will at once direct your attention to the methods employed for the measurement of the arterial pressure.

Observation XIX.—On the Method of Measuring and Recording the Arterial Pressure.

The arterial pressure, although in the mean remarkably constant, almost as constant as the temperature of the body, is subject to recurring variations—*i.e.*, alternate augmentations and diminutions, which are of three orders. Of these, the first is dependent on the rhythmical injection of blood into the arteries by the contraction of the heart; the second, on the influence which the respiratory movements, or rather the alternate acts of breathing, exercise on the circulation; the third, on augmentations or diminutions of what is called the *tonus* of the arteries, by virtue of which they are constantly undergoing changes of diameter, consequent on varying conditions of the nervous system.

In the measurement of the arterial pressure we have, therefore, two distinct problems. The first is the determination of the mean or average pressure, which, as I have said before, is almost as constant as the temperature in the same animal so long as it remains in a natural state; the second is the investigation of the variations due to the heart's action, to respiration, or to arterial contractility, respectively.

For the determination of the mean arterial pressure, and of those variations which belong to the second and third class, preference is to be given to the ordinary mercurial manometer, one branch of which is connected with the artery to be investigated, while the other is open. This instrument, as so applied, constitutes what Poiseuille designated by the term hæmadynamometer. It was employed in this simple form until Ludwig, in 1848, by his invention of the kymograph, laid the foundation of the more exact methods of investigating blood-pressure which are now in use. Just as the first method of Poiseuille originated in the ruder experiments of our countryman Hales, so the notion of the kymograph was suggested by a contrivance of Watts for registering the pressure of the steam-engine.

This contrivance consists essentially in causing a pen, fixed horizontally at the upper end of a vertical steel rod, the lower end of which rests by a floating piston on the surface of the mercurial column in the distal open limb of the manometer, to write the up and down movements of the column on a surface of paper progressing horizontally at a uniform rate by clockwork. Since the time that Ludwig first employed it, the contrivance has developed into a method now commonly known as the graphic method. For many years the kymograph was limited to the laboratories of Germany, and retained for the most part the same form in which it was originally introduced by Ludwig. To what extent it has been used in France, I do not know; but in England, at the time that the instrument which we are going to use this morning was constructed, there was, to the best of my belief, no other.

We will now proceed to make an observation of the arterial pressure in the rabbit, after which I will explain the construction of the instrument, the mode of using it, and the general nature of the results which are obtained by it.

The animal has been placed under the influence of chloral, five grains of which substance have been injected into the external jugular vein, and it is absolutely insensible. As a means of producing anæsthesia in animals, this substance is far superior to chloroform, partly because it interferes less with the play of the vital functions, partly because its influence is much more permanent, lasting for five or six hours without any repetition of the dose. It is the last fact especially which renders it so valuable.

With respect to the performance of what are called vivisections, I can assure you that I have as great a horror of them as any member of the Society for the Prevention of Cruelty to Animals. The rules with respect to them are these—First, no experiment that can be performed under the influence of an anæsthetic ought to be done without it; secondly, no *painful* experiment is justifiable for the mere purpose of illustrating a law or fact already demonstrated; thirdly, whenever, for the investigation of new truth. it is necessary to make a painful experiment, every effort should be made to insure success, in order that the suffering inflicted may not be wasted. For the question of cruelty depends, not on the absolute amount of suffering, but on its relation to the good to be attained by it. For this reason, no painful experiment ought to be performed by an unskilled person, with insufficient instruments and assistance, and in places not suitable for the purpose. Even under the most favourable circumstances it is only by the utmost care and forethought, joined to a certain amount of experience and skill, that physiological experiments can be made successful. It is in neglect of these precautions and qualifications that the real cruelty consists. To counteract it, the only effectual way is to establish physiological and pathological laboratories under proper regulations. The opponents of the legitimate use of vivisection should consider in how far their opposition may not tend to promote cruelty by compelling those who are engaged in physiological study to make their experiments in holes and corners, and without proper assistance or apparatus.

Every kymograph may be described as consisting of two parts—the recording apparatus and the manometer. In this instrument, as arranged for the present experiment, the manometer (A B D) retains the form which was originally given to it by Poiseuille. The vertical brass frame, to which it is fixed above and below, is supported by a horizontal arm, which is fitted to the upper surface of the case of the clockwork. In its distal limb (C) is a floating piston (B), and a rod of glass about nine inches in length, which is bent horizontally at its upper end (D). Behind the tube, and close to it, there are two vertical and parallel steel rods like knitting needles, fixed below to the vertical brass frame already mentioned, on which an extremely light rider, carrying a pen (C), runs freely up and down. If you watch this rider you will see that it follows exactly the movements of the mercurial column, for it is connected with the horizontal arm (D) by a silk cord. The use of the steel rods is to keep the movements of the pen steady and vertical.

In Professor Ludwig's laboratory, at Leipsic, the method of securing this is different, and perhaps in many respects preferable. The horizontal pen springs directly from the upper end of the piston rod, the manometer being fixed at a much lower level relatively to the cylinder; the point rests obliquely, just as an ordinary writing-pen does, against the moving paper. It is kept in contact by a plummet, the silk cord of which gently presses against its side.

The other limb of the manometer is connected by a tube with the artery. The way in which this is effected is a matter of considerable importance. The artery which is almost always selected in the rabbit is the carotid. The operative procedure is simple. The artery can be exposed with the greatest facility, and must be cleared of its sheath for about an inch, in doing which the most scrupulous care must be taken not to interfere with the vagus. Two ligatures must then be placed round the artery, one of which—that further from the heart—must be tightened. A clip having been placed on the artery about three-quarters of an inch above the ligature, the artery is then opened by an oblique incision, and a canula introduced and secured with the loose ligature, which should be looped ready beforehand. The canula is of a peculiar form. It is a T-shaped tube (N), either of silver, or of glass with a silver nozzle. When in use it is connected by the stem (M) with the tube leading to the manometer; by one arm (P) it is inserted into the artery, while the other ends in a vulcanite escape-tube (O), controlled by a pair of bulldog forceps. The interior of the tube (N) is divided by a septum which runs from end to end, the use of which I will explain immediately. You will observe that the connecting-tube (I) which unites the artery with the manometer is partly of vulcanite but principally of lead, the purpose of which is to obviate the modification of the effect by elasticity which would take place if the former material were used for the whole. Further, you will notice that the connecting-tube (K) communicates by a side branch (L) with a bottle which is suspended from the ceiling at a height of seven or eight feet from the table. This bottle contains a saturated solution of bicarbonate of soda. Before the connecting-tube (I K) is united with the artery-tube, the proximal limb of the manometer (excepting that part which is occupied by the mercury) and the connecting-tube itself must be filled with the same liquid.

Fig. 13.

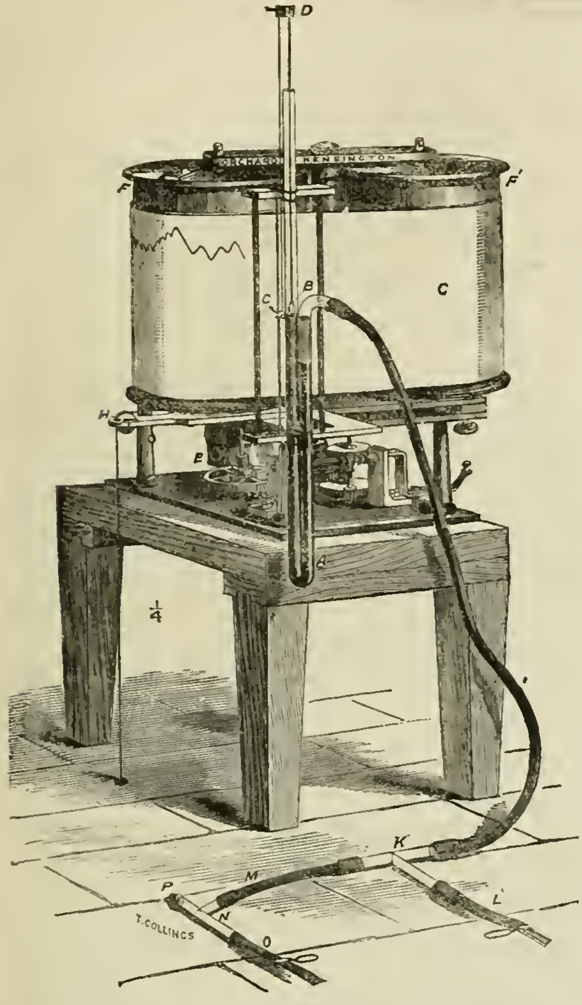

Fig. 13.—Dr. Sanderson's double-cylinder recording apparatus, with mercurial manometer attached. For description, see text.

Let us suppose this to have been accomplished, and that the communication of the system with the bottle containing soda solution on the one hand, and with the artery-tube (P) on the other has been established, and further, that the latter has been inserted in the carotid, and secured as I have explained. The whole system of tubes has been completely filled with solution of soda, in order that whatever blood may pass into it from the artery may be prevented from coagulating. With a similar view, it is of great advantage that a pressure should exist in the artery-tube before blood is allowed to have access to its interior, which is nearly equal to that usually prevailing in the arterial system; for otherwise, a large quantity of blood finds its way into the tube and coagulates, notwithstanding the soda solution. To avoid this accident, the liability to which is the chief source of failure in observations of this kind, is the purpose which the bottle suspended to the ceiling is intended to answer. So long as it is in communication with the manometer, it is obvious that the difference between the height of the two columns will correspond to the difference of elevation between the surface of the mercury in the proximal column and that of the liquid in the bottle—the former difference being to the latter as the specific gravity of saturated solution of soda is to the specific gravity of mercury.

Before removing the clip from the artery you will, of course, understand that the branch tube (L) is closed. If, however, in spite of all precautions, coagulation should occur in the artery-tube, it is easy to reopen it, at the same time relaxing the grasp of the bulldog forceps (O), and closing for the moment the communication with the manometer. By this means a stream of soda solution is made to flow through the artery-tube, and the clot removed.

As regards the recording cylinder, I have little to explain. The direction of rotation is from right to left. The right hand cylinder (F') is driven by the clockwork, but can be put out of gear when necessary. The other cylinder (F) is moved by a weight, the cord of which runs over the pulley (H). By this arrangement, the paper as it rolls off the one cylinder on to the other is kept constantly tight. On the right side of the clockwork is seen a handle by which it can be stopped.

The tracing we have obtained shows us that in this rabbit the mean arterial pressure is about five inches and a half, and that the expansion and contraction of the artery (in other words, the pulse) are indicated by very minute undulations, each of which corresponds in duration to $\frac{1}{180}$ of a minute, this being about the normal rate in the rabbit. But, in addition to this, you notice that there are larger waves, which correspond, not to the beats of the heart, but to the respiration—the valley and ascending limb of each of these greater undulations corresponding to inspiration, the summit and descending limb corresponding to expiration and to the pause.

The instrument we have been using is not the one which I myself prefer for purposes of investigation. That instrument I will first shortly describe, and then point out its practical advantages. It differs, first, in the form given to the manometer, and, secondly, in the mode of transmitting the movements of the mercurial column to the paper.

The manometer consists of two limbs of equal length, one of which, the distal (A), is much wider than the other near the top, the relation between the lumen of the one and that of the other being 1 : 12. Consequently, for each inch that the level of the mercury moves in the distal limb, it moves twelve inches in the proximal. The float which rests on the distal column is of boxwood; its under surface is concave, so as to fit the convex surface of the mercury. By the vertical rod it is connected with a light lever (E), two feet in length, which is counterpoised by a weight suspended to it on the other side of the brass bearing (A). At its opposite end the lever carries a pen, which writes on the moving paper. The only serious objection to this manometer is that the movement of the pen, instead of being rectilinear and vertical, is circular. Consequently, it is vertical only when the lever is horizontal, for which reason the fulcrum (E), which is constructed so as to slide up and down on the brass uprights, is so placed that the lever is horizontal when the height of the mercurial column corresponds to the average arterial pressure. Its advantages are, however, more than sufficient to counterbalance this one drawback. They may be enumerated as follows:—1. The working of the instrument is more accurate and reliable. The resistance offered by the narrow surface of mercury in the ordinary kymograph is so slight in proportion to the weight it has to support, and the friction so considerable, that, in spite of very careful adjustment, the floating piston often sinks below the mercurial surface during sudden ascents of the column, or lags behind it during its descents. In the lever kymograph this is never the case. However rapid the oscillations, the float never leaves the surface. 2. A pen carried at the end of a flexible lever accommodates itself to the paper much more readily than one which works in sliders, whence the tracing is finer, and the movement steadier. 3. The distance of any point in a tracing, as measured from a horizontal line on the paper which indicates that state of the manometer in which the two columns stand at the same level, is always in exact proportion to the difference in height of the two columns at the time to which the point corresponds; but the former (*i.e.*, the vertical measurement of the tracing) is very much smaller than the latter. Thus, in my instrument, an actual difference of pressure of one inch corresponds to one-third of an inch in the tracing. The advantage of this is that, even if the range of variation of pressure in the course of an observation is as much as eight inches, the whole of it may be recorded on a band of paper of very moderate width. After all, the best way of judging methods is by the comparison of results. The exact conformity to each other of the tracings obtained under the same circumstances by the lever kymograph affords the best proof that it is a satisfactory instrument.

Fig. 14.

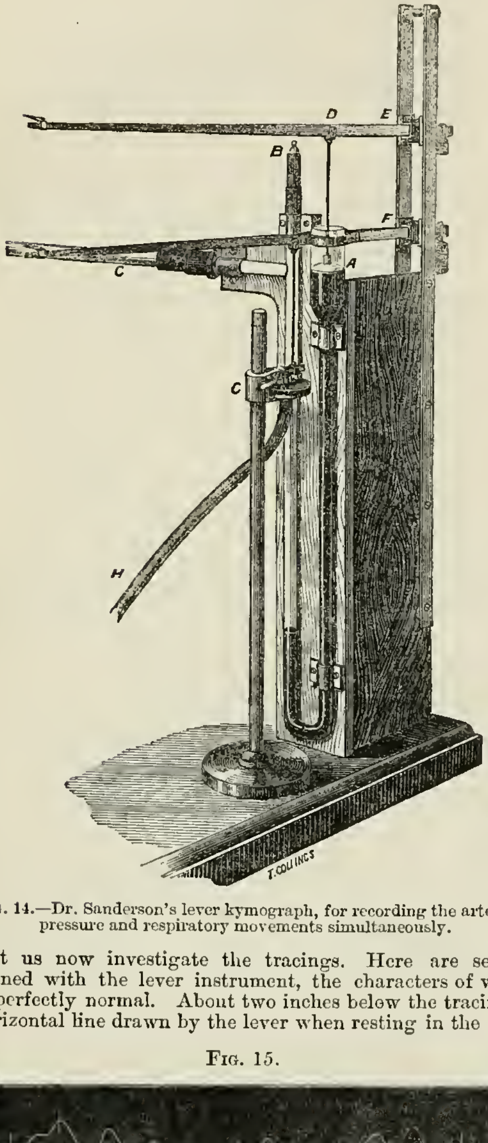

Fig. 14.—Dr. Sanderson's lever kymograph, for recording the arterial pressure and respiratory movements simultaneously.

Let us now investigate the tracings. Here are several obtained with the lever instrument, the characters of which are perfectly normal. About two inches below the tracing is a horizontal line drawn by the lever when resting in the position which corresponds to zero—*i.e.*, the position it assumes when the two columns in the manometer are of equal height. This zero line is called the abscissa. The distance between it and any point in the tracing measured vertically is equal to a quarter of the mercurial pressure which existed at the moment to which the point corresponds. Below the abscissa is another tracing, made by a second lever, which records the respiratory movements of the chest simultaneously with those of the heart. By comparing the coincident parts in the tracings, you see that the short wavelets correspond to the end of inspiration and the commencement of expiration, and the long ones to the pause between one respiration and its successor.

Fig. 15.

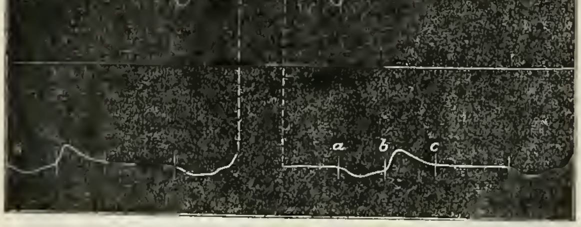

Fig. 15.—Tracings made with the instrument figured above. The arterial tracing is marked AP, the respiratory R. In the latter, the beginning of inspiration is indicated by the vertical stroke, *a*; of expiration, by *b*; of the pause, by *c*. The coincident points in AP are indicated by similar strokes. The break is made by removing both pens from the paper by the same act. The tracing corresponds to a period of ten seconds. The horizontal straight line is parallel to the abscissa. The distance between it and AP (about two inches) has been shortened to save space.

It is in these last that we can best study the individual form of the undulations. In every kymographic tracing, it is to be remembered that what is inscribed is not the actual movement of the artery, but the oscillations of the mercurial column. It is true that the latter are the immediate results of the former, and that the elevation of the distal column produced by each arterial expansion has some relation to the increase of lateral pressure, of which the expansion is the expression; but the curve drawn is not that of the artery, but of the manometer. The artery expands suddenly, the mercury rises comparatively slowly, so that at the moment it attains its acme the artery has already collapsed. Consequently, if the interval between each pulsation and its successor is very short, the extent of oscillation (or, as it is usually called, the excursion) of the manometer is relatively too small; and conversely, if the interval is much prolonged, the excursion is relatively too great. The descent of the column is almost entirely independent of the collapse of the artery. It falls back to equilibrium, and describes a curve, which (as you may learn by comparison) has the same characters as that made by the lever in returning to its original position, by whatever way—as, *e.g.*, by squeezing the connecting-tube—the equilibrium of the manometer may have been momentarily disturbed.

This being the case, it is easy to understand that no conclusion can be derived from observations with the mercurial manometer, either as to the duration of the effect produced by each contraction of the heart, or as to the relative duration of the periods of expansion and collapse. The use of the instrument is limited to the investigation of the mean pressure, and of those varieties of pressure of which the periods of recurrence are long enough to prevent their being interfered with by the proper oscillations of the instrument.

If we desire to obtain a record of the exact interval of time between the close of one arterial expansion and the commencement of the next, or, what amounts to the same thing, to record the complicated succession of variations of arterial pressure which constitute an act of pulsation, precisely as they occur, as regards order, duration, and degree, the instrument with which we write must be of such a nature that it transmits the movements communicated to it without mixing with them any movements of its own. The most perfect of such instruments is the so-called *Federkymographion* of Professor Fick. I regret that I cannot show it you, and must therefore content myself with describing it. It consists essentially of a C-shaped hollow spring of thin metal. The cavity of the spring is filled with spirits of wine, and communicates with the artery by means of a connecting-tube containing carbonate of soda. As the pressure increases, the crescentic spring tends to straighten, and *vice versâ*. Hence, if the proximal end is fixed, the distal end performs movements, which follow exactly the variations of arterial tension. These movements are of very small extent, but they are so exact that the slightest and most transitory variations are expressed by them. Before they are written on the cylinder they must be enlarged by a lever. As I have never used this instrument, I cannot speak of its practical advantages.

In Fick's instrument the variations of intravascular pressure to be recorded are converted by the C-shaped spring and the lever arrangement attached to it, into rectilinear movements. A similar conversion takes place in every artery, the elastic wall of which expands with every increase of pressure on its internal surface, and contracts with every diminution of it. In other words, any point taken on the surface of an artery is constantly performing orderly successions of rectilinear movements in opposite directions, alternately receding from and approaching to the axis of the vessel. These arterial movements are evidently of the same nature as those of Fick's hollow spring. Consequently, if we could transmit them to paper in a magnified form, we should obtain a tracing of the same character as that which is yielded by his instrument, the difference being, that whereas in the case of the spring the resistance to expansion is constant, and thereby the pressure required to overcome it known, the elastic resistance of the artery is subject to unknown variations.

It is on this principle that the instrument invented by Professor Chauveau, and now commonly known as Marey's sphygmograph, is based. Its purpose is to measure the complicated succession of alternate enlargements and diminutions which an artery undergoes whenever blood is forced into it by the heart, to magnify these movements, and to write them on a surface progressing at a uniform rate by clockwork. The way in which this is accomplished, and the significance of the records obtained, will be considered in next lecture.

ORIGINAL COMMUNICATIONS.

ON SEWAGE AND PARASITES,

ESPECIALLY IN RELATION TO THE DISPERSION AND VITALITY OF THE GERMS OF ENTOZOA(a).

By T. SPENCER COBBOLD, M.D., F.R.S.,
Correspondent of the Academy of Sciences of Philadelphia.

After the considerate manner in which my previous paper was received by the Association, I now venture to submit a few further details, which may be regarded as supplemental to the data supplied by the former communication; and in selecting the present order of facts, I have been guided partly by the character of the remarks which fell from Mr. Hope, Mr. Smee, Dr. Hawkesley, and Mr. Michael, and partly by the suggestions kindly offered by Dr. Buchanan, Dr. Stallard, and others, after the close of the last meeting.

In view of determining the question at issue, it will tend to clear the ground if at the outset I observe that the sort of practical evidence most needed is precisely that which cannot be readily obtained. Clearly, the examination of the flesh of beasts, reared either upon, or by means of fodder derived from, sewage-irrigated meadows, would, if conducted by an experienced helminthologist, yield the required information. When Mr. Hope tells us that a cow fed for four years on his sewage farm competed for a prize at last Smithfield show, that fact does not by any means satisfy me as to the freedom of the animal from measles and other entozoa. As I have, in effect, already urged, it is useless to talk about the absence of proofs of parasitism, as derived from sewage, when we have no adequate means of getting at the evidence. Not only is it necessary to examine, post-mortem, animals which have been secretly hurried off to slaughter-houses as soon as they have displayed symptoms of unhealthiness, but we must also scrutinise the meat derived from apparently healthy beasts sent direct from sewage farms. It is all very well to say that meat for our markets is efficiently inspected. That it is intentionally so in all, and actually so in some instances, I do not doubt; but that the majority of our inspectors possess the requisite knowledge of entozoal forms, guaranteeing absolute efficiency in respect of their duties, I emphatically deny. Not only am I constantly interrogated respecting dubious appearances in the flesh of animals used as food, but an inspector in one of our largest cities has applied to me for specimens, to enable him to identify the cystic entozoa of cattle.

As regards the amount of egg-dispersion by means of sewage, I am free to acknowledge the impossibility of acquiring data capable of affording even an approximatively correct notion. On this score I do not care to insist upon the acceptance of conclusions which, for myself, only take up the position of strong convictions. If I express the opinion that we have a daily entry of 270,000,000 of the ova of intestinal worms into the metropolitan sewage, I can offer no proof as to the correctness of this surmise; or if I go further, and say that four times that number would probably be nearer the mark, my convictions are not disturbed by any counter-assertion to the effect that the event is impossible. After all, allowing the numbers to amount to 1,080,000,000, that would, I reckon, only give us an average of one egg in seven ounces of sewage. Let those, therefore, who demand microscopic evidence as to the existence of entozoal germs in sewage, consider the amount of skill, time, and patience requisite for the detection of the presence of an organic particle, having a diameter of $\frac{1}{850}$ of an inch, and being concealed in such a relatively huge mass of offensive material.

Into this question of dispersion, I cannot at present go further; besides, it must be obvious that the consideration of the vitality of the eggs of parasites, under varying conditions, is the point to which our attention should be primarily directed. Now although, as far as I am aware, no investigations on this head have ever been made with especial reference to the sewage question, we are by no means destitute of facts of the highest practical value in this relation. My only regret is that the facts I have now to bring forward must be presented in so restricted and crude a shape. At all events, sufficient will be said to show the fallacy of drawing general conclusions from isolated data.

Bilharzia Hæmatobia.—Whilst the eggs of this entozoon are still in the urine, there appears to be neither the power nor the inclination on the part of the embryo to escape from its shell; yet from the moment when the eggs are removed from the urine and placed in water, a series of changes are commenced and carried on with extraordinary rapidity. In less than two minutes I have seen an hitherto motionless embryonic mass alter its form, become violently agitated, and burst out of its envelope in the condition of a free swimming animalcule. Commonly, more time is required, especially if any appreciable quantity of urine is allowed to remain in the new medium. Thus, to record only one observation:—On August 21 last, I placed a drop of fresh urine, containing twelve eggs of *Bilharzia*, on a slide under the field of a one-inch objective glass; and to this I added about eight drops of drinking-water. The first embryo escaped at the expiration of 17 minutes, whilst two more emerged in another minute; the fourth embryo appeared at the end of the 26th minute, the fifth in 28, the sixth in 32, the seventh in 34, the eighth in 37, the ninth in 38, the tenth in 40, the eleventh in 43, and the twelfth in 46 minutes respectively.

Omitting, purposely, a multitude of interesting details, I am bound to add some other particulars; the more so, perhaps, because the results were so much at variance with my expectations. Thus, the strength and vigour of the escaped larvæ appeared to depend upon the relative quantity and purity of the water in which the larvæ were immersed. In weakly diluted urine they soon perished, and even also in water where only a small quantity of decomposed vegetable or animal matters had been introduced. On August 16 I placed about 1000 eggs in a quart of clean water, to which less than a drachm of urine had been likewise added. In forty-eight hours not a single living embryo could be found. In fact, I subsequently ascertained that I could not keep the embryos alive for twenty-four hours in any water in which I had accidentally or otherwise introduced the smallest trace of mucus, blood-corpuscles, urinary crystals, or decomposing matter of any kind. All sorts of reagents speedily killed the larvæ. Mere discoloration by carmine solution, or by a drop of permanganate of potash, in the form known as Condy's fluid, instantly caused them to assume grotesque and unnatural shapes—death sooner or later following from the disintegration and resolution of their bodies into minute sarcode masses. Still more rapidly poisonous effects were produced by the addition of a little sherry or alcohol, though the strength of the latter was not more than one part of proof spirit to fifty of water. I will only further add that the development of the larvæ was equally well accomplished in distilled water, and likewise, also, in brackish and sea-water. It may be said, indeed, that the addition of salt water revived the ciliated embryos when they were on the point of expiring in any non-saline medium.

As regards *Bilharzia*, therefore, the above data, now publicly brought forward for the first time, undoubtedly appear to favour the notion that little harm can result from sewage distribution—so far, at least, as parasitism is concerned. For the sake of those who will, perhaps, have derived some comfort in this matter, I am sorry, therefore, to be obliged to add that our experiences with the eggs and larvæ of other parasites placed under similar conditions give results which are in many respects precisely the opposite of those just recorded. For lack of time I cannot possibly do justice to this view of the case, but must content myself by offering the following fragmentary data:—

Ascarides.—The eggs of the common round worm, *Ascaris lumbricoides*, have been kept alive by Dr. Davaine for a period of more than five years. I have myself watched their development in fresh water through all the stages of yelk-segmentation up to the stage of an imperfectly organised, coiled, intra-chorional embryo, and have kept them in the latter condition for a period of three months. Davaine administered some of his five-year old embryos to rats, and had the satisfaction of finding a few of these eggs in the rodents' fæces, with their embryos still living, but striving to emerge. He also gave eggs

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(a) Read February 18, 1871.

to a cow, and introduced others into the stomachs of dogs in small linen-covered flasks. As a general result, it may be said that the embryos escaped their shells, but those eggs in which the yelk-segmentation had not arrived at the early embryonal stage remained undigested.

So far back as 1853, Verloren reared coiled intra-chorional embryos in the eggs of *Ascaris marginata* within a period of fifteen days, in distilled water. I have also reared the embryos of this species in fresh water, and have kept them alive for a period of nearly a year and a half, at the expiration of which time, and during the warm weather, some few of them succeeded in making their escape.

According to Davaine, and speaking generally, the eggs of many nematode species will readily retain their vitality though long exposed to dryness, but their yelk contents will not go on developing during this period of exposure. In the case of *Ascaris tetraptera* of the mouse, however, embryonic formation goes on in spite of the absence of external moisture. He has noticed the same thing in the oxyurides of rodents. Dryness does not even destroy the eggs of *Ascaris lumbricoides* and *Tricocephalus dispar*. It would seem, in short, that the eggs of nematodes, which normally take up their residence in cats, dogs, and the carnivora which reside in arid regions or deserts, will develope embryos in ovo without a trace of moisture. Davaine thinks it is not necessary that nematode embryos should pass through any intermediary bearer, and he believes that they are often directly transferred to the stomach of their "hosts" whilst adhering in the form of an impalpable dust to the coats of their bearers, whence they are detached by the animals' frequent habit of licking the fur.

With the eggs of the *Ascaris megalocephala* of the horse, I have performed numerous experiments. I have reared the embryos in simple fresh water, and have found them during warm weather escaping before the expiration of five months. I have also succeeded in rearing these larvæ in pond mud, noticing, at the same time, that after their exclusion they grow more or less rapidly up to a certain point, after which they appear to stop. The addition of horses' dung to the soft wet mud in one case, and of cow's dung in another, neither appeared to advance nor retard the process of embryonal formation so long as the embryos were enclosed in their shells. On the other hand, when I reared the embryos in simple horse-dung, purposely kept moist, they attained a decidedly higher degree of organisation than those reared in wet mud or water. Having watched hundreds of these particular larvæ under varying conditions, I have come to the conclusion that, after their escape from the egg, their activity, growth, and strength is most marked whilst living in those media which happen to be the most turbid and impure.

One of the most desirable aims experimenters have in view is to get a true conception of the developmental relations of the little threadworm, which, I believe, infests some three millions of the inhabitants of this country. I have experimented largely with this entozoon also, and I have tried in vain to rear it in a monkey. I naturally selected this animal, thinking that the conditions (in view of man's asserted relationship and antecedents) might turn out to be eminently favourable. However, I only obtained negative results; and as regards the rearing experiments, under other conditions I only once succeeded in producing that vermiform stage of embryonal development which, as is now known from Vix and Leuckart's researches, succeeds that of the tadpole-shaped condition. I did not, in short, expose the eggs in water to a sufficient increase of temperature. In this connexion, Leuckart remarks ("Die Menschlichen Parasiten," Band ii., s. 326)—"One only needs to expose the eggs of the human threadworm to the action of the sun's rays in a moistened paper envelope, when already, after the space of five or six hours, the tadpole-shaped embryos become slender, elongated worms, which are not altogether unlike the sexually mature oxyurides in form, displaying under the warmth rather lively movements." Leuckart also finds that, in cases where the eggs have remained for a lengthened period in the intestinal canal, the embryos are capable of developing into this elongated or vermiform stage whilst still in the human bearer. Speaking of these intra-chorional embryos, he says—"Not only are these elongated embryos found in the fæces, but also in the mucus of the rectum above and around the anus."

To cut the matter short, Leuckart holds, in partial opposition to Vix, that, generally speaking, or under ordinary circumstances, the vermiform larvæ escape from their egg-shells when the ova have been swallowed by some new bearer. In other words, we take in the eggs either with food or with drink, or in some other way; and it then follows that, if their embryonic contents have acquired the vermiform stage, the gastric juice, aided by the struggles of the enclosed embryo, will ensure the escape of the larva. For myself, I will only say that, for the ultimate development of the mature worm, I cannot yet follow Davaine and others, and so disallow the necessity either of an intermediary animal or vegetable bearer, or, failing these, the assumption of a higher larval stage, either in moist earth, soft mud, or open waters. The question is by no means settled.

I may here add, parenthetically, as it were, that during my attempts to rear oxyurides in rotten apples and pears, I fell in with two species of *Anguillulæ*, severally belonging to the genera *Aphelenchus* and *Plectus* established by Dr. Bastian. I allude to them here merely in reference to their extraordinary tenacity of life. Thus, although these free nematode worms were perfectly dried up in portions of fruit which had been kept for several days in a hard and even brittle state, they revived and resumed their wonted activity "after soaking for a few hours in water."

At the risk of doing positive injustice to a truly large and complicated subject, I must now bring these brief and, I fear, somewhat desultory remarks to a close. As regards the tæniæ, it is notorious that they are supplied with remarkably thick egg-shells, and, were this not the case, it is difficult to understand how their enclosed and delicate six-hooked embryos could long survive their expulsion from the host and from the proglottids. How long they are able to retain their vitality when dispersed by sewage and other means is a point worthy of further inquiry; but, meanwhile, taking into consideration various data derived from indirect sources, I strongly suspect that Küchenmeister was not far wrong when he surmised "that the eggs might lie through the winter in ice and snow, be carried about in the water for months by the stormy weather of spring, and yet at the expiration of this period develope their brood as soon as they have arrived at a suitable intestine." Into cesspools and drains, as he elsewhere says, "the tapeworms of the human subject evacuate their eggs; the eggs are then thrown upon grass, roots, and other vegetable matters, along with liquid manure, and they are swallowed by pigs, which wallow in such filth." He might, also, have added that, on sewage farms, the cattle likewise must needs come in for their share of these measly-meat producing germs.

NOTES ON THE ENGADINE.

By R. WHITFIELD HEWLETT, M.D.

St. Moritz and its Neighbourhood.

Much has been written about the Engadine, its climate, its air, its waters, and its baths, but much has been said that would, perhaps, have been better not said, and much left unwritten that might with advantage have been communicated. At the present time, there seems to be a danger of the Engadine, especially of St. Moritz, being over-rated on the one hand, and not sufficiently appreciated on the other. It will be my object, in this and in my subsequent letters, to describe St. Moritz as it is—its merits and its deficiencies; to draw, as far as possible, with dispassionate hand, a picture of the relative importance of its air and its waters, of the class of cases for which it is and for which it is not adapted, and to suggest the steps which ought to be taken by the communal authorities, and by the landlords, to improve a state of things that is most defective.

The valley of the Engadine, as many of your readers are aware, is situated in the Canton Grisons, the most eastern canton of Switzerland. Commencing on the Italian side at Maloja, a small hamlet situated at the upper extremity of the Val Bregaglia, it extends from south-west to north-east, and terminates at Martinsbrück, on the frontier of the Tyrol. Its breadth varies from half a league in the lower Engadine to more than a league in some parts of the upper valley.

At once the highest and largest valley in the Alps, it is girt by mountains, on the north-west and south-east, which, in beauty, grandeur, and height, can compare with the better-known mountains of the Oberland. The Rhœtian Alps, on the north-west, attain an altitude varying from 9000 to 11,000 feet, while to the south-east the Bernina rears its snowy crest to a height of 13,500 feet above the sea. The height of the valley at its Tyrolese frontier is 3400 feet, and at St. Moritz, its culminating point, is 6100 feet.

The climate and products, no less than the character and habits of the inhabitants, divide the Engadine naturally into two parts, called respectively "the Upper" and "the Lower"

Engadine. The former, with which alone we are at present concerned, extends from Maloja on the south-west to Capella on the north-east. Through it runs the sparkling Inn, which, fed by the beautiful lakes of Sils, Silva Plana, and St. Moritz, rushes on with ever-increasing force to Innsbruck, the capital of the Tyrol. The climate is severe. The culture of corn, and, indeed, of almost every other crop, is unknown; occasionally meagre fields of potatoes, oats, and rye are met with. The larch and the *Pinus cembra*, a tree but little found in any other part of Switzerland, flourish here to a height of even 7000 feet. The snow-line does not extend below 9450 feet, while on Mont Blanc 8900 feet, and on the Pyrenees 8400 feet are considered respectively the extreme limit.

There are five villages in the Upper Engadine that deserve notice—viz., St. Moritz, Silva Plana, Campfer, Samaden, and Pontresina. Of these, St. Moritz is the highest and most important. The ever-increasing reputation of its waters, its air, and its scenery has brought the whole Engadine into notice, and has reflected fame upon the villages that cluster round it.

Silva Plana, situated at the foot of the Julier, 5958 feet above the sea, is the first village of the Engadine that greets the traveller on his descent from the Julier Alp. Well sheltered from the north and north-west winds by the uprising mountain, with a number of charming walks and views, Silva Plana offers a delightful residence for those who dislike the noise and bustle of a large establishment, and do not wish to drink the waters or take the baths of St. Moritz, which are four miles distant. The hotel (Poste) is quiet and comfortable, and has the advantage of being managed by a lady who speaks English, and is most attentive to the wants of her guests.

Campfer.—From Silva Plana the road gradually ascends for about two miles to the hamlet of Campfer, where there is a first-rate hotel, the Julier. Situated about 6000 feet above the sea, protected from the north and north-easterly winds, within easy reach of the Kurhaus, either on foot through a picturesque pine wood, or by omnibus, which plies to and fro several times in the morning, Campfer is about the same distance from the baths on their southern side, as St. Moritz is on their northern, and in my opinion ranks next to the village of St. Moritz as a desirable residence for those who come to the Engadine to derive benefit from the air and water.

Samaden.—Issuing from the northern extremity of the St. Moritz lake, the Inn falls through a rocky wood, the eastern shield of the village of St. Moritz, to the level of the valley in which Samaden, the most flourishing village of the Engadine, is situated. The valley, widened here by its junction with the Val Pontresina, lies 430 feet below the Dorf St. Moritz, and is exposed to the north, south, and east winds, which often sweep through its plains with great violence. Its soil is damp and swampy, and a cloud of vapour often hugs the immediate neighbourhood of the river. Starting early one morning from St. Moritz to ascend the Piz Lanquard, I noticed that Samaden was quite hidden beneath a thick cloud of mist. The white spire of the church alone rose above the vapoury shroud to tell of the life below it. Samaden is well protected from the north, but its exposure to the east and south winds, its proximity to the river, which often overflows its banks, the swampy soil, render it, as a residence for the delicate, undesirable in summer and impossible in winter. Though ague is said to be very rare amongst the natives here, one case has come under my notice.

A delicate gentleman slept at Samaden for two or three nights with his window open, in a room looking on to the river and the plain. A few days after he came under my care with decided symptoms of malaria poison, which required the free exhibition of quinine. The weather just before had been intensely hot, and I doubt not the drying of the swampy, boggy soil under intense solar heat had generated the malaria poison.

The Bernina hotel enjoys a great reputation for its excellent accommodation.

Pontresina, situated in a narrow valley running at right angles to the Inn, is too much exposed to the north-west winds, too near the glaciers, and too draughty to be suitable at any season for a delicate person. But it is a delightful residence for the strong and active, as it is the centre of almost all the mountain excursions. The Kreuz, Krone, and Hemboch are the best hotels at present.

St. Moritz.—Under the head of St. Moritz are included the Dorf or village of St. Moritz, and the vast establishment of the Kurhaus situated around the source of the springs.

The village, 300 feet above the level of the Inn, and 6100 feet above the sea, lies along the slope of the Piz Nair range, which, rising to a height of 10,000 feet, completely shelters it from the north and north-west winds, while some gently rising ground to the east, and a thick pine wood which clothes the hill as it falls to the level of the Inn, break the force of the keen winds that sweep the valley in which Samaden lies.

The Kurhaus, 300 feet below the village, and only a few feet above the level of the Inn, is situated in a narrow part of the swampy valley, and is but ill adapted from its position for the delicate. Often in early morning a shroud of mist may be seen hovering above and around the baths and hotel. The soil upon which the latter was built was so swampy that piles of wood and stones had to be sunk before its foundations could be laid, and the grass around is of the peculiar yellowish-green colour so familiar to the inhabitants of boggy soils. The mountains, uprising on either side, narrow here the breadth of the valley, and create a draught, from which the village is free, conditions which seem to me to obviate in great measure the influence of perhaps the most life-giving element of this district—the pure dry atmosphere.

The Village.—There are only three hotels I can recommend in the village—the Külm, Pension Suisse, and the Post. The other hotels, and even the Post, are principally frequented by Germans and Italians, and are not adapted to the wants of English invalids.

The Food.—We refer to the reports of "starvation at St. Moritz, and the impossibility of obtaining good food," only to contradict them. The fare at the Pension Suisse is very good, and at the Külm, on the whole, plain and good. Travellers who cannot be happy without the delicacies of a French *cuisine* had better, as a rule, keep away from an Alpine village. It is amusing, however, to see how gradually the keen mountain appetite overcomes the fastidiousness of the *bon vivant*, how little by little the fleshpots of London and Paris are forgotten, and our dainty friend awakens to the consciousness that *café au lait* without chicory, delicious butter, pure milk, a good steak, and Alpine mutton may be, on the whole, more agreeable to that long-suffering and much-abused organ—the modern stomach—than are the *récherché* dishes of a Parisian *cuisine*.

Heating.—One thing, however, most essential to the comfort and health of the traveller is, we must confess, conspicuous only by its absence—viz., a proper system of heating the rooms. In a climate in which snow may fall during any month of the year, and the thermometer fall for many nights, as during the past week (August 21 to 28), to within a few degrees of freezing-point, it is needless to say the changes of temperature are very great. Many of the rooms are without any heating apparatus. Some have a stove, but the trouble of lighting it, the dry heat, and the smell of the newly-painted iron is frequently a greater trial than the cold. The *salle à manger* and *salon de lecture* at the Külm are badly heated and badly ventilated, and the atmosphere injurious to an invalid.

Drainage.—St. Moritz, possessing the greatest facilities for a good system of drainage, is one of the most badly-drained villages in Switzerland. The drainage is partly by water and partly dry, and, as usual, the half system is worse than no system at all. One house has a free supply of water, another an open cesspool which poisons the whole neighbourhood, especially after rain; a third uses Moule's earth system. The main drain, as it passes through the principal street, is untrapped, and the smell is sometimes horrible, while another much-frequented walk is made at times almost intolerable by an open sewer.

We cannot too strongly urge the importance of a thoroughly well organised system of heating and drainage. The rooms must be properly protected against vicissitudes of weather, or the invalid and health-seeking traveller will find an Alpine resort less elevated and more congenial; and the village must be well drained, and the houses well ventilated, or the English traveller will seek in other valleys a spot without the paradox of the most life-giving and purest air in the world contaminated by the emanations of open sewers and the foul odours of the stable and cowshed.

Private lodgings are difficult to obtain, unless ordered some time before the season begins, and very expensive: 30 fr. and 40 fr. a day are often asked for three moderate-sized rooms. They do not supply *pension*. Dinner, if required at home, must be brought from a neighbouring hotel. The erection of more houses will, however, tend to lower the exorbitant prices now asked. I have only one more drawback to point out, with its appropriate remedy, to the landlords of St. Moritz. After taking a bath, it is most important that the bather should not be exposed to a chill or to undue fatigue: in some cases it is desirable to go to bed for a short while. The distance of St. Moritz and of Campfer from the baths, especially in cold weather, is a difficulty that might be very much obviated by a well-regulated service of *chaise-à-porteur*, or covered sedan, to convey bathers from the bath to their hotel.

If these wants be remedied (and how simple the remedy!), St. Moritz need fear no competitor in the Alps. It is impossible to imagine any spot that could offer a more varied combination of natural beauty. The sublime, the beautiful, whatever tends to excite in the soul of man the most exalted ideas of a Creative Power, on the one hand, and to instil into him, with that strange, mysterious influence that Nature only possesses, the keen instincts of life and health, on the other, are found in this favoured land. The softer loveliness of Italy—the rich blue sky, and the sparkling green of the placid lake—mingles here with the colder beauty of a sterner climate, and, in the silent majesty of the rugged peaks, in the icy grandeur of the eternal snows, in the pine-clad slopes reflected in waters of emerald hue, presents a picture of which the eye never wearies, and from the contemplation of which the whole man returns refreshed, invigorated, and ennobled.

THE EXTERNAL APPLICATION OF CARBOLIC ACID IN CASES OF POISONED WOUNDS.

By PATRICK O'CONNELL D'OYLE, L.K.Q.C.P.I.,
Assistant-Surgeon Royal Navy.

The successful treatment, in my hands, of poisoned wounds by the application of carbolic acid to them, leads me to say a few words on the subject. When we come to consider the excessive danger to the patient, and the mortality in cases of poisoned wounds, it becomes our bounden duty (in my opinion) to make ourselves familiar with every mode of treatment, no matter how trivial, likely to be useful and successful. Various as are the modes of their treatment, local and general, the fatal results frequently attending these clearly demonstrate to us that much has still to be learned relative to them. I purpose giving my experiments on fowls relative to the treatment of poisoned wounds by carbolic acid.

During the Niger Expedition of 1868, being in Medical charge of H.M.S. *Investigator*, and having to pass through a hostile country, where poisoned arrows and spears were the principal offensive weapons, I procured several freshly-poisoned arrows. Now, taking some fowls, I stripped the feathers from their thighs, and ran the heads of the arrows through their most fleshy part. The arrow was allowed to remain in the wound rather more than one minute—in some instances as long as ninety seconds. As I withdrew the arrow, I poured liquefied, undiluted carbolic acid into the wound, taking especial care to make it come into contact with every portion of it. A small bandage was now applied over the wound, and the fowls isolated. On one-half of the fowls operated upon—or, more properly speaking, inoculated—no carbolic acid was used, and I found every one of these die in a space of time varying from one to twelve minutes. On the other hand, those I used the acid with lived, and seemed not to suffer from the effects of the poison, although a great deal of discoloration was visible around the wound for several days. This gradually disappeared. None of the fowls that died did so until the withdrawal of the arrow and the exposure of the wound to the air. I must confess that my experiments were very limited, but I cannot attribute to chance the uniform results obtained, and therefore I am led to recommend the application of carbolic acid to poisoned wounds.

The following experiment I also made. Having scraped the superficial coating, down to the iron (but taking care not to take any of this), from the head of a poisoned arrow, I dissolved it in ether, and, on adding carbolic acid to this solution, a white precipitate, somewhat resembling albumen precipitated from urine by nitric acid, was thrown down. I inquired very minutely of the native interpreters as to the mode of poisoning their arrows, and the treatment adopted if a native be wounded by one of them. I was informed that some plant, whose name or appearance I could not find out, was obtained, and a decoction of it made; a snake's head reduced to powder was then added to the decoction, the whole boiled down to the consistence of a syrup, smeared upon the arrow-heads and allowed to dry. I am aware that the poison used for spears, arrows, etc., in the towns bordering on the River Niger has been asserted to be a purely vegetable one, but my inquiries lead me to think this is a mistake. I was most particular in seeking and obtaining information on this subject, and in every instance my informants spoke of a snake's head reduced to powder as being added to the infusion. The snake must have been of a poisonous character, and recently killed. Now, as to the treatment adopted. If a native be wounded by a poisoned weapon, some of their antidote is chewed and as quickly as possible applied to the wound, and then a dose of it is swallowed; this, I believe, invariably acts as a powerfully stimulating emetic, and it is upon this action they place the chief reliance. "Suppose he no puke proper he die," said the native interpreter to me; in fact, their experience has taught them the emetic action is the one to be relied on. Human excrement is sometimes used instead of a better antidote, but they only apply it to the wound. Their antidotes, with the exception of the last-named, are of a vegetable character. The poison takes but a very short time to kill. Several natives, who were wounded while we were destroying a village, were unable to reach their boat, although it was distant only a few yards.

In conclusion, I would recommend, in cases of poisoned wounds, the instantaneous application of strong carbolic acid to the part, every portion of the wound being made to come in contact with it; the immediate administration of a strong stimulating emetic, and the subsequent use of stimulants; and suggesting that the value of carbolic acid may depend on its neutralisation of the poison, and also its power of preventing decomposition, I may express a hope that this plan of treating poisoned wounds, which, as far as I am concerned, I have never read or heard of before, may prove serviceable on future occasions; and if so I shall consider myself amply rewarded.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

KING'S COLLEGE HOSPITAL.

OPERATIONS.

Ligature of the Subclavian Artery (by Sir William Fergusson)—Ligature of the External Iliac Artery (by Mr. Henry Smith.)

The operating theatre at King's College Hospital was crowded last Saturday, February 18, for it had been announced that Sir W. Fergusson was to tie the subclavian artery, and the rare opportunity of witnessing this operation attracted, besides many students from other schools, not a few Hospital Surgeons. After Mr. Henry Smith had obliterated some varicose veins in a man's leg, the patient with axillary aneurism was brought in, at once placed under chloroform, and the operation commenced. Owing to the depth of the vessel, and the fact of some of the fibres of the edge of the scalenus anticus being spread over it—points referred to by the operator in his subsequent remarks—the proceeding was somewhat unusually difficult, and the first single incision, free though it seemed to be, required to be enlarged more than once before the vessel was sufficiently exposed for deligation. There seemed to be no special trouble about passing the thread round the artery. An ordinary aneurism-needle was used, and passed from before backwards. When, by slightly elevating the vessel, and compressing it with the forefinger, it was found that the pulsation in the aneurism was completely controlled, the usual knot was tied, and made secure by two additional turns of the thread. Both ends of the thread were then tied together, and allowed to hang out of the wound, which was sewn up.

In his subsequent remarks upon the operation, Sir William stated that the patient was aged 53, and had been a sailor up to a very recent date. About three or four months ago the man thought that he had "ricked his arm-pit," an exceedingly likely occurrence amongst sailors, and since that time he had perceived a pulsating swelling in the axilla. Sir William had kept him under observation for some weeks past, during which time he had noted a steady increase in the tumour. Continued pressure upon the vessel had been tried, but it was found that the artery was too deeply placed for this to be satisfactorily applied, and the man could not bear the attempts. It was therefore resolved to tie the artery. The operation which had just been performed presented many of the difficulties referred to in text-books, and, certainly, not those occasional facilities which have led some Surgeons after an unusually easy operation to speak lightly of its difficulties, and rank it amongst the more simple of Surgical proceedings. On this occasion, probably the average amount of trouble had been given. But, in truth, he (Sir William) had seen very little of the operation. Without desiring to appear egotistic, he might boast of, perhaps, unusual experience in operative Surgery, and yet in forty years of active engagement in tying vessels, etc., he had only once before had occasion to tie the subclavian artery, and that was now forty years ago; nor did he remember to have witnessed it, although, of course, the vessel had been tied by others several times meanwhile. Still, what he had said was sufficient to indicate that the operation was a tolerably rare one.

In the present case, Sir William said, the students had noticed that he began with a free incision, but even this had to be frequently enlarged, and a crucial incision was required. After the platysma was divided, many small veins came in the way, and oozed a good deal. Many attempts had been made in the ward to determine the precise position of the omo-hyoid muscle, but without success, and during the operation there was some little trouble in making out this point. It is so good a guide—better even than the edge of the anterior scalenus—that one should always seek carefully for it. On this occasion, as soon as Sir William came upon the cross fibres of this muscle, he hooked it at once upwards and outwards, and then speedily found the vessel, which was distinct enough to the finger, but not to the eye, as some fibres of the anterior scalenus were spread over it, and required some nice cutting before the vessel was fairly freed for deligation. A peculiar feature in this case, not referred to in books, was that the man had wrist-drop on the affected side—no doubt from pressure of the aneurism upon the brachial plexus. A difficulty, noted in text-books, and met with here in a marked degree, was one which had sometimes caused even first-class Surgeons to fail in the operation—namely, the great depth of the vessel, which did not come nearly up to the level of the clavicle. This was due in such cases to a habit, acquired in consequence of the pressure in the armpit, of raising the shoulder constantly, and this occasionally so altered the position of the vessel that first-rate operators had been occasionally compelled to abandon the search.

Mr. Henry Smith's patient was next brought into the theatre—a woman, aged 35, with a large aneurism of the right femoral artery in the groin. As soon as chloroform had been given, Mr. Smith commenced with the usual curved incision above the groin, making it sufficiently long to expose the common iliac vessel, if this should prove necessary. The succeeding steps of the operation were performed with unusual ease and rapidity, and after the patient had been removed, Mr. Smith addressed the students. He congratulated them upon their rare fortune in witnessing two such important operations on the same occasion. He pointed out the difference between the two cases, and alluded to a very similar operation to the present which he had performed last summer. The patient had been under treatment in the ward for two or three weeks, and was to have been brought down on the previous Saturday, but she had taken fright, and left the building suddenly. While at home, however, the tumour rapidly and painfully increased, so that, on her readmission after five or six days, the swelling was found to extend an inch higher above Poupart's ligament. For the benefit of those who had not before witnessed the proceeding, Mr. Smith explained at length the steps of the operation, which was performed strictly in accordance with the directions laid down by Sir Astley Cooper. In the course of these observations, he took occasion to remark that, for his own part, he paid little heed to the transverse fascia in dissecting down upon the vessel. This fascia was made much of in books, but Mr. H. Smith could only say that he had never even seen it, and he had certainly never been able to recognise anything so definite as to need slitting up on a director. In like manner, he would note that the vein should be really well out of the way—in fact, he had never seen the vein in performing this operation. It should be borne in mind that a too eager operator might turn up the artery with the peritoneum, as Mr. Smith himself had once done, and then look in vain for the artery in its usual position. Further, although this individual case happened to be as simple as one could possibly wish, they must remember that this simplicity could never be predicated, as a mass of enlarged and matted-together glands might obscure the vessel, and render the operation one of the greatest difficulty.

We are glad to be able to add that both patients were making capital progress when we heard of them again, three or four days subsequent to the operations.

BIRMINGHAM GENERAL HOSPITAL.

THREE CASES OF LOCAL PARALYSIS: IN TWO, ACCOMPANYING DISEASE OF THE CENTRAL ORGANS OF THE NERVOUS SYSTEM; IN THE THIRD, CONNECTED WITH TREMOR—QUESTION OF SYPHILIS AS A CAUSE.

(Under the care of Dr. RUSSELL.)

I have grouped these three cases together, as they all present nervous defect in one of the upper extremities—a defect, however, differing in each instance.

In the first two cases the defect was accompanied with distinct evidence of central disease: spinal in the first, and probably connected with the membranes; in the second, in part, at least, intracranial. But in each patient the disease in the single limb possessed special peculiarities. In the first, whilst the sensitive nerves of the upper extremity (as of the paralysed lower extremities) were fully respected, and whilst the entire system of motor nerves of the limb was enfeebled, an altogether disproportionate amount of paralysis fell upon particular muscles, with so much caprice as to resemble rather a case in which the lesion affected the muscles than the nerve trunks. This irregularity in the distribution of the paralysis was specially evidenced in the group of muscles supplied by the the musculo-spiral nerve. The advanced atrophy of the paralysed muscles, and their insensibility to faradisation, are both significant either of lesion of muscular fibre or of nerve trunk. It will be seen, however, that, besides the evidence of the presence of central disease, no proof of any influence operating directly upon muscle was forthcoming. In the second case the local defect consisted in interference with the sensitive fibres of the ulnar nerve, and also with the sensitive nerve or nerves of one foot and leg. Here there was also singular hyperæsthesia in certain other parts.

The third case is one of tremor of the arm, combined with some weakness and wasting of all the muscles of the extremity, sensation being intact.

There is reason to believe that the syphilitic poison existed in all three cases, and the irregularity of the nervous development in all is strikingly conformed to the peculiar characteristic of syphilitic disease in the nervous system—its want, namely, of conformity to any of the usual types, and the great breadth and irregularity in the distribution of its lesion.

I should refer to a very interesting series of cases of local paralysis, published by Dr. Broadbent in the *British Medical Journal* for April 30, 1870.

Case 1.—N. H., aged 37. This patient presented, in the first place, complete paralysis of the lower extremities, with scarcely perceptible impairment of sensibility, and with nearly complete retention of control over the sphincters. In the second place, whilst the left arm was healthy, the right upper extremity was enfeebled to a certain, but very moderate degree, as regards all its muscles; but the paralysis fell with extreme severity upon certain particular muscles, almost completely disabling them. At the same time, sensibility was intact over the entire limb. The muscles almost completely paralysed were the following:—Those constituting the anterior and posterior boundary of the axillary cavity, including both great and little pectoral, excepting only the clavicular fibres of the former, which retained power; the deltoid was vigorous, and also the scapular muscles; but the extensor of the elbow and the extensors of the fingers were almost powerless, whilst the extensors of the wrist, and also the supinators, retained the same amount of contractile energy which belonged to the flexors and pronators. The fingers were habitually semi-flexed, and could not be extended; but the wrist did not drop, and, when the hand was laid upon a table, no increase of extending power was acquired by the finger muscles. All the intrinsic muscles of the hand were fairly vigorous. The seat of the paralysed muscles was accurately defined by the use of Stohrer's battery, and by the wasting they had undergone. The paralysed muscles were greatly atrophied, and were nearly insensible to the current. The posterior boundary of the axilla, and the sternal fibres of the great pectoral, with the little pectoral, were almost destroyed, and the ribs in front were plainly visible beneath the scanty remains of the pectoralis major, the clavicular fibres of the latter muscle, which were preserved, standing forward as a prominent mass. The distinctness of the deltoid from the neighbouring muscles almost amounted to deformity; the triceps was attenuated, and the back of the forearm was flattened, but not hollowed. It was interesting to notice that, whilst the battery current directed upon the back of the forearm caused instant extension of the wrist, it entirely failed to move the fingers. On the other hand, the supinators and flexors answered at once to the battery, and retained their plumpness. The forearm had lost three-quarters of an inch in girth, and the upper arm nearly two inches. As already stated, no imperfection was discoverable in sensation. There was not a trace of lead in the gums. The heart and the urine were healthy. The patient admitted suppurating buboes, but with scanty discharge, two years ago; he had ague, as a soldier in India, four years ago, and two fits of ague twelve months since. He had no enlargement of his spleen. He lost the use of his legs quite suddenly, seven months ago, having suffered, during the previous day, from severe lumbar pains, which, however, did not extend into his limbs, though he had afterwards a little pain about the knees. Three days after, his arm failed in precisely the same manner, and at the same time he suffered severe pains in the region of the deltoid. There was no affection of micturition for three months, and then only to a slight extent. The only assignable cause was the operation of cold, which he felt severely on landing in Edinburgh from India.

Case 2.—E. S., aged 56. She walked with some difficulty, and was soon disabled by fatigue. When sitting, she moved her legs freely; but in walking, advanced them slowly and with caution, especially when turning round. She had no headache, but her head was light, "things went round with her," whether sitting or lying, and she had a fear of falling, her fancied tendency being always to fall to the left side. But, in addition, her right arm was impaired in power for delicate operations, as was most plainly seen in her writing. I could not obtain any evidence against the perfect integrity of the opposite limb. Muscular nutrition in all the extremities was excellent. Electro-motility was remarkably low throughout the body, but equally so in every part. As regards sensation, advanced anæsthesia existed along the entire inner and chief part of the posterior aspect of the enfeebled arm, involving likewise the two inner fingers of the hand (the *radial* side of the ring-finger as much as the ulnar side). The same defect existed in the dorsum of the right foot and up the right leg. (I have neglected to define the situation of the insensibility more accurately.) These two districts were equally anæsthetic to faradisation; whilst the outside of the right arm and the opposite leg were hyperæsthetic to the current, the patient crying out the moment she felt even a very feeble current; the left arm, on the contrary, preserved its normal relation to the battery. The patient also complained very much of a tight feeling around the base of the chest, and of paroxysms of pain which set in quite suddenly and lasted several days. The pain began in the region of the dorsal muscles of the vertebral column on one side, slowly ascended to the shoulder, and, in the course of days, descended through the opposite shoulder to the corresponding spot on the other side. The cerebral nerves were all quite healthy. The optic discs, however, were concealed by abundant remains of former iritis. The left tibia and left ulna were enlarged; and a cicatrix covering the seat of carious bone existed in the forehead—the result of an abscess with exfoliation—both the abscess and the enlargement of the tibia dating only from a year ago. The cartilage of the nose was partially flattened; it was perforated, and a superficial ulcer existed in the mucous membrane. The tonsils were free from cicatrices. No evidence of syphilis was obtainable from her history. She had lost all her teeth from a fever when young. Vision was impaired in the right eye after this fever; in the left, during the past year. Such was all the information we could gain. She had noticed the want of feeling in the arm for four years. Two years ago she was taken with a fit, in which she did not lose consciousness; she kept her bed three weeks, and has suffered from her present symptoms ever since.

Case 3.—J. H., aged 37, was admitted with tremor of the right hand and arm. The tremor was constant; it affected the fingers and the hand: to a less extent the forearm; it was much augmented by muscular effort, and then involved the upper arm also. The grasp with the hand was decidedly enfeebled; flexion and extension of the elbow were powerful. The entire group of muscles affecting the right upper extremity, including those influencing the shoulder, were somewhat wasted by comparison with those on the other side. Sensation and electro-sensibility were everywhere perfect; electro-motility was more exalted in the tremulous muscles than in those of the opposite forearm. There was considerable disease of the osseous system, in the shape of enlargement of certain bones. The middle third of each humerus was enlarged, and on the left side was tender. Both clavicles were much thickened. In the right clavicle the thickening involved the entire length of the bone, which at its sternal end was an inch and a half in breadth. The spine of the left scapula was broader than of the other, and there was some increase in the breadth of the left tenth rib, with tenderness. The only venereal symptom which the patient admitted was a gleet fifteen years ago. He has been married eleven years, and has had four healthy children. My account of his previous history is unfortunately meagre; it merely states that two years ago the patient had what he called rheumatism, which affected most of his joints, but especially the right shoulder and arm; the disease was not attended with swelling. It has laid him by two or three times since. Last summer he had "lumps" on his head, and has never worn a hat since. His heart was healthy. His urine contained some albumen. During the year preceding his admission he had emaciated considerably.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 25, 1871.

THE SMALL-POX EPIDEMIC.

The registered mortality from small-pox in London has risen from 211 to 218 in the week which ended on February 18. Of these deaths, 65 belonged to the East districts, 50 to the North, 42 to the South, 41 to the West, and 20 to the Central districts of the metropolis. The fatal cases thus show a decline in the East and West, while they have increased in the other districts, and remarkably in the North. The Registrar-General tells us that during the thirty-one years 1840-70 the disease may be said to have been epidemic nine times, and that in nearly all these instances it appeared in the latter part of the year, and lasted from one to two years. The most severe of these visitations was that of 1840-1, when the highest weekly number of deaths in the thirty-one years occurred—namely, 102 in the last week of 1840. That the present epidemic is more severe than any during the thirty-one years is shown by the fact that the average weekly mortality for the past nine weeks has been 152, while in an equal number of weeks during the previous most severe epidemic, 1840-1, the weekly average was only 71.

Public arrangements for the arrest of the spread of an epidemic of small-pox are based upon the acceptance of the doctrine that it is communicated from the sick to the healthy, that the disease does not arise spontaneously out of any imaginable combination of influences in the absence of a case of the disease from which a contagion may be derived. In other words, notwithstanding that certain years, certain seasons, certain kinds of weather manifestly are favourable to the extension of the disease, no individual suffers unless he has received, either immediately or mediately, into his circulation a specific morbid product derived from one already sick with small-pox. Still it is curious to observe that a doctrine so well established as this is, and one which is generally accepted by the educated classes of society, has not yet thoroughly filtered down into its lower strata. The ready manner in which the poor expose themselves to contagion does not all proceed from the recklessness engendered by the hand-to-mouth way in which they live. We have had reason to know that much of it is the result of sheer ignorance of the fact that small-pox is a highly contagious disease, that it is communicable by intercourse with the sick, and through the medium of clothing, etc., which they have used or which has been lying in their neighbourhood. Hence we are constantly meeting with instances of persons who have been waiting on the sick spreading the disease by visiting their friends and neighbours without changing their apparel; of washerwomen and manglers carrying on their businesses in the very room occupied by a small-pox patient, and communicating the disease through the medium of the articles they send home from their infected rooms. Even in the Profession there is a difference of opinion as to the stage of small-pox at which it begins to be contagious. There are some who, perhaps arguing from analogy, are disposed to think that a communicable virus is not given off until the specific eruption appears upon the skin, and some who regard the disease as scarcely likely to be communicated even during the first day or two of the eruptive stage. We are sure that this notion is as inconsistent with facts as it is dangerous to the public health. The observations of highly competent men have satisfied us that the cutaneous eruption is no proper criterion to go by, and that small-pox may be communicated when not a single pock has appeared upon the skin. It was only a fortnight ago that a case of petechial typhus, fatal in a few days, was reported to one of the metropolitan Health Officers. Suspecting that there might have been an error in the diagnosis, he saw the Surgeon who reported it, and learned from him that the illness commenced with severe pain in the back and other initiatory symptoms of small-pox; and, moreover, that the patient, a girl, had been exposed to small-pox contagion. In this case there was no eruption up to the death, yet a sister who lived in the house and assisted in nursing her was about a fortnight after the death attacked with small-pox. That a variolous fever without eruption prevailed in epidemic seasons was an old observation of Sydenham. That people with this form of the disease, ignorant of its nature, may go about and communicate small-pox, is not an improbable way of accounting for some of those attacks in which no direct or indirect exposure to contagion can be traced. However this may be, it is obviously a prudent course to interdict personal intercourse with individuals who, during the prevalence of the epidemic, show the symptoms of the initiatory fever, whether they issue in eruptive small-pox or subside without the development of pocks.

We have already referred to two kinds of public provision made for the suppression of the reigning epidemic—the establishment of Hospitals and the encouragement of primary and secondary vaccination. We should not be far from the truth were we to say that these two preventive measures, utilised to the fullest possible extent, would almost suffice to bring the epidemic to an end. But, inasmuch as every case of small-pox is not isolated immediately on its commencement, and so, for a longer or shorter time, is a focus of infection for its neighbourhood, directly spreading the contagium through the atmosphere, or indirectly through other media to healthy persons; and inasmuch as it is Utopian to expect absolute and universal protection of the public by vaccination and revaccination to be attainable, other additional measures have to be adopted for intercepting and annihilating the *materies morbi*. Public provision for this purpose is made by the Sanitary Act of 1866, which, recognising the doctrine of contagion, lays upon local authorities the duty of applying it in the suppression of communicable disorders.

The term "disinfection" is applied to proceedings which have for their object the destruction of those qualities of matters discharged from the sick which enable them to reproduce a similar disease in the healthy. In modern scientific parlance, the process of disinfection consists in the destruction of the vitality of "disease germs"; and the process may be, and ought to be, employed in respect of anything which there is reasonable ground for believing may be infected, or which may contain the active germs of the disease. It is applicable, then, to the person of the sick, and his dejections and discharges; to the air of his chamber; to his clothing and bedding, and anything used by him; to the clothing of his attendants; to the walls, ceiling, and floor of the apartment; and to everything that the apartment contains. The disinfectants which are most to be relied upon are—a prolonged heat of 230° to 280° Fahr., prolonged boiling in water, sulphurous acid vapour, carbolic acid, and chlorine. Where a patient is being treated at home, the best plan of preventing the diffusion of the contagium is to maintain a constant current of air from without into and through the chamber by means of a small fire, while an old sheet, sprinkled freely with carbolic acid or a solution of chloride of lime, is suspended outside the door. The atmosphere of the chamber, too, may be usefully slightly charged with the vapour of carbolic acid or chlorine. The only precaution necessary, is to avoid using both these different agents at the same time. On the recovery of a patient, he should not be permitted to mix with other persons until all the crusts have fallen, or until he has taken several baths containing a little carbolic acid in solution. It has been questioned whether a dead body gives off the contagium of small-pox so as to be dangerous. It is not necessary to ascertain this definitively merely to settle our practice: the simple suspicion of the affirmative being true should suffice to determine us to secure the corpse as quickly as possible in a coffin, covering it with the disinfectant that is preferred; we are in the habit of using carbolic acid or MacDougal's powder. When the death takes place in a poor and crowded house, the body should be removed to a public mortuary. The chamber being emptied, either by the removal or recovery or death of the patient, the process of disinfection should be applied to it and to its contents. And here comes a practical difficulty—namely, that the disinfection cannot be properly carried into effect while people are resident; and among the poor it is a common thing for a whole family to occupy but a single room. Hence, when that room has to be disinfected, an impediment arises from the absence of any place to which the family can be temporarily removed. If the Diseases Prevention Act were in force, as it was during the cholera season of 1866, nuisance authorities would be required to provide houses of refuge or places of temporary accommodation, but no such place is provided, so far as we have learned, in any parish of the metropolis, for the exigencies of the present epidemic. The best mode of proceeding for disinfection of an infected room we believe to be as follows:—As soon as possible after the sick person is removed, paste up with brown paper all the crevices of the windows and doors, and the whole of the opening of the fire-place, and burn a quarter or half a pound of brimstone in the room, according to its size, by covering that quantity, broken into small pieces, in an iron dish, over a bucket of water, with live coals. The room should be kept closed, and the chinks of the door pasted up, for about six hours. The contents of the room may then be manipulated with comparative safety. The textile articles capable of being boiled without injury should then be removed, and put to soak for some hours in water containing some carbolic acid in solution, and then well boiled for two or three hours. Woollen articles, which cannot be boiled, should be disinfected by heat, in an appropriate oven, which it is the duty of the public local authority to provide. Feather beds and pillows are best disinfected by emptying out the feathers into a clean sheet, and then soaking and boiling the ticks. The feathers may be disinfected by spreading them out upon sheets in a closed chamber, and fumigating, as before, with sulphurous acid, after which they may be again put into the ticks. The room, cleared of these several articles, may then be taken in hand. The paper should be smeared with crude carbolic acid, stripped off, and burned, the ceilings and walls washed with water containing some carbolic acid, and then limewhited, and the floor and woodwork scrubbed with soap and water and carbolic acid. The various articles of furniture should be similarly cleansed. In poor houses, the only way of effectually dealing with beds and clothing is often absolutely to consume them by fire. After a room has thus been disinfected, it is a good practice, where it can be carried out, to leave it unoccupied, with the windows wide open, for a week or a fortnight. By the 23rd section of the Sanitary Act, 1866, the nuisance authority in every district in the kingdom is empowered to "provide a proper place with all necessary apparatus and attendance for the disinfecting of woollen articles, clothing, or bedding which may have become infected." It might be supposed that in the metropolis, at any rate, where infectious maladies of one kind or another are scarcely ever absent, local authorities would have seen it their interest as well as their duty to have availed themselves of the power thus given them. At the time when relapsing fever was prevalent, a year ago, the Medical Department of the Privy Council urged the importance of this step upon the metropolitan vestries, and in their last memorandum, to which we have before alluded, attention is again called to this subject. The fact is, that out of the forty-five districts into which the metropolis is distributed, there were but five in which, a fortnight ago, any provision of this sort for disinfection by heat or boiling was made. These districts were Marylebone, St. Giles's and St. George's (Bloomsbury), St. George's (Hanover-square), Chelsea, and St. Luke's. The apparatus provided in Marylebone and St. George's, Hanover-square, is Nelson's patent. This apparatus consists of a box in which the articles to be disinfected are exposed to a dry heat of 200° by means of gas. Dr. Whitmore states that the heat can be raised to 210° or 220°. In St. Luke's an oven is provided in which fumigation with sulphurous acid can also be obtained. In Chelsea the apparatus consists of a brick oven, by no means well contrived. St. Giles's parish has recently provided itself with Fraser's patent apparatus, which, so far as we have seen, is the best yet contrived for the use of public authorities; it has already been fully described in this journal. In this a heat of 230° or 250° can be readily raised and maintained, while fumigation with sulphurous acid can be conjoined. The dread of the epidemic, or the repeated admonition of Mr. Simon, or both together, have had the effect of inducing seven other parishes to carry out the directions of the Sanitary Act. We learn that recently the authorities of the City of London, Poplar, Hackney, Shoreditch, Islington, Bow, and Hampstead have determined upon this course, four out of the number having settled upon Fraser's apparatus. Sixteen other vestries and district boards are, we hear, thinking about doing something in this way. The remainder are yet unmoved—and this remainder, we are sorry to say, includes some of the poorest districts, where a place and apparatus for disinfection are most urgently needed. On the whole, it would appear that Fraser's apparatus is at present regarded with most favour. Dr. Letheby has expressed himself dissatisfied as regards the application of mere dry heat. The plan which he proposes to adopt in the City is—first, to fumigate with sulphurous acid for an hour or two; then to expose the articles to superheated high-pressure steam of about 250°; and lastly, to a dry heat of 250° or 280° for two or three hours. If any application of heat will destroy disease germs surely this will. We have no doubt that this process, elaborate though it be, is justified by the demands of prudence; and it is quite possible that in course of time experience will show the necessity of resorting to the use of moist heat, even by those authorities who have determined for the present occasion to erect ovens upon Fraser's principle.

TORTURE IN INDIA.[a]

Among a people cruel as well as weak, modes of torture might be expected to be common, yet we were hardly prepared for the multitude of devices whereby suffering may be produced revealed to us by Dr. Chevers. In the olden time torture was generally used by native rulers, as by the Normans on Isaac of York, to induce their subjects to yield up their possessions, when they were suspected of having any, and in a great many instances the means adopted—viz., fire—was the same. Nor did the practice cease with native rule; it was too ingrained in the native constitution to be readily swept away, and even the police authorities introduced by the British were discovered to be constantly in the practice of using some mode of torture to induce their prisoners to confess, and thus, while obtaining easy proof of their culpability, increase their own reputation for zeal and cleverness. But, in truth, the use of torture was universal—practised even by parents on their children. Thus, it was not uncommon for a native, instead of beating his son, to put red pepper into his eyes as a punishment for offences committed.

But, as we said above, heat, in some form or other, seems to be one of the most frequently-used means of inflicting pain, and this may be done, either by applying to the wretch the heated bowl of a pipe, a red-hot piece of charcoal, a lighted torch, a red-hot iron, or boiling oil or water. In the case of women, the pudenda would seem to be the parts most frequently injured in this way. Some of the instances of torture recorded here seem absolutely diabolical. Thus, in one case, the fingers and toes of certain prisoners were bound together, and splinters of bamboo driven between each, after which boiling oil was poured over the injured parts. Not satisfied with this, they next proceeded to squeeze the testes of the unfortunate wretches between pincers made of wood, until they were destroyed. A string was next attached to the penis, and fastened tightly to a tree at a distance, after which one of the tormentors employed himself in striking the taut string with a stick. Need it be added that the unfortunate man died? *Ordeal* by fire was also frequently employed among the Brahmins. Cold—to which the natives would be even more susceptible—was also used as a means of torture. Thus, in cold weather, water might be thrown on the body as a punishment, according to the old Hindu law. Another mode of torture popular, apparently, with the old police, was to tie the suspected culprit's hands behind his back, and then to attach them to a beam or branch of a tree above his head, so as to be able to swing him backwards and forwards. In this position the victim was frequently beaten with sticks and stinging plants. This would be pleasantly varied by suspending by the feet, and beating the upturned soles; suspending by the hair, by the moustache, the ears, etc. Red pepper, a common product of the country, would seem to be frequently employed as a means of causing severe pain; sometimes introduced into the nostrils or eyes; sometimes burnt beneath the nose; put in a bag and cast over the head; rubbed as chilies into the breasts of females, or introduced into the vagina or urethra. Quicklime is also used for introduction into the eyes, and its acridity increased by the use of the marking-nut, a plant possessing a very acrid juice. Another mode of torture here mentioned as at one time employed by Scindiah was placing the victim on an elastic couch, beneath which were placed, with their points directed upwards, the long and sharp thorns of the acacia, and thus, whether at motion or at rest, his body was pierced and lacerated. This failing to induce him to disclose his treasure, when he was nearly exhausted they removed him from his bed of pain and brought before him his infant child, whom they introduced into a bag along with a wild cat, and then stood by ready to

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(a) "A Manual of Medical Jurisprudence for India, including the Outline of a History of Crime against the Person in India." By Norman Chevers, M.D., Surgeon-Major H.M. Bengal Army; Principal of the Calcutta Medical College; Professor of Medicine, and Senior Physician, in the College Hospital, etc. Calcutta: Thacker, Spink, and Co. Pp. 861.

irritate the animal till it should destroy the child. This was too much for him, and he made the needful disclosure. The introduction of a stick or other foreign body into the vagina or rectum would seem to have been a common mode of torture. Death sometimes resulted from the inflammation thus excited. Even children seem to practise the latter mode of cruelty on each other. In like manner a wire or a stick is sometimes introduced into the urethra.

It has been reported of some of our keepers of the insane that they travel up and down the chest of a refractory patient on their hands and knees until he is effectually quieted—sometimes by breaking his ribs. The plan is not original, as it is practised in India, only, instead of using the knees, the natives commonly use a pair of bamboos—one in front, the other behind—and compress the chest or limbs between them. Sometimes a heavy weight, as a hand-mill, is placed on the chest or stomach; and sometimes the fingers, instead of the chest, are squeezed between bamboos. Instead of squeezing with bamboos, torture is sometimes inflicted by tying a rope tightly round one or more of the limbs; this is sometimes carried so far that gangrene sets in. Of old, a modification of this plan was used in Western India. The prisoner was stripped, and an animal killed, after which its newly flayed hide was tightly fastened on him, when he was abandoned to its miserable compression as it hardened and contracted. Sometimes plans for maintaining the victim in an unpleasant and painful posture would be adopted; of these the simplest are the stocks, which used to be employed in our own land. A more horrible mode of inflicting torture was formerly common—viz., that of placing a mole, cricket, or a spider on the navel, and covering it over with an earthen pot, leaving the animal to seek its escape by tearing at the entrails. Another favourite practice was exposing the victim to the attack of a colony of red ants.

It would hardly be possible to exhaust the list of native atrocities, some too disgusting to mention, but many leave marks, and marks are apt to be followed by punishment; hence ingenuity has been exercised to devise some mode of inflicting pain which can leave no trace. Of these, starvation, exposure to the sun, preventing from sleeping, pinching, etc., are employed, but still more effectual are those nameless acts whereby self-respect is wounded and caste lost; but of these we will not further speak.

THE WEEK.

TOPICS OF THE DAY.

The scheme for the formation of a Conjoint Board for the examination of Practitioners in Medicine, Surgery, and Midwifery, prepared by the Committee appointed by the three English Medical Corporations, was discussed at considerable length by the Fellows of the Royal College of Physicians at the Comitia on Monday last, and, we are glad to learn, has received the full assent of the College. It is true, it is rumoured that some of the senior Fellows of the College have qualified their approval by expressing an opinion that the scheme is only applicable to an examination for the general Practitioner. But considering that it is framed for the admission of candidates to the Licence of the Royal College of Physicians itself, as well as to the Membership of the Royal College of Surgeons and the Licence of the Society of Apothecaries, and that it provides for the nomination of a full proportion of examiners by the Royal College of Physicians as well as by the other Corporations, it requires no prophet to foretell that it must constitute a most important step to the erection of that one portal to Medical practice for which the Profession has long been striving. Of course it can never be wished or expected that an examination provided by a Conjoint Board should admit candidates to the higher honours which are in the gift of certain of the Medical authorities. What is wanted is that it should be a good, practical, and, as far as it goes, scientific examination in all the branches of Medicine; that it should be thorough within certain limits; and that it should at least warrant the public in reposing confidence in the general practical knowledge of the possessors of the diplomas which it will confer. We may state, on good authority, that the following is the exact distribution of nominations to examinerships. It will be seen that the information we have published as probably true, on previous occasions, is fully confirmed:—It is proposed that there shall be ten examiners in Medicine, five of whom will be nominated by the Royal College of Physicians and five by the Society of Apothecaries. There will be ten examiners in Surgery, nominated by the Royal College of Surgeons. There will be six examiners in Midwifery, two of whom will be nominated by each of the three Corporations. In Anatomy and Physiology there will be eight examiners; five to be nominated by the Royal College of Surgeons and three by the Royal College of Physicians. In Forensic Medicine, there will be four examiners; two to be nominated by the Royal College of Physicians and two by the Society of Apothecaries. And in Chemistry, Materia Medica, Pharmacy, and Medical Botany, there are to be eight examiners; four to be nominated by the Royal College of Physicians and four by the Society of Apothecaries. The fee, as we previously announced, is to be thirty guineas, and will, on the candidate undertaking to obey the by-laws of the respective Corporations, be the sole money payment for all or any of the three diplomas. The funds accruing are to be divided into two parts—one-half will be set aside for the payment of the examiners and of the expenses of the examinations, and the other half will be divided between the three Corporations, in proportion to their previous incomes from examinations, the calculation being based upon the income of the last five years. This part of the scheme, however, is to be subject to revision at the end of three years. On the whole, we are decidedly of opinion that the scheme is a just and equitable one. We have no fear that a Board thus nominated will prove itself unequal to the occasion. We believe that the examinations of the Medical Practitioners of England and Wales will be in every respect worthy of the country and of the Profession. The presence of different elements in the Conjoint Board will prove a healthy stimulus to each. We have no doubt that the Board will both obtain and keep public confidence. At no very distant time we shall hope to see it made still more comprehensive by the co-operation of the Universities. But for this we may wait. Reforms, to be stable, must not be forced. The entire consolidation of the numerous, and sometimes antagonistic, elements into which our Profession has been unhappily broken up, is a work which requires time and patience.

The reply given by Mr. Forster to Dr. Lush, on Monday evening, completely dissipates any lingering expectation that the Government will reintroduce their Medical Acts Amendment Bill in the present session. We do not know whether any private member will show sufficient confidence in his own influence within the House, and sufficient reliance upon support from without, to venture upon the introduction of a Bill. But it is easy to predict that no measure can possibly be pushed through both Houses of Parliament without the direct and active support of the Government, and it can hardly be expected that Mr. Forster and his colleagues will give their assistance to a private member to accomplish a feat which they have only just failed in performing. For ourselves, we think that the present state of affairs suggests most powerfully the necessity of the Medical Profession dispensing as far possible with the aid of the Legislature. The great changes required by the Profession may most of them be accomplished by voluntary effort. An important step has already been made in the arrangement of the scheme for the Conjoint Board; and if the General Medical Council will use its influence to effect a similar movement in Scotland and Ireland, we think that any necessity for immediate Medical legislation will be entirely superseded.

Lord Derby's speech at the dinner of the Hospital for Sick Children contained a great deal of good physiology and sound observation put in a popular way. The same ideas are commonly current amongst our Profession, but that does not make us the less pleased to see them set in a clear light by so distinguished a statesman as Lord Derby. From the high mortality of towns over country, he drew an argument for special Medical provision for the children in great towns. We are very glad to see that he boldly asserted emigration to be the only true remedy for over-population. He said—

> "Now, I carry the argument a step further, and I contend that children are exactly those for whom Medical help is most wanted in London; because it is among children that the high death-rate exists which makes the difference in mortality between town and country. Adults live and thrive very little the worse for the smoke; but the smoke and all that goes with it kills off the babies and those under five years. There is no more delicate test of pure air than whether a child will thrive in it. Now, in London the air is not pure; you may test it in the parks. With all the attention that can be given, and unlimited outlay, only a few of the hardiest kinds of trees will grow, the others dwindle and die. Now, it is reasonable to suppose that the atmosphere which kills an oak is not exactly suited to a child. Add to this overcrowding, frequent want of work in the poorest class, want of proper care and nursing in illness—not from neglect, but from ignorance and want of means—and the case seems to me made out for an institution such as the Hospital for Sick Children. Some people are alarmed lest, if by improved sanitary resources our death-rate should lessen in a great degree, as it might and ought, we should be overdone with a population which could not find employment. I don't share in that fear. We are an emigrating country, and as our labouring class becomes more instructed, more wideawake, more aware of the state of things in the outside world, the attractions of a new country will be stronger, and emigration will increase."

After the severe sentence which Mr. Bruce permitted to be carried out on the woman Waters, we fully expected that that gentleman would have brought into Parliament a Bill on the subject of baby-farming. This, however, is not to be the case, and he only promises to give Mr. Charley's measure his full attention. If women are to be held to be murderesses, and hanged for carrying out the trade of baby-farming when the children intrusted to their care die, although it is well known that a large proportion of infants artificially fed die under the best *régime;* and when it is remembered that in the manufacturing districts large numbers of the infants of women working in the factories are put out to nurse—and consequently out of the world—without scruple, we think it is high time that some distinct enactments providing inspection and supervision should be made. We are glad Mr. Charley has brought his Bill into the House; but we think that this in no degree relieves the Government from its responsibility.

The Poor-law Commissioners are taking active measures to arrest the spread of small-pox in Ireland. According to a circular issued by the Commissioners, the cases which have occurred have been traced from sea-ports on the eastern coast, into which the disease has been imported from Liverpool, Glasgow, and South Wales.

Mr. Mitchell Henry, late of the Middlesex Hospital, has been returned without opposition as Member of Parliament for Galway.

QUALIFIED AND NON-QUALIFIED PRACTITIONERS.

In another column we print a letter from Professor Bischoff, in which that eminent physiologist asks our opinion on the value or otherwise of the law requiring Practitioners of Medicine to undergo an education and examination. The question is sometimes raised here, by a set of political philosophers, who contend that all systems of government err on the side of excess; that perfect freedom should be the rule, and State regulations the exception, in all mundane affairs, and that the maxim *caveat emptor* is as applicable to the man who sends for a Surgeon as to him who buys a horse.

But, looking at Professor Bischoff's question in the light of reason and experience, we do not hesitate to declare our belief —1st. That anyone who desires to practise Medicine worthily, to study its principles, and to advance the science, would never object to pass an examination; and that the persons who desire to practise without examination are probably mere adventurers and charlatans, whose object is mere money. 2nd. That the practice of persons not examined would be full of blunders and charlatanism. 3rd. There are large numbers of persons whose judgment is *nil;* and who would run after the unlicensed Practitioners, because they would assume a licence to lie and brag freely! 4th. In England, where it is the custom of large numbers of the people to apply to druggists, we do not doubt but that many diseases pass unnoticed till too late, or are wrongly or superficially treated. 5th. Assuredly most of the cases of abortion in England are perpetrated by irregular and unlicensed Practitioners. 6th. We believe that legislation and fear of punishment can do much towards suppressing illegal practice.

We must observe that, although in England every man may practise Medicine and Surgery, yet he must not assume any of the titles and designations used by qualified Practitioners, such as Doctor, Surgeon, Physician, or the like; neither can he take any public Medical appointment, nor sue for fees or charges. Moreover, it is the ancient traditional custom with the poorer classes not to pay fees for advice, but to go to a druggist to purchase something which the vendor believes will do him good. The English apothecaries are men of first-rate acquirements, fully qualified and licensed to practise Physic, and their education and examinations are equal to those of most M.D.'s and Physicians.

CASE UNDER THE POOR-LAWS.

Mr. Ebsworth, Surgeon and accoucheur, of Trinity-street, Southwark, has brought an action, in the Southwark County Court, against the guardians of St. Saviour's, to recover £15 18s. 6d. for vaccination fees. It appears that Mr. Ebsworth was, in July, 1861, appointed Vaccination Officer by the Board of Guardians of St. Mary's, Newington, and continued to act as public vaccinator for the parish up to July, 1870. The amalgamation of the parish of Newington with that of St. Saviour's, however, took place in October, 1869; but this made no alteration in the performance of his duties, which were continued to the above date, as no notice of any change of arrangement had been given him. The Vaccination Act required the board of guardians to give notice of any such change, but he received nothing of the kind until July 17, 1870, when a vaccination placard was issued, and Mr. Ebsworth's name removed from the list of vaccinators. The defence of the guardians, depending as it did upon a technical point—that no old contract had been made with him previous to the amalgamation of the parishes—was a shabby one. A reason for all this, however, might be found in the fact that Mr. Ebsworth had been receiving only £75 a year, while other parochial Medical men were in receipt of £250 for vaccination and vaccination fees. Mr. Ebsworth drew attention to the fact, and obtained an increase of pay, and, in the very first fortnight after it was granted, the guardians retaliated upon him.

Mr. Jones, assistant clerk to the Union, said that anxious as the St. Saviour's guardians were to carry out the arrangements with respect to the new appointment of Medical officer, made with the guardians of St. Mary's, Newington, the Poor-law Board would not sanction the course they proposed to take. In point of fact acting under the powers of the Act 30 and 31 Vic., cap. 84, sec. 4, the Poor-law Board refused to sanction the establishment of five vaccination districts, as heretofore, and would only agree to have two districts; and, according to the Act of Parliament, the Poor-law Board had power to refuse the ratification of the appointment of a Medical officer when a distinct contract with him had not previously existed. In this case, the guardians did the best they could to have Mr. Ebsworth appointed, and sent his name up to the Poor-law Board, but the latter refused to sanction the appointment.

On Mr. Ebsworth's behalf, it was contended that, under the Act, a new contract arose with him, and he also relied upon that section of the Act which said—"The Medical officer shall be the public vaccinator." His Honour said that, having heard the facts of the case, he considered it one of sufficient importance to justify him in reserving his judgment, which he should pronounce at an early day.

VÆ VICTIS!

We have on more than one occasion noticed the hardship and injustice of the position of Medical Officers of the Army as regards the period of leave granted to them for the recovery of their health. While officers of the military branch can, without loss of pay or time counting for service, obtain twelve or eighteen months', or even two years' leave on Medical certificate, those of the "civil" departments—in which Medical officers are included—on the expiration of six months must return to duty, most probably at the same foreign station at which their health had broken down, or go on half-pay, and must thus incur, not only temporary pecuniary loss, but permanent departmental retrogression and postponement of ultimate retirement. We are informed that the Indian Government, by a recent enactment, has very seriously increased this hardship in the case of Medical officers of the British service who are compelled to return to England on Medical certificate. It has been directed that the Medical boards in India must pronounce an opinion as to whether it is probable that the Medical officers who appear before them will be fit to return to India at the expiration of six months. Those Medical officers whose cases are so serious as to render it unadvisable for them to return to India at the end of such a limited period, are struck off the strength of the Indian establishment, and successors from England must immediately take their places. The result of this decision is, as we are informed, that they lose the six months' Indian pay granted to other officers leaving India on Medical certificate, as the Indian Government very astutely declines to pay at the Indian rates officers who are not likely again to serve in India for some time. The consequence is, that Medical officers whose health has so completely broken down in India that not only can they not return to that country, but are unfit for service at home or in a temperate climate, at the expiration of six months, in addition to losing the six months' Indian pay, are placed on half-pay at home. The consideration shown to them is thus, in fact, inversely proportional to the extent to which their health has suffered. We have every reason to believe that in this matter we have been correctly informed, and we consider the subject one which well merits the attention of some of the members of our Profession in the present House of Commons.

THE METROPOLITAN ASYLUMS BOARD.

The President of the Poor-law Board, in reply to Mr. Jebb's letter to him in reference to the mis-statements with regard to the proceedings of the Managers of the Metropolitan Asylum District, says—that the three sites secured for erecting asylums were secured with the consent of the Poor-law Board, and that they could not have been obtained on more reasonable terms or in better positions; that the inquiries made by the Poor-law Board fully bear out the statements of the managers, that it is wholly untrue that patients have arrived at the Hospitals in ordinary cabs, or in other conveyances plying for hire; that of 800 patients admitted, all except one, who was not a pauper, were brought in carriages exclusively appropriated to the conveyance of persons suffering from contagious diseases; that, the Poor-law Board will investigate most rigidly any cases of alleged improper conveyance of sick paupers, but the only complaint of this nature hitherto submitted to them was proved to be groundless; that he gladly calls to mind the public-spirited determination at which the visiting committees of the Asylums have arrived, to undertake the personal and systematic inspection of the infectious wards, notwithstanding the personal risks they may incur.

WHAT CONSTITUTES AN EPIDEMIC OF SMALL-POX?

It is quite clear that small-pox has spread in an unusual degree over the whole of Europe. We hear of it at Malta, in France, Holland, and England. There are one or two conditions necessary for this epidemic; either an unusual virulence of the small-pox poison, or some change in the human body rendering it unusually liable. We know that such changes do occur. For instance, the freshly-vaccinated child who cannot take small-pox, undergoes some change which makes it again liable at 20 years of age. Such a change seems now to have come over the whole human family. The evidence of Mr. Ellis, in a letter to the *Times*, that adults never were known to take vaccination as they now do, is confirmed by that of Mr. Blackman, the eminent public vaccinator, and of all other Medical men, public and private. But if people can take vaccination, they might take small-pox; for they who are proof against one, are proof against the other. It was believed by Dr. George Gregory that a great improvement in health and strength renewed the liability to small-pox after vaccination; but it is more easy to speculate than to prove anything as to the causes of this and other epidemics.

THE STAMPING-OUT OF SMALL-POX.

The *Dublin Daily Express* of Tuesday last published a long letter from Dr. Evory Kennedy, containing practical suggestions which derive great value from his eminent rank in the Medical Profession and the careful attention which he has bestowed upon the subject. He says the means of stamping out small-pox may be described in three words—isolation, disinfection, and vaccination. He strongly urges the importance of vaccination as a check and safeguard against the disease, and adds that in several capitals of Europe, but more especially in Naples, Paris, and Rotterdam, much zeal has lately been shown to introduce modifications in vaccination, with a view to obtain a more protective virus; but the result of these variations from Jenner's simple plan is not such as to draw us away from our allegiance to the system adopted by its great founder.

VACCINATION BY PRIVATE PRACTITIONERS.

At the last meeting of the Association of Medical Officers of Health, some remarks fell from Mr. J. N. Radcliffe, one of the Privy Council Inspectors, which well deserve consideration. He condemned a very large body of vaccinators as performing their work in a shamefully slovenly and worse than worthless manner. Their carelessness was shown by the fact of their never caring to keep up a succession of vaccinated children from week to week, so that they might always have a stock of fresh lymph of assured purity. They neglected vaccination for long intervals, then sent off to Whitehall for a large stock. We are convinced that nothing but arm-to-arm vaccination ought to be encouraged; and we believe that a very little friendly feeling amongst neighbouring Practitioners would prompt them to arrange with each other to keep going a succession of vaccinated arms, amongst their private patients, from week to week. Some men complain of the poor pay; but better work always brings better pay, and, if patients cannot pay, they should be made over to the public vaccinator.

MR. PAGET.

We are glad to hear that Mr. Paget is fast recovering from a somewhat serious indisposition. He will speedily, we trust, be able to resume the full measure of his labours.

THE MANCHESTER MEDICO-ETHICAL ASSOCIATION.

In the report just issued, the Committee state that no fewer than fourteen meetings of that body had been held. These had been occupied by considering the form of the amended Bill to be brought before Parliament. The chief points arrived at were—1. One portal of entrance into the Profession. 2. More direct representation of the general body of Practitioners in the General Council—feeling assured that, until this body was differently constituted, no real good could be done in the way of reform; and, 3, the appointment of a public prosecutor. The attention of the Committee was also occupied with the question of quack advertisements. The *Saturday Review* had stated that the *Manchester Courier* and the *Examiner and Times* had inserted quack advertisements of an immoral character.

> "A sub-committee was appointed to wait upon the respective editors of these papers, and to point out the impropriety of inserting such advertisements. An interview was subsequently had with each editor. The editor of the *Courier* promised not to insert advertisements from any new advertiser, and the editor of the *Examiner and Times* said that great care was taken to withhold all improper words and expressions; whilst both gentlemen admitted that it was desirable to control the class of advertisements referred to as rigidly as possible."

A sub-committee had been appointed to consider "the mode of admission of patients to the Medical charities." The number of members had increased during the past year from sixty to seventy-five.

THE AMERICAN LAW AS TO THE LEGAL CAPACITY OF HABITUAL DRUNKARDS.

It is not definitely settled, neither, perhaps, is it possible to settle, just what degree of drunkenness will avoid a contract or will. The questions in every case must always be: Had the testator at the time of making the will a disposing mind? and did he act freely? A person deprived of reason by intoxication cannot make a valid contract or will. [So decided in Prentice *v.* Ackorn (2 Paige, 30); Duffield *v.* Robinson (2 Harrington, 375.)] It is said in Peck *v.* Casey (27 New York Rep., 9) that neither habitual intoxication, nor the actual stimulus of intoxicating liquors, at the time of executing a will, incapacitates a testator, unless the excitement produced thereby be such as to disorder his faculties and powers—his judgment; but this case is not inconsistent with the principles before stated, for the decision was based upon the ground that the mind of the testator had not become impaired from habits of intemperance, and was not, at the time of the execution of the will, so far under the influence of liquor as to affect the character of the instrument. By the revised statutes of New York, "all persons, except idiots, persons of unsound mind, and infants, may devise their real estate by their last will and testament duty executed" (2 Rev. St., 56). "Every male person of the age of 18 years or upwards, and every female of the age of 16 years or upwards, of sound mind and memory, and no others, may give and bequeath his or her personal estate by will in writing" (2 *Ibid.*, 60). The question as to just what persons are prohibited by the term "persons of unsound mind," has led to much discussion and litigation. It is something separate and distinct from idiocy, which state of want of understanding, and not a perversion of the intellect, is separately provided for; and it is not synonymous with *non compos mentis*, which term comprehends every description of mental infirmity. The true rule is, perhaps, that which was laid down by Mr. Justice Davies in Delafield *v.* Parish (25 New York Rep., 9), that the testator must have sufficient capacity to comprehend the conditions of his property, and his relations to the persons who were or should be the objects of his bounty, and the scope and provisions of his will, and these are the proper questions to be submitted to a jury in such cases.—McClintock *v.* Curd (32 Mo., 411); Beaubien *v.* Cuotti (12 Mich., 459); Converse *v.* Converse (21 Vt., 168); Daniel *v.* Daniel (39 Pennsylvania State Rep., 191). The testator must not only have a disposing capacity, but the instrument must be his own free act, and a jury, in deciding questions of this nature, should ask themselves whether, from all the circumstances of the case, they regarded it as the will of the testator or the act of some other person or persons (1 Redf. on Wills, 131). Every species of influence which goes so far as to overcome free agency, must be regarded as undue, and all fraudulent acts are embraced in the term. A person has a right, in a fair and legitimate manner, to urge another to make a will in his favour, and an influence sufficient to avoid a will must amount to coercion or virtual control over the testator.—Gardner *v.* Gardner (22 Wend, 526); Low *v.* Williamson (1 Green's Ch., 82); Tyler *v.* Gardner (25 N. Y., 559); Wier *v.* Fitzgerald (2 Bradf., 42). The result of the late decisions of the Court of Appeals on the same subject—viz., Van Guysling *v.* Van Kuren (35 New York Rep., 70), Christie *v.* Clark (45 Barb., 529), Eau *v.* Snyder (46 *Id.*, 230), and others—is, that a person whose senses and memory were obscured by a long course of intemperance, or who was suffering from excessive indulgence at the time, could not make a valid will or contract.

HEALTH OF PARIS.

Paris continues to be extremely unhealthy, and the Physicians are unanimous in urging people to keep away and in recommending persons here not to allow their families to return. The atmosphere is charged with typhus miasms. The death-rate continues to increase.

FROM ABROAD.—DEATH FROM CHLOROFORM.—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

Dr. Blodig, Professor of Ophthalmology at the Eye Infirmary at Gratz, relates an interesting case (*Wien. Med. Woch.*, December 31) of death under chloroform. The subject was a lad, aged 11, who, two or three weeks before, had wounded his eye with a knife, giving rise to cataract and dislocation of the lens, together with adhesion of the inflamed iris. It was resolved to remove the lens, and perform iridectomy, and, with this intention, chloroform (the good quality of which had been tested in numerous other cases) was administered, about two drachms being employed. The operation required more than usual care and time, owing to the constant movement of the head on the part of the patient. While the dressing was being applied, the lad was observed to make several rapid respirations, and then to cease breathing. The pulse could not be felt, and the pupil of the other eye was unusually dilated. Artificial respiration and various other means were resorted to, with the effect, at first, of restoring some respiratory movements at longer or shorter intervals, the pulse also being felt again weakly beating, and the face recovering some of its colour. A collapse then suddenly set in, and, after three-quarters of an hour further effort, all hope was abandoned. A post-mortem, carefully performed, failed to exhibit any peculiarity. Professor Blodig thinks that the following points are noteworthy in the case:—1. The small quantity of the chloroform used. 2. The incompleteness of the narcosis produced, as evidenced by the frequent movements of the head during the operation. 3. The continuance of respiration after the completion of the operation, and certainly six or eight minutes after the cessation of the inhalation. 4. The return of deep inspirations and the colour of the face and lips during the attempts at reanimation. 5. The absence of any explanatory appearance at the autopsy.

Professor Billroth, now entering upon the Surgical portion of his letters, first observes that almost every Surgeon, without acting in concert on the matter, seemed bent upon ascertaining the limits to which conservative Surgery of the limbs might be carried. When he left the seat of war, at the end of September, his impression was, that the experiments in the extreme conservative direction had been carried too far, especially as regards gunshot wounds of the knee; and that, in the event of the continuance of this war, or the breaking out of a new one, amputation would be performed more frequently, and at an earlier period. He could not suppress the feeling that our indications for amputation are far too uncertain, and in some cases rest on no firm basis. With the exception of this and a few subordinate points, no branch of Surgery is so guided by well-ascertained and precise rules as the treatment of gunshot wounds.

As far as his own observations extend, Professor Billroth believes that, after a battle, in only a third of the cases are the wounds of a severe character, and that of these a third or a fourth die. It is too early to draw any statistical conclusions, which, indeed, cannot be safely drawn from the experience of particular Hospitals or towns. Hereafter the gross mortality will have to be compared with that resulting from former wars, and we shall be able to judge how far science and humanity have or have not made progress. The mode of warfare, as—*e.g.*, whether a preponderating number of wounds have been caused by shells or other projectiles, the conditions of climate, time of year, and various other points, will have then to be taken into account. In the meantime, he confines his attention to the subject of gunshot wounds, having had no opportunity of treating sword or bayonet wounds in his own Hospitals, and having seen but few examples in those of his colleagues. He furnishes figures of the different projectiles employed, and observes that, although the aperture which the needle-gun makes must be larger than that from the chassepôt, the difference to the eye is insignificant, except in subcutaneous wounds (*Haarseilschüssen*) of the soft parts. Wounds with slit-like exits are sometimes remarkable for the amount of suppuration which takes place in the subcutaneous cellular tissue, requiring for its discharge dilatation of the aperture—this, indeed, sometimes healing up before the pus is discharged. In some of the *Haarseilschüssen*, the second portion of the track of the wound heals without any discharge at all, while the orifice of entrance is in a state of suppuration; and this is what happens in gunshot wounds supposed to heal by first intention, examples of which Professor Billroth has never met with. The action of projectiles on the bones is that which is most peculiar in military Surgery. The "colossal" splintering of the diaphyses of the long bones, and the direct manner in which they are struck and broken, are quite remarkable; in civil practice there is nothing analogous to it. When, in cases of running over, falling from heights, accidents from machinery, etc., fractures are produced with numerous and extensive splinters, the soft parts are also so much crushed that primary amputation has to be at once executed. But in gunshot wounds the implication of the soft parts is comparatively slight, there being seldom any considerable crushing or laceration, the bones only being crushed and splintered to an unknown extent in various directions. Little difference between the effects of the French and German projectiles on the bones and vessels was observable. In both simple fractures and contusions without wounds, and in both enormous splintering were met with; and if, as some have stated, the injuries to the bones have been found less severe among the Germans, this must be attributed less to the smaller volume of the French projectile than to the fact of the French very often firing from too great a distance, whereas the Germans advanced much nearer, in order to take good aim. When bones are struck by projectiles, these seldom remain unchanged in form, becoming flattened or split into fragments of the most irregular shape. On examining the portions of torn lead which are extracted from the wounds, we might easily come to the conclusion that the ball, when striking against the bone, must have been in a soft or half-molten state, since it seems incredible that the bone should offer such a resistance as to remain unbroken while the ball itself may have become flattened. Yet none of the projectiles extracted have exhibited any signs whatever of a melting of the metal. Neither at Weissenburg or at any of the Lazareths which he inspected did Professor Billroth see any wounds which were to be certainly attributed to the mitrailleuse projectiles. There would seem to be nothing special about them beyond their being probably somewhat larger than those caused by the chassepôt, and somewhat less than those from the needle-gun. However, neither Professor Billroth nor his colleagues had occasion to extract any of the mitrailleuse projectiles, even after battles wherein this weapon had been much employed. Nor did he meet with many wounds from shells at Weissenburg. The injuries done by them were very considerable, much resembling those observed in accidents from machinery. It was for these fearful injuries that primary amputation was chiefly resorted to.

The belief that balls are often healed over has, as its consequence, discountenancing attempts at searching for them soon after the receipt of the wounds, as an unnecessary loss of time; and the advice has even been given to take no trouble in looking for them in blind wound-tracks, since metallic bodies do not impede healing by the irritation they cause. Such advice must not be too closely followed, for if the Surgeon surmounts his desire to extract as many balls as possible, he will still find the soldier expressing the most anxious desire to have the ball removed, which he believes to be the only cause of his suffering and impediment to his recovery. Although for the purpose of such extraction great numbers cannot be put under chloroform, there is no operation of which he can so well judge of the aim, and to the performance of which he so readily consents. His joy on the removal of the ball is extreme, in the belief that the obstacle to his rapid recovery has now been removed. Quite independently of this psychical effect of the extraction, which, however, should not be underrated, and which should be allowed to the Doctor, who seldom has an opportunity of performing so effectual an operation, the presence of the ball is by no means so insignificant in its effects upon the healing of the wound as has been represented. At all events, the projectiles now employed induce very considerable suppuration. Upon this point Professor Billroth has already expressed his opinion, in a lecture delivered at Vienna, and reproduced in our pages (December 24, 1870, p. 736). Certainly, in all blind wound-tracks of extremities, and in non-penetrating wounds of the trunk and head, the finger should always be introduced on the first examination or dressing; and when the entrance caused by the chassepôt is too small, we must enlarge it by a slight incision, so as to admit the finger together with an instrument passed by its side. Nor should we neglect the old rule of endeavouring to ascertain the position of the soldier when struck, this often furnishing us with a good indication of the probable situation of the projectile. Besides the fear of extensive suppuration ensuing if the projectiles are allowed to remain unremoved, we must also bear in mind that, under the present system of distributing the wounded, we know not how many days and nights the soldier may have to travel, the projectile still in the wound, before an attempt at its removal can again be made. If it compress a nerve, the pain which is induced by the transport becomes excessive. If the ball lies imbedded in the bone or amongst splinters, or lies in contact with the joint, the necessary time and assistance for the extraction may not be obtainable near the battlefield. A considerable number of balls that were not at first discoverable, and were supposed to have passed through or glanced off, are subsequently discovered within the cavities of abscesses, the sharp edges of the torn projectile often being the mechanical cause of keeping up the inflammation and suppuration. Moreover, when the projectile is much broken, we know that it must have struck a bone, greatly contusing or fracturing it. The ensuing traumatic ostitis and periostitis has a special disposition for inducing suppuration in the surrounding cellular tissue, especially if the injury be complicated with a suppurating wound. In this way, we see why a projectile is so often found within collections of matter. But even when the projectile is unchanged in form, we must not conclude that it has not struck a bone. The scapula, ribs, pelvis, or spongy portions of the long bones may be perforated by projectiles and greatly crushed without any change in the form of these being produced. Although there are preparations exhibiting projectiles partially encapsulated in bones by means of osseous deposits, yet these must be regarded as mere curiosities. As a general rule in such cases, painful ostitis and periostitis followed by formation of abscess is the result.

In reference to the detection of deep-seated projectiles in wounds, Professor Billroth observes that Nélaton's sound has certainly been of use in some doubtful cases, but that its fame is much greater than its practical utility. As a general rule, projectiles that cannot be reached by the finger can very rarely be extracted, for in the employment of long forceps the sense of touch is very imperfect, and the body can only be firmly embraced when it is not too mobile. He had expected great things from the American bullet-forceps; but, although his pair was by no means a weak one—and he had been able to raise a stool without bending its branches, yet it was found much too weak for the extraction of deep-seated balls, bending when forcibly closed on the body.

(To be continued.)

PARLIAMENTARY.—BABY-FARMING — SMALL-POX — ADULTERATION OF FOOD AND DRUGS—VACCINATION—MEDICAL ACTS AMENDMENT.

In the House of Commons, on Thursday, February 16,

Mr. Bruce, in answer to Mr. Charley, said that he was unable to undertake the introduction of a measure on the subject of baby-farming at present. The hon. member, however, he understood had, with the assistance of persons who took an interest in the subject, prepared a Bill, and if he would introduce it, it should receive the careful consideration of the Government.

Mr. Holms asked the President of the Poor-law Board if he would state the number of cases of small-pox reported among the pauper population of the metropolis, and the extent of the accommodation provided for them, or in immediate preparation.

Mr. Goschen said the last returns showed that the total number of these small-pox cases under treatment was 1228. The accommodation for them consisted of 520 beds in the metropolitan Hospitals, and the boards of guardians had accommodation for some 300 more; making a total of 820 beds, or about 400 short. In the course of a fortnight, however, the number of beds would be increased by upwards of 500, so that the provision would exceed the cases known to be in existence. Some of the accommodation furnished by the guardians was, however, of an insufficient and temporary character, and it might be requisite to have 200 or 300 additional beds. Of the 400 cases unprovided for, the majority were at Bethnal-green, Shoreditch, and Whitechapel. A report had gone abroad that at Shoreditch there were 420 cases unprovided for; but that number was made up by an erroneous calculation. The real number of cases unprovided for at Shoreditch was about 150—certainly far too many.

Mr. Muntz obtained leave to bring in a Bill to amend the law for the prevention of adulteration of food and drink and drugs.

On the motion of Mr. W. E. Forster, the Select Committee on the Vaccination Act (1867) was nominated as follows:—Mr. W. E. Forster, Mr. Cave, Mr. Candlish, Mr. W. H. Smith, Mr. Muntz, Lord R. Montagu, Mr. Jacob Bright, Sir S. Child, Dr. Lyon Playfair, Mr. Holt, Mr. Taylor, Sir D. Corrigan, Dr. Brewer, Mr. Alderman Carter, and Mr. Hibbert, with power to send for persons, papers, and records.

On Monday, February 20,

Dr. Lush asked the Vice-President of the Council whether it was his intention to bring in any Bill for the amendment of the Medical Acts during the present session.

Mr. W. E. Forster said it was not intended to bring in such a Bill in the present session.

On Tuesday, Mr. Charley, in moving for leave to introduce a Bill for the better protection of the lives of infants, said the House would admit the necessity for such a Bill. The leading provision of the Bill was, that it should not be lawful for any person to nurse for hire apart from their parents any children under a certain age without being furnished with a licence from a magistrate, and a certificate from a magistrate, or minister of religion, or registered Medical Practitioner, that the applicant was of a good character and was able to supply children with food and lodging. The licence would endure for a year, and would be revocable. The Bill would impose penalties on persons taking children without a licence, and it made provision for the registration and inspection of children. At the suggestion of the right hon. gentleman the President of the Poor-law Board, the Bill contained a clause to the effect that the provisions of the Bill should not interfere with the management of pauper children.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

It is at such a season as this that we all feel most fully the need of a registration of public sickness. Valuable as the mortality returns issued from Somerset House undoubtedly are, they fail to tell us the very thing which we are most anxious to know. They tell us how many people have died of small-pox after an illness varying from a few days to a week or two; but as these deaths relate to persons who have been ill for varying periods, and are not all even registered in the week in which they occur, they furnish only a very rough idea of the real progress of the epidemic from week to week. Even thus they are necessarily behind date to the extent of the average duration of an attack of fatal small-pox, and we fail to learn from them whether the disease is growing milder as the epidemic runs on, or is becoming more fatal to those attacked. The Health Officers of the metropolis at one time published statistics of the kind we now so greatly need, and had it not been for the occurrence of a spasm of governmental economy, we should still have continued to receive the benefit of their observations. We understand that the Association of Medical Officers of Health is about to supply the public with the information now required as to the new cases of small-pox observed week by week in the metropolitan districts. If all the Medical Officers of Health unite in this effort, they will merit the best thanks of the public at large. Awaiting this publication, we may give the following numbers, as showing the weekly progress of the disease in two parishes—namely, Islington in the North, and Whitechapel in the East, as furnished to us by the Health Officers of each respectively, commencing from the end of November:—

New Cases.

Week ending	Islington.	Whitechapel.
November 26, 1870	17	16
December 3, ,,	17	18
,, 10, ,,	23	25
,, 17, ,,	24	31
,, 24, ,,	24	25
,, 31, ,,	16	18
January 7, 1871	16	20
,, 14, ,,	38	33
,, 21, ,,	23	19
,, 28, ,,	44	30
February 4, ,,	20	32
,, 11, ,,	34	25
,, 18, ,,	36	31

It is curious to notice how the weekly fluctuations corresponded for the most part in these two districts of London, although situated so far apart. It would be difficult to overestimate the scientific value of similar returns if they were gathered from all the parishes in the metropolis. We add the following

New Cases of Small-pox in Public Practice of the undermentioned Districts during the Week ending February 18, 1871.

Whitechapel	31,	of which sent to Hospital	—
St. James, Westminster	14,	,, ,,	12
St. George, Hanover-square	28,	,, ,,	22
Holborn	14,	,, ,,	11
Lambeth	18,	,, ,,	6
Islington	36,	,, ,,	22

HISTORY OF THE FIRST FRENCH VOLUNTEER AMBULANCE.

By ONE OF THE SURGEONS,
Now Prisoner of War at Versailles.

(*Continued from page* 171.)

"Misery" and "wretchedness," taken in their full sense, would give as true an idea of the condition of the wounded in Metz as any picture which I may be able to draw. Imagine 40,000 wounded, or more, suddenly collected during a summer season in and around an unhealthy, unprovided town, itself surrounded by two great armies.

Metz, in ordinary times, is a city of 60,000 inhabitants; but this number was greatly increased by refugees from the adjoining townships. Already, during the first days of August, when families from the distance were moving in to seek shelter there, an order was issued that everybody entering the fortress must come provided with thirty days' provisions. But, even if this measure had been carried into effect, which it was not, that quantity of food would have been quite insufficient to last during the entire *blocus.* Peasants, with their household goods, came swarming into town; all brought furniture, bedding, and articles of value, which they wished to save from destruction, but only a few thought of food, either for themselves or for their animals. The number of inhabitants was thus increased to fully one-half.

Another fact which augmented the population of the city, and consequently helped to make hygienic conditions worse, was the tearing down of all buildings and dwelling-houses which fell within the reach of the batteries of the ramparts—the so-called "*servitude militaire.*" The necessity of such an order was inexplicable; for everyone must admit that, once the outer forts taken or flanked, the city could make little or no resistance. The destruction of these houses was therefore useless, and, besides driving those inhabitants into the already overcrowded city, thereby converted the many pretty parks, walks, and gardens of the environs into one vast military camp. If these properties had been left undisturbed, the immediate circumference of Metz would not only have been kept much cleaner, but enough garden vegetables could have been raised to supply citizens as well as soldiers. There was not a tree, not a shrub, left standing; the magnificent old poplars on the road-side, the nurseries even, all shared the same fate. The surroundings of Metz became a waste, a perfect wilderness.

Still another, and not the least unhappy, change—one which was necessary, it is true, but which helped to cut down the effective of the army and filled the Hospitals at a fearful rate—was the inundation of all the country south of Metz, between Forts Queuelen and St. Quentin. The Moselle—the valley of which is certainly as picturesque as that of the Arno—had to be used as a weapon against the enemy. By means of sluices it is possible to swamp the country for a great distance, and thus assist in the defence of the city from the southern side. All this would be very well provided soldiers are not obliged to camp alongside of such lands, and as long as winds from that direction, impregnated with the marshy poison, do not blow over the city and encampments. If the inundation of these lowlands could have been kept at a standstill, so as to cover equally and continually the decaying and decayed vegetables below, no harm could have come from it; but this was impossible. Owing to the rise and fall in the river from the heavy rains which fell during the months of August, September, and October, great irregularities occurred in the inundation. When the waters had receded to near the normal level, as first intended, acres of land were left exposed, covered with decayed vegetable matter. Now, if to the first two *facta,* aqueous deposition and vegetable decay, we add a certain amount of solar heat, the third necessary element to give rise to malaria, the *tableau* will be complete, I should think, to produce the various so-called "*maladies à quinine;*" also, doubtless, do we pave the way for "typhoid," and other low types of fever resembling it. It is true that the enormous amount of this disease, which so greatly decimated the ranks during the last thirty days of the blockade, in October, was principally due to insufficiency of proper food, to want of stimulants, to exposure, damp, and to moral depression; but at the same time it cannot be denied that the nightly absorption of a malarious atmosphere must have come in for a good share in the development of the disease. While on the subject of "malaria," I wish to remark that no one need be astonished if at some later day Surgeons who were in Metz during the *blocus* should publish cases of purulent infection cured by quinine. Those of the Medical officers who did not take into account this fact may have been led into error, in more than one instance, and looked upon every "*frisson*" as the beginning of pyæmia. The mistake is the more likely when quartered in a locality where purulent infection caused such frightful havoc as it did with us. The Surgeon preoccupied with that idea, and forgetting that a wounded man is equally liable to be taken with a chill from a non-Surgical cause, instantly considers the case one of purulent infection, and orders the pet remedy—sulphate of quinine. Soldiers, moreover, are often so ignorant and so little observant of themselves, that unless they are particularly questioned, one may suppose the chill, which by chance falls to the observation of the Surgeon or the *infirmier,* to be the proclaimer of the "dreadful disease." Several of such cases occurred in my ward; but I do not flatter myself to have cured purulent infection by quinine.

So much for the surroundings of Metz. As to the city itself, things were no better. If we take a glance at the place as it was during the blockade, we find all the barracks, schools, and public buildings converted into Hospitals. Over 2000 wounded were lodged here and there in the houses of the inhabitants. The promenade of the city, a beautiful square called "L'Esplanade," was immediately after the battle of the 16th put into requisition for tent Hospitals. A forest of tents of the old sugar-loaf pattern, close as they could stand, covered these grounds. Another 2000 wounded were thus stored away. "Stored away" is, indeed, the word. Each tent, in time of peace intended for six well men, now contained from eight to ten wounded, packed like salt herrings in a barrel, with the feet pointing towards the centre. All were bedded on straw, and but precious little of that. Their covering consisted of a dirty old army blanket, provided they had had the good fortune to have it near them when picked up on the field of battle. As to sheets or pillows, these were out of the question. The Esplanade ambulance, if such a name might be given to such a miserable affair, was a sad sight, and I, for my part, cannot imagine how Surgeons there could ever have applied the most simple bandage, much less an immovable apparatus, or perform an operation. The mortality, of course, was frightful. Adjoining the Esplanade was another open space, a sort of military parade ground, large enough, I should say, for a regiment to be drawn up in line. Here the shelter for the wounded, instead of tents, was railway baggage cars. These cars were again divided into upper and lower story, by means of a wooden partition, so as to afford double room. In some of the cars—those which had no plank partition—the wounded were swinging in hammocks. The idea of putting a wounded man into a hammock seems too ridiculous, and I cannot for my life see what sort of cases they could be fit for, nor what kind of cures one could expect to make in them. Of these cars there were ten in a line, and ten or twelve rows, in all from 100 to 120, each crowded to overflowing. As to the success of the treatment, I suppose it is useless to say anything.

On the plane called "Ile de Chambière," at the north-eastern portion of the city, had been erected thirty barracks, built and distributed somewhat after the fashion of the United States Hospital Barracks, near Washington, capable of accommodating each from sixty to seventy patients—all lying upon the floor, of course, as in every other ambulance. It is hard enough work to lean over wounded placed in beds from two to two and a half feet high, but it must be exceedingly tiresome to have to dress sixty or seventy patients in a morning, stooping and kneeling down. Near the south-western part of Metz, on a low tract of land called "Sauley," figured another tent ambulance, quite after the pattern of the one on the Esplanade already mentioned, only four or five times as large, and still worse organised, if possible, than that one. No necessity to enumerate every ambulance in and around the city. The above will suffice to show that the wounded in Metz were not to be envied. As to the Medical attention they received, especially about the commencement of the *blocus,* before death diminished their number, I need but give as an example the patients brought into my own tent from the "Sauley ambulance." Out of twenty-eight wounded whom I received, not one had been looked after for three days, and six of them had not had their wounds dressed for a week. Some of the latter presented the most horrible bed-sores which have ever come to my notice. It is impossible to form an idea of the dreadful mismanagement which pervaded every part of the Medical department, and especially in these outer ambulances made up *à l'improviste.* The want of Medical aid was not as great as may be supposed; but the distributions were badly made, and there seemed to be no head to the whole. This, above all, was the case with volunteer-

Surgeons, Physicians, nurses, and everything that was volunteer. I am now perfectly convinced that the volunteer system cannot exist and do well in a regular army. In saying this, I do not mean to make an exception in favour of the First French Ambulance, to which I belonged; although we might lay claims to have done some good, inasmuch as two of our Surgeons received the much-coveted "red ribbon," about which so many Frenchmen go crazy. I should be willing to accept volunteer Surgeons, only with the understanding that they become *militaire* for the time being, after the manner of the Prussians; and certainly I should never enlist "under-assistants," the most of whom are students, and quite unfit to attend the wounded. Their place is much better occupied by good *infirmiers*.

Writing about the neglect of the wounded in Metz, the ladies, too, come in for their share. I am far from advocating that ladies should dress wounds and do Hospital work; on the contrary, to me, a lady at that moment is quite out of place. But in the midst of so much suffering, when everything was wanting, and during a national war like this, ladies could have done a great deal one way or another. There were some, of course, who devoted themselves night and day; but all in all—I am sorry to have to say so—I have never seen less attention shown the wounded than there. The fact of having already a friend or relative in the house to take care of is not enough in the presence of so much misery and want. What I say of the ladies, in respect to the wounded, is equally true of the men as regards the army. They all played the soldier admirably well in the city, and even on the ramparts, but to undertake an important mission, such as getting through the lines—which, for a person born and raised in the country, was quite possible during the first thirty or forty days of the blockade at least—to carry a letter or a dispatch, not a soul ever offered to do, although the fate of the whole country depended upon it. Take any other country—take Germany, for instance—and reverse matters, and an attempt of this kind would have been made, I am sure. The people of the Lorraine did not prove the great patriots of old. There was a great deal of talk, but little action to the purpose; and my own impression is that they do not care much whether they become Prussian or remain French, provided they are left alone.

The first few days following the battle of St. Privat (August 18), our ambulance did very little; not that there was nothing for us to do, but in the confusion and excitement which existed, we had had no particular work assigned to us, and, to tell the truth, we were not at all anxious to take Hospital duty, which would have interfered with our original plan—that of following the army, for which purpose, in fact, we were more especially organised. It was not until the 22nd, when there could be no longer a doubt as to the *blocus*, that we set to work to form an ambulance of our own.

After having thoroughly examined every quarter of the town, we at last were fortunate enough to find still one more spot left which had not yet been taken charge of for the wounded; this was a triangular space, about 150 metres long, called "Jardin Fabert." The greatest objection to the place was its size, which was altogether too small for our numerous *personnel*, and the material at our disposition; but, finding nothing else, we lost no time in putting things in order for the reception of the wounded. At the entrance of the garden was a large wooden building, intended, I should say, for a pleasure hall, afterwards used as a gymnasium, but of late altogether deserted. The Moselle was on each side of us.

Before looking up this place for an ambulance, however, we had again attempted to make ourselves useful by going into the enemy's lines to bring away the wounded left there after the battle of the 18th, but this time with less success than on former occasions. With some twenty-five or thirty waggons behind us, we started, on the morning of the 21st, in the direction of St. Privat. Arrived at the village of Rozerieulles, we already came upon Prussian outposts, who, seeing our flag—at that time a little more respected than during the latter portion of the war—allowed us to approach without saying a word. The ambulance which we inquired after, they thought, must be in Gravelotte, or still further in the rear. I should here mention that the uniform adopted for the French volunteer ambulances was of a dark blue, so that, especially with the brassard on, we could easily be mistaken for Prussians, which seems to have been the case on this occasion, for we not only passed the advance picket, but also scouts, and occasionally an officer or two, all of whom saluted and answered my questions politely. We thus managed to go on without difficulty until, suddenly, when in sight of the plateau of Gravelotte, the battle-ground of the 16th, we found ourselves in front of a Prussian *corps d'armée* and an intrenched Prussian camp. M. Lefort and myself being ahead, we ordered the waggons and the balance of the Surgeons to halt at the foot of the plateau, until we could gather some information as to the whereabouts of our wounded, but also to see if it was prudent to venture any further, for we were evidently spectators of a scene which might not be agreeable to the Prussians. The first officer asked told us to ride to head-quarters, a house on the right of the road, a little ahead of us, where we should probably find the "General Stabs-Arzt." We here did find not only the Surgeon-in-chief of the corps, but also a General—Manteuffel, I think—who wanted to know "how in the devil we came here?" As neither of us gave signs of understanding German (I began to think it was best not to understand), the General repeated the same question in French, only a little less rudely. M. Lefort answered that we had simply come to look for the wounded which had fallen into Prussian hands on the 18th, as had been allowed us on previous occasions. After having told us to return immediately where we had come from, and never again to show our faces in his camp, I heard that officer order one of his staff to have the whole advance guard severely punished. We had scarcely riden 500 yards on our way back, and I had already thanked fortune for getting off so well, when we were accosted by some captain or major, who, too, wanted to know what we were doing here. Our answer that we were going to Metz did no good. "*Fous sallez affeck moi*,"(a) he said, and off we were marched again to head-quarters. I was too far off to understand what was said about us, but, at any rate, the consultation between the officers resulted in an order to have us sent to the rear, instead of letting us go on to Metz. Fortunately, in the course of the argument, and seeing that things were beginning to look rather awkward, M. Lefort mentioned that he had been with the Prussian army in 1864, against Schleswig-Holstein; that he could refer them to Count von Stolberg, formerly Grand Master of the Johanniters, etc.; all of which had the desired-for effect; so that, after ordering us to bandage our eyes, we were led back to Rozerieulles. To show the *ruse* of the Prussians, I might add that the soldier who was sent to lead our horses understood French perfectly; however, he could not have gathered much from the conversation which passed between M. Lefort and myself. We were only to glad to get out of the scrape, and I can assure you we did not commit ourselves. Once out of their clutches, we concluded that, if ever again we were obliged to go for our wounded in the enemy's hands, we should no more try and pass as Prussians, but halt at the outposts, and have our business announced *en règle*.

As matters turned out, we ought to be thankful that we failed in our mission; for surely the wounded were much better off in the Prussian lines than in Metz, where they would have been necessarily ill-treated. The little annoyance which M. Lefort and myself met with I cannot complain of; on the contrary, I think we fully deserved what we received. But, speaking of maltreatment of Medical officers, recalls von Bismarck's circular of January 9, 1871, in which the Chancellor of the German Confederation declaims against the French for not having observed the rules of the Geneva Convention, as though the Prussians had never been guilty of any wrongs against the white and the red-cross band. Why not tell the truth of the matter, and acknowledge that the Geneva Convention has become a complete farce during this war, and that the same has been totally disregarded by both parties.

If it will do any good to give individual cases, I might add to the already-mentioned murder of a French Surgeon, near Gravelotte, on August 16, by a Prussian Uhlan—firstly, that the Second French Volunteer Ambulance, Professor Marc Sée, Surgeon-in-Chief, was made prisoner at Pont-à-Mousson on August 17th, and sent to Cologne; secondly, that the Third French Volunteer Ambulance, Professor Ledentu, Surgeon-in-Chief, was taken prisoner near Gravelotte on August 16, and held there for over a month; two of the Surgeons who managed to come to Metz afterwards assured us, moreover, that the ambulance had been badly treated by the Prussian authorities; thirdly, that I and one of my assistants, Mr. Boylan, were arrested at Villeneuve-le-Roi on November 16, while on our way from Metz to Versailles, with our papers and everything in perfect order. Here we were kept and guarded over night until next morning, when we were sent, between two gendarmes, to Versailles, where, by order of General von Voigts Rhetz, commander of the place, we have remained ever since as prisoners of war, on parole, with the freedom of the city. So, both parties have violated the Geneva Convention, and the less that is said about the matter the better.

(a) I have distorted the spelling of the phrase "*vous allez avec moi*" to give it the way the Germans pronounce French.

In one of my previous letters I observed that this war had been the means of disabusing my mind of the utility of volunteer ambulances; and I can now say that it has done the same in regard to the Geneva flag. Both are good in their way, but it it is exceedingly difficult to make them work right in time of war.

NEW BOOKS, WITH SHORT CRITIQUES.

On the Tonic Treatment of Gout. By JAMES C. DICKINSON, M.R.C.S., late of Her Majesty's Indian Service, and formerly Staff-Surgeon Crimean Army. 8vo. Pp. 128. Baillière, Tindall, and Cox.

⁂ From considerable experience in India and elsewhere, the author has come to the conclusion that asthenic gout is now much more prevalent than it was in the time of Dr. Todd. He considers that later writers have not paid sufficient attention to this fact, nor to the necessity for a tonic plan of treatment in many cases which come under notice. The object of this volume, then, is to show the necessity of treating a great number of cases of gout from the beginning by tonics, and not to trust to "specifics" or a low diet and regimen, as very frequently resorted to. The work, which is divided into ten chapters, gives a full and accurate history of the literature of gout, together with the opinions of ancient and modern writers. He has chapters on the pathology, causes, and symptoms, and treatment of gout; on "remedies," and general rules of living. To these is added an appendix of cases illustrative of the tonic treatment. Mr. Dickinson has succeeded in putting in a succinct and clear form a mass of information respecting a very prevalent form of disease. The work can be referred to with advantage by young and old Practitioners.

The Descent of Man, and Selection in Relation to Sex. By CHARLES DARWIN, M.A., F.R.S. Two vols. London: J. Murray. Pp. 423 and 475.

⁂ We will not do more now than announce the appearance of a book which has long been looked for by men alike of science and of no science. There is no man now living who has so widely and deeply influenced the minds of men of education as Darwin, and his views have been even more cordially received in Germany than they have here. Curiously enough, they have made no great way in France. Followers will hail this new contribution from the pen of their master. In it his ideas are more clearly defined than before.

The Naval Medical Service. By F. J. BROWN, M.D. Second Edition.

⁂ The second edition of this very able little work has been issued, in which the author, "having obtained more information, has modified the text where necessary, in order to show that by chapter 4, section 3, officers are allowed the option of the scale of retirement, or the active half-pay of their rank at the time of retirement." The author has also added to the text certain points that have been brought to his notice concerning the chief office of the department.

DR. JAMES WINGATE JOHNSTON, the retired Inspector of Hospitals and Fleets, who has been awarded the good-service pension in the place of Dr. John Wilson, retired Inspector-General, who died in August last—entered the Naval Medical Service as Assistant-Surgeon on May 17, 1825, and, after serving in that capacity for upwards of six years on the North American and home stations, and on particular service, was promoted to the rank of Surgeon on January 27, 1832, and served with great credit on the North American, West Indian, Pacific, and South American stations, and was also in charge of the convict ships. He was promoted to the rank of Deputy Inspector-General on August 20, 1847, and served as Deputy-Inspector of the Fleet, under the command of the Earl of Dundonald, on the North American and West Indian station; and in the same capacity for four years, at Jamaica Hospital, during the prevalence of cholera and yellow fever; and subsequently at the Royal Naval Hospitals at Deal, Chatham, and Greenwich. On March 21, 1869, he was promoted to the rank of Inspector-General, and his name was placed on the retired list in November, 1868. Dr. Johnston has been awarded Sir Gilbert Blane's Gold Medal, and is Honorary Surgeon to the Queen.

FOREIGN CORRESPONDENCE.

HOLLAND.

ROTTERDAM.

THE SMALL-POX EPIDEMIC IN HOLLAND.

THE epidemic of small-pox is fearfully raging in our country, and those places where the inhabitants are the most orthodox are the worst off. It is a shame to hear the arguments against vaccination, mostly in the so-called religious "temples." You would believe you were amongst the worst sort of heathens when hearing their arguments, and there is no convincing these people.

In Rotterdam, vaccination and revaccination are carried on on a great scale; but still there are many opponents who hold those dark and barbarous religious principles. It is to be hoped that, under the ministry of our energetic and famous Thorbecke, vaccination will be made obligatory ere long.

The following are the weekly numbers of deaths from small-pox:—

	Rotterdam.	The Hague.	Utrecht.	Amsterdam.
Population . .	121,027	92,021	60,421	274,931
Dec. 10, 1870 .	39	33	57	20
„ 17, „ .		32		
„ 24, „ .		52		
„ 31, „ .		75		
Jan. 7, 1871 .	30	35	27	5
„ 14, „ .	37	86	26	5
„ 21, „ .	55	126	33	10
„ 28, „ .	54	93	58	12
Feb. 4, „ .	62	112	45	18
„ 11, „ .	63	—	—	—
„ 18, „ .	84	—	—	—

The mortality of Utrecht and the Hague, if prevalent in London, would give the monstrous number of 3000 weekly deaths.

GENERAL CORRESPONDENCE.

IS A LEGAL QUALIFICATION EXPEDIENT FOR MEDICAL PRACTITIONERS?

LETTER FROM PROFESSOR BISCHOFF.

[To the Editor of the Medical Times and Gazette.]

SIR,—If I take the liberty to ask a favour of you in the following letter, I do so with the hope that you will find a sufficient apology for the demand I make on your valuable time in the interest connected with the subject.

You probably know that with us in Germany the *venia practicandi* for Physicians can be obtained only by passing an examination authorised by the State, and acquiring the degree of Doctor of Medicine. I myself, and many others are of opinion that by this requirement on the part of the State, the general high-standing of our German Physicians, and the flourishing condition of our Medical faculties have been established and maintained. There are, however, at present endeavours made among us to abolish this institution, and, as in England and America, to leave it to the option of everybody to practise Medicine even without having passed an examination and obtained a degree.

It would be of great interest to me to have your opinion on this matter, and I should be very much pleased if you would have the kindness to answer me the following questions:—

1. Do you think that the option to pass an examination or to practise Physic without having passed one, has ever conduced to further the study of Medicine, or to stimulate to greater zeal and diligence in its pursuit?

2. Do you not think that the privilege to be a Practitioner without thorough knowledge warranted by an examination assists and increases blundering and charlatanism in Medical practice?

3. Do you think that the public have sufficient judgment and discernment to guard against Physicians that have not passed an examination; to avoid them, and to rely on such as have been examined, because it is known that the former have made no thorough studies, and are for that reason less instructed?

4. Have experience and observation not taught that the

injuries inflicted on the health of the public by Physicians that have not passed an examination are great and manifold?

5. Has it not been observed especially that, with respect to Forensic Medicine and to Medicine in so far as it relates to police, great evil has been caused by Physicians who had not passed an examination, and that by such, through their use of poisons, of means to produce abortion and the like, crime has been aided and increased?

6. Do you think that these evils, or these causes of fear of unrestricted Medical practice can be checked by legislation and by punishment for mischief done?

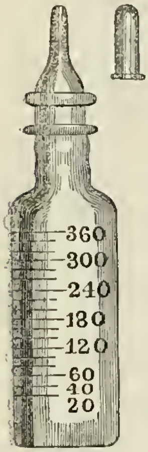
By simply answering these questions from your experience and observation, you would do me, and perhaps, also, our whole Medical Profession, a great service. For that reason I beg of you a speedy answer.

I am, &c.
Dr. Bischoff,
Professor of Anatomy and Physiology to Munich.
Elisenstrasse, Munich, February 5.

CHLOROFORM ADMINISTRATION.

Letter from Mr. John Astley Bloxam.

[To the Editor of the Medical Times and Gazette.]



Sir,—As a favourable notice was taken in your paper, dated February 4, of my method of administering chloroform, I beg to enclose a drawing of the bottle, which is exceedingly portable and simple. No assistant is required in the administration, and the chloroform being spread over a large surface of lint, the amount of atmospheric air mixed is very great, and not limited. The objectionable mouthpiece is also not present. I believe it is safer, also, as you do not trust to the regular action of some set of valves, which are liable to get out of order, but to your own attentive observation of the case. The bottles so graduated are to be obtained of Messrs. Arnold and Sons, Smithfield, at 3s. 6d. each.

I am, &c.,
John Astley Bloxam,
Chloroform Administrator and Surgical Registrar St. Bartholomew's Hospital, late Assistant-Surgeon Royal Horse Guards.
St. Bartholomew's Hospital, London, February 22.

ALLEGED GERMAN BARBARITIES.

Letter from Dr. P. Giraldes.

[To the Editor of the Medical Times and Gazette.]

Monsieur le Directeur du Medical Times and Gazette,—Dans l'intérêt du respect dû aux conventions internationales, je viens vous prier de vouloir bien insérer la présente lettre dans votre plus prochain numéro; et vous prier de vouloir bien agréer l'expression de mes meilleurs sentiments.

P. Giraldes,
Membre de l'Académie de Médecine.

Monsieur le Rédacteur,—Parmi les episodes douloureux du siége de Paris, il importe de faire connaître, et de porter à la connaissance du monde savant, et en particulier du monde Médical, le mépris des autorités allemandes pour les conventions de la Réunion Internationale de Génève.

En effet, non seulement le pavillon de Génève a servi aux Allemandes à couvrir des convois de vivres *et de munitions*, mais encore, ils n'ont pas hesité à tirer sur les ambulanciers qui le portaient et a blesser et tuer quelques uns de ces hommes dévoués.

Mais pour couronner l'œuvre, Monsieur de Bismarck a consenté, et Monsieur de Moltke a fait exécuter, *sciemment, de propos délibéré* le bombardement, pendant le jour *et la nuit*, des *hôpitaux* et ambulances.

Au nombre des Hôpitaux bombardés, très-reconnaissables par leur dôme élevé, et par le drapeau de Génève qui les décorrait, se trouva l'Hôpital Militaire du Val-de-Grâce, et l'Hospice de la Salpêtrière.

L'Hôpital du Val-de-Grâce a reçu dans son enceinte 92 obus de 14 et de 22 centimètres de base; il a fallu déménager cet établissement.

L'Hôpital de la Pitié en a reçu 100 du même calibre.

L'Hôpital des Enfants et l'Hôpital Necker, établissements très-visibles des batteries de Meudon, d'ailleurs surmontés du drapeau de Génève, ces deux Hôpitaux ont été bombardés jour et nuit.

Cet acte d'infame brutalité, digne de la sauvagerie des peaux Rouges, doit être signale!

J'ai l'honneur d'être, Monsieur,
Votre serviteur, P. Giraldes,
Chargé d'un Service Militaire à l'Hôpital du Val-de-Grâce; Membre de l'Académie de Médecine.

ADVANTAGES OF BICHLORIDE OF METHYLINE.

Letter from Mr. Charles Gaine.

[To the Editor of the Medical Times and Gazette.]

Sir,—In April last I read a paper before the Bath and Bristol branch of the Bristol Medical Association on "Anæsthetics," and in it endeavoured to explain the advantages which, from repeated experiments, I thought the "bichloride of methylene" possessed over all others then known. Since that time I have administered it in a great number of operations, not only in my own special practice, but also for my colleague, Mr. Stockwell, at the Royal United Hospital, and in private practice, with the most marked success; notably in the following operations:—Lithotomy, reduction of dislocations, fistula in ano, recto-vesical fistula, resection of knee-joint, amputation of leg, excision of mamma, necrosis, cataract, iridectomy, etc.—the oldest person operated upon being a woman, aged 70; the youngest, a child, aged 6 years. The shortest time in which anæsthesia was produced was twenty seconds, in a child, to sound for stone in the bladder; the longest, two minutes and a half, in a man, aged 24, for extraction of teeth—the shortest time which anæsthesia was maintained being forty seconds; the longest thirty-five minutes. The recovery has always been rapid and complete.

I first administered the bichloride of methylene in some half-dozen cases in 1868, but discontinued its use, because I found it less manageable than chloroform; the cause of my failure then, I have since discovered, was the admission of too much air in administering it. I subsequently employed the protoxide of nitrogen in my own practice, but the peculiar physiological phenomena exemplified in using this gas never impressed me so much in its favour as it has many others.

In January, 1870, I read a paper by Mr. Bader, of Guy's Hospital, published in the *British Medical Journal* of January 9, "On the Administration of Chloroform and other Anæsthetics." In this paper the cause of my former failure with the bichloride was fully explained. I therefore resolved to give it another trial; and to the courtesy of my friend Mr. W. R. Wood, of Carlisle House, Brighton, and Mr. Rendle, of Guy's Hospital, I am indebted for some valuable information as to the manner of administering it, and to the latter gentleman for a description of his inhaler also. This inhaler I have found to answer the purpose admirably. It consists of a hollow cylinder made of thick leather, about five inches long, and shaped at one end to fit the nose and chin, the other end having small holes punched in for the admission of air. It will be necessary to have three different sizes, as the efficacy of inducing rapid anæsthesia with the bichloride of methylene depends on the inhaler accurately fitting the nose and chin, so as to prevent the admission of air at that end. A flannel bag hangs loosely within the cylinder, on which the methylene is sprinkled.

The following rules I have found of great importance, and the strict observance of them will tend greatly towards success in the administration of this agent:—It should never be administered without first preparing the patient. Abstaining from food and stimulants of every kind should be insisted on for from three to four hours before the time appointed for administering it; all garments should be loose. Auscultation not revealing any morbid condition to contraindicate its use, the methylene may be administered in the following manner: The patient being either in the recumbent or semi-recumbent position, forty minims should be sprinkled on the flannel bag, and the inhaler then applied closely over the nose and mouth. A slight choking sensation will be first apparent, which passes off rapidly; if not, remove the inhaler for an instant. In from half a minute to a minute (seldom longer) anæsthesia of the eyeball is complete, though it will continue to roll about, showing more of the sclerotic than usual. The operation may then be commenced. Remove the inhaler entirely, until symptoms of returning consciousness are seen, when, if the operation is not completed, renew the inhalation with half a drachm more methylene; in a few seconds the inhaler may be again removed. In this manner, by proper attention to symptoms, a patient may be kept under its influence for any reasonable time. Should the operation be of short duration, from forty minims to a drachm of methylene will suffice for most cases. With two drachms and a half I have kept a patient under it for thirty-five minutes for resection of the knee-joint. I have not had a single case of vomiting, and two cases only that gave me the least uneasiness, and these had both departed from the rules laid down as to stimulants, etc.

To relate a number of cases would only occupy your valuable space for no useful end, but the following extracts from my note-book may not be uninteresting in comparing the effects of methylene with chloroform and protoxide of nitrogen on patients who had inhaled one or other of these agents before. In January last I was consulted by a clergyman who, some five years since, had on three different occasions inhaled chloroform for removal of teeth. My friend, Mr. Fowler, who administered it, told me that each time he had the greatest difficulty in getting him under the influence of it, and he was always prostrated for nearly a week after it. It was necessary to remove some particles of necrosed bone in the upper jaw, and puncture a deep-seated cyst. This was accomplished under the influence of one drachm of methylene, and in three minutes from the commencement of the inhalation he was sufficiently conscious to converse with us, and inquire what had been done. He walked away a few minutes after, and has not subsequently felt the slightest ill effects.

A young lady had inhaled "protoxide of nitrogen" in London for tooth extraction. The first upper and lower molars on the left side were extracted; the corresponding teeth on the opposite side were broken in the attempt. It was necessary, for regulating purposes, to remove the stumps. She asked me to give her chloroform; she said she would not take gas again. Methylene was administered, and the stumps removed, and in five minutes she walked away without feeling any inconvenience.

In the case of a woman, from whom it was necessary to remove all the remaining teeth (twenty-two in number), I administered protoxide of nitrogen; she was so uproarious, and subsequently became so blue with stertorous breathing, that I was only enabled to remove three teeth. A week later, I removed the remaining nineteen under methylene at one sitting, seventy minims only of the bichloride being used. A quarter of an hour afterwards she walked home, feeling no ill effects, further than the loss of her teeth. Very many similar examples could I mention, but, as I have said, no useful purpose will be served by so doing. Let it suffice that, in relating my success with the bichloride of methylene, I have confined myself entirely to what I have observed in administering this agent, and am alone responsible for any shortcomings in this respect. It is equally useful in long as in short operations, and only requires to be more generally understood to give it precedence over all anæsthetics yet known. In private practice I have usually been assisted by the family Medical attendant; at the Royal United Hospital, by Mr. H. C. Hopkins, the House-Surgeon. I am, &c.

Charles Gaine.

DR. BEAUPERTHUY'S TREATMENT OF LEPROSY.

Letter from Dr. R. H. Bakewell.

[To the Editor of the Medical Times and Gazette.]

Sir,—It appears from a paragraph published in two of your Medical contemporaries, that the Colonial Department has requested the College of Physicians to select a gentleman to go out to Trinidad, to make inquiries as to the result of Dr. Beauperthuy's treatment of leprosy. The Colonial Office takes its time about everything, and it certainly is not in a hurry about this matter, which has now been before it about two years and a half. As I have no expectation of living to the age of the patriarchs, I shall not await the arrival of the gentleman from the College of Physicians, but will, with your permission, put before your readers (particularly those in the tropics) the present state of this question.

The method of treatment followed by Dr. Beauperthuy will be found described in one of your numbers for May, 1870. It may be as well to mention that it consists of nourishing diet, with total abstinence from salt fish and pork; daily frictions of the whole body with cocoanut oil, followed after a few hours by soap-and-water baths; the application externally of cashew-nut oil—a vesicant—and attention to the usual hygienic rules. Very small doses of the perchloride of mercury are administered twice a day. This treatment has been tried, first by myself, on some patients in this island; secondly, at Guadeloupe, by Dr. Brassac, who was sent by the French Government to Cumana to investigate the method; and also by two other Physicians, whose names I forget, at Guadeloupe. Dr. Beauperthuy is now at Demerara, by desire of the Demerara government, making arrangements for the treatment of forty lepers, whom the government will place at his disposal. He will also be allowed to undertake private cases. He came here from Cumana a few weeks ago, bringing with him two or three cases which he had treated and cured.

One of these, a young white creole, of Martinique, I saw at Cumana eighteen months ago (May, 1869), in company with Dr. Brassac. The latter, in his printed official report, thus describes his condition:—"A. R., aged 22 years, son of a white creole family; no hereditary influence. Disease commenced two and a half years ago, when serving in the French army at Cherbourg, by stains (*taches*) first on the thighs, then on the legs and arms. Sensibility, perfect at first, became obtuse later. Ten months after the first spots, some tubercles appeared, the number of which rapidly increased. These tubercles, for the most part pisiform, of a cherry red, are so close together in some regions as to resemble the pustules of confluent small-pox, and form broad layers (*de larges couches*). There is ulceration of the nasal mucous membrane; swelling (non-tuberculous) of the uvula and epiglottis."

My own notes, after giving the history as above, are:—"The whole of the body, face, arms, and legs, covered with thousands of small round tubercles. On the arms, they touch one another, and form large thick masses. Respiration nasal; ulcers on mucous membrane of nose." Both of us omitted to note what, however, was the fact, that there was no beard, and the eyebrows were very insignificant.

Since his return I have carefully examined the whole of his body. There is not a trace of tubercle about him anywhere; his respiration is normal; the ulcers of the mucous membrane have healed, his beard and moustache have grown, and he is altogether in better health generally than he was. I confess I did not know him again when I saw him, and until I saw his portrait, taken at the the time of his arrival at Cumana, I could not remember which of the patients he was.

Of course, the Leprosy Committee of the Royal College of Physicians will say, as they have done to other cases reported by me officially to the Government, that the case is either not cured, or never was a case of leprosy. But I venture to appeal from the College to the Profession, and ask them, until I am proved untruthful, to believe me when I say that, after seeing nearly 300 cases of leprosy, I know this was one, and I know that, as far as any external signs of the disease go, he is now cured. I appeal to the Profession against the report of the Leprosy Committee, with the more confidence because these cases were not treated by any method of mine; and I have no interests to serve in the matter except those of science and humanity.

Another equally satisfactory case is one treated by myself (by Dr. Beauperthuy's method, of course). He was sent to me by the late Mr. Bury Irwin Dasent, M.R.C.S., and Surgeon-General of this colony. The disease was well developed on the face arms, and legs. Anæsthesia of the affected parts was so complete that he came under my care with two ulcers produced by the application of red-hot charcoal to his flesh, which application he did not feel at all. He was not so long under observation and treatment as I wished, as he was very anxious to return to his wife and family; and, as he began to be melancholic, and worried me every day with requests to be discharged, I was obliged to let him go before the cure was perfect; nevertheless, the disease was arrested. There is (December 27, 1870) not a trace of tubercle left; sensibility has been entirely restored to the face, ears, and arms, where the anæsthesia was complete. The sensibility of the legs is nearly perfect, but not quite; however, where he could not formerly feel a live coal, he now feels the slightest pinch. There is one suspicious pale spot on the thigh, which ought to be touched, but I do not expect he will care to have it done, as he is at work every day, and is—like all Hindoos—excessively avaricious, and unwilling to lose a few days' work. He says he is perfectly well. He walked up from his home, twelve miles off, to see me, but went back without calling again. He first came under treatment on October 8, 1869, and was discharged at the end of February, 1870. The first application of the pure cashew oil was made on October 13. I had previously used a diluted oil, which was found of no use. A final application of the oil was made once after his discharge, on March 8. From that date until December 27 I never saw him. He had persevered in a good diet, and took the internal remedy until the beginning of April. I must not occupy your space with other cases, several of which will be found in my official report. I trust that these two may be considered as showing that there is something in the treatment, although the Leprosy Committee considers that my testimony is worth nothing, and "is no evidence of a cure having been effected."(a)

I am, &c.,
R. H. Bakewell, M.D., M.R.C.S. Eng., &c.,
Medical Officer of Health, etc., to the
Colony of Trinidad.

Trinidad, January 8.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 14, 1871.

Geo. Johnson, M.D., Vice-President, in the Chair.

A paper, by G. W. Callender, F.R.C.S., was read, on "Three Cases of Injury to the Brain, with an Appendix of Cases." In this communication attention is directed—first, to the frequency with which convulsions or rigidity are associated with paralysis of the left side of the body, as compared with that of the right; secondly, to the occurrence of these symptoms in cases of injury or disease of those parts of the right cerebral hemisphere which lie above the corpus striatum. After referring to some observations with reference to diseases of the membranes and around the principal cerebral arteries as associated with the occurrence of convulsions, some cases of left side paralysis are quoted from the practice of St. Bartholomew's Hospital, three of which are given in detail. These cases, added to others recorded by various observers, give the following results:—Side paralysis, 109 cases; rigidity or convulsions in 46. Right side paralysis, 48; rigidity or convulsions in 7. Left side paralysis, 61; rigidity or convulsions in 39. Cases in which parts above the corpera striata are affected: Left side, 37 cases; convulsions in seven. Right side, 47; convulsions in 39. Cases in which the corpora striata, including the optic thalami, are affected: Left side, 11 cases; convulsions in 0. Right side, 13; convulsions in 0. For convenience of reference an appendix is added, giving the cases referred to, arranged in two tables, and an outline map of the brain.

Mr. Croft asked Mr. Callender to give his theory more fully as to the nature and cause of the convulsions in these cases.

Dr. W. Ogle said figures went to show that disease of the right side of the brain produced convulsions more frequently than did that of the left. This was important, as tending to show that the functions of the two sides of the brain were not absolutely identical. The function of speech and its site tended to show the same thing. It was quite possible that the exceptions might be explained by the fact that left-handed people were much more common than was generally supposed.

Mr. F. Clarke narrated the case of a boy, aged 14, whose head was struck by the chain of a crane and extensively fractured. The wound on the right side of the brain was deep, and an extensive hernia followed, but ultimately the opening closed. He never at any time had spasms or paralysis, and after recovery he went back to his work, but his memory gradually failed, and he became imbecile.

Mr. Hunt referred to a case of injury to the head where the skull was fractured and the brain injured severely, yet recovery followed with little effect on the intellect.

Dr. Webster also narrated a similar case.

Mr. Clover said convulsions were common after inhalation of nitrous oxide, but not on one particular side. He thought this tended to show that convulsions did not depend on any special influence on one side more than the other.

Mr. Callender, in reply, said there were, no doubt, many causes of convulsions, but he had stuck to one point merely—viz., that certain injuries were more likely to induce them than were others. It was necessary that they should know more of the development of parts to be able to speak as to their relative functions.

A paper, by Robert Hall Bakewell, M.D., Medical Officer of Health for Trinidad, was read, entitled "Observations on the Pathology and Treatment of Malarious Fevers." In this paper the author gives the results of his experience of malarious diseases during a lengthened residence in the West Indies. After giving an account of the various opinions entertained by different authorities as to the mode in which the malaria poison enters the system, he states his opinion that, when once there, it acts, not by producing any change in the blood which renders it unsuitable for the nutrition of the organs, but by influencing specially the sympathetic nerves; and he attempts to explain the phenomena of the ague-fit on this hypothesis. In his treatment of the malarious diseases, the author relies on quinine and arsenic, and states that the bilious vomiting and purging, which often, in the West Indies, accompany an attack of marsh fever, are not, as usually supposed, an indication for the administration of calomel.

Mr. Heckstall Smith thought the malarious poison was carried in the air. In Essex they planted trees to prevent its spread, and walls had been found to have a similar effect in Mauritius in protecting barracks. He thought it good to give emetics at first, large doses of bark or quinine to stop periodicity, and arsenic after.

After a few words from Dr. Webster, the meeting adjourned.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, February 1.

Dr. Braxton Hicks, F.R.S., President, in the Chair.

The President delivered an Inaugural Address. The following gentlemen were elected Fellows of the Society:—Clement Godson, M.R.C.S.; Fred. B. Hallowes, M.R.C.S. (Redhill); P. G. Philps, M.R.C.S.; Charles Read, M.R.C.S.; and W. H. W. Wilkinson, L.R.C.P.

Dr. Heywoon Smith exhibited a Cast of the Head of a Child he had recently delivered by cephalotripsy.

Dr. Protheroe Smith exhibited the Pelvic Viscera of a woman who had died from spontaneous rupture of an ovarian cyst, complicated with a fibroid tumour of the uterus. The patient had suffered from severe diarrhœa for eight months before coming under observation, and also from sacral and bearing-down pains. The diagnosis which was made was correct, as verified by a post-mortem examination; but before any treatment could be adopted, the patient was seized suddenly with severe abdominal pain and vomiting, and she died in eight hours. After death an ovarian cyst was found, occupying the right side of the abdomen, and the peritoneal cavity contained two or three quarts of dark-coloured fluid, which was seen pouring out from an opening in the cyst immediately behind a globular fibroid tumour on the left side of the uterus. Dr. Protheroe Smith brought forward the specimen in evidence of the necessity of performing ovariotomy early under similar circumstances.

The President observed that Dr. Protheroe Smith had alluded to a very important point in practice—namely, how early the operation was justifiable in ovarian disease. There could be no doubt that many lives were lost whilst waiting, and he instanced one where another month would have rendered the operation impossible.

Dr. Phillips remarked that the early removal of an ovarian cyst had occupied the attention of many Practitioners, and that an American Physician was so impressed with its importance as to advocate, in certain cases, the performance of the operation through the posterior wall of the vagina, while the cyst was yet small.

Dr. Barnes observed that there was another mode of dealing with very early ovarian dropsy, from which good might be expected—namely, to puncture the cyst through the vagina by Dieulafoy's aspirator, and to inject it with iodine. He related a case in which this had been done, and thought the method deserved further clinical investigation.

Dr. Wiltshire said that the operation referred to by Dr. Phillips was called elytrotomy. Had gastrotomy been performed for the removal of the ovarian cyst now exhibited, he though the uterine fibroid might also have been removed at the same time.

Dr. Enis exhibited an Ovarian Cyst which he had removed from a patient at the Soho Hospital on January 28. This case also exemplified the advantage of early operation. The adhesions had probably formed during the last month. The patient was doing well.

Dr. Wiltshire agreed with Dr. Edis that, as a rule, the vascularity of ovarian adhesions increased with their duration.

(a) Extract from the report sent me by the Secretary of State for the Colonies.

He advocated the evacuation of secondary cysts before attempting to break down any adhesions.

Dr. Playfair read a paper "On Irritable Bladder in the latter months of Pregnancy." The author remarked on the frequency with which a severe and intractable form of irritable bladder was met with in the last few months of pregnancy, often giving rise to much distress and suffering, and little amenable to general treatment. He stated his opinion that many of these cases were due to a distinct mechanical cause—namely, pressure on the bladder, resulting from an oblique or transverse position of the fœtus. He described how these cases could be recognised by a careful examination of the abdomen. With regard to treatment, he stated that little or no benefit could be expected from drugs, but said that immediate relief could often be obtained by altering the position of the fœtus in utero, by abdominal manipulation after the manner described under the name of "external version" by Wigand, Stoltz, Mattei, and others. He described the method by which this could be effected, and concluded the paper by detailing three cases in which the most severe forms of dysuria were immediately relieved by this simple procedure, after the failure of every other plan of treatment.

Dr. Barnes said that if it should be proved that dysuria was a symptom of transverse or oblique position of the child, we should have a valuable indication to correct the malposition before labour came on, by substituting external bipolar version under the most favourable circumstances for turning at the time of labour. He would ask why Dr. Playfair, having rectified the position of the child, did not secure it in due relation to the axis of the uterus? This could be done by a bandage and two pads; one applied to each pole of the fœtus, and directed towards the median line.

The President considered himself indebted to the author for pointing out the fact that obliquity of the uterus produced irritability of the bladder. He was, however, at a loss to account for it by the pressure of the fœtus on the bladder, as the head in ordinary positions would press quite as much as a shoulder, if not more, and that against the most irritable portion of the bladder—namely, the lower portion. He would suggest another explanation—the disturbance to the form of the bladder by the altered form of the uterus.

Dr. Protheroe Smith inquired whether the author of the paper had observed a want of lumbo-sacral curvature of the spine in the cases related by him. Dr. Smith had remarked in some cases of extreme irritability of the bladder in pregnant women, not only a straight spine, but, as a result, an increased projection of the abdomen forwards—a condition which was effectually relieved by his pelvic band.

Dr. Playfair, in reply, stated that all the cases had terminated by head presentations. He did not, of course, hold that all cases of irritable bladder could be traced to this source. The three cases he had detailed were the only ones he had seen in which the transverse position of the fœtus could be clearly made out.

A paper by Drs. Braxton Hicks and Phillips, entitled "Remarks on Tables of Mortality after Obstetric Operations," was then partly read, and, on the motion of Dr. Barnes, seconded by Dr. Rogers, the further reading of this paper was adjourned to the next meeting.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, February 18.

Dr. Druitt, President, in the Chair.

The President read a letter from Dr. E. Ballard, who said he did not think the Privy Council's new system of vaccination was at all to blame for the present epidemic of small-pox, but he thought that more encouragement ought to have been given, before the outbreak, to revaccination. The regulation by which the fee for revaccination was fixed at only two-thirds of that for primary vaccination, led the guardians to consider revaccination of only secondary importance. Dr. Ballard was not only opposed to restricting the number of revaccinators, but he thought that, especially at the present time, vaccination ought to be carried into the houses of the poor. He did not consider the Act of 1867 complete; there was too much circumlocution, too many people, and too many offices.

A letter was read from Mr. G. Turner, of Peckham, calling attention to the Hospital Marquees manufactured by him.

The President laid before the Society a number of old pamphlets written about the years 1800-1805, including a portrait of a boy affected with so-called ox-pox. One writer prophesied that vaccinated children would be covered with red hair like cows, and would roar like bulls.

Dr. Druitt then read some remarks on what ought to be called Successful Revaccination. He said that many public vaccinators were in doubt whether they should get paid for revaccination unless *successful*. What is successful revaccination? He believed to be that there must be more than the effects produced by puncture with a clean lancet—this was failure. There must be evidence that some morbid agent has been introduced, although it may not produce its fully-developed phenomena. The effects of revaccination may be divided into four classes, according to the susceptibility of the patient; and the duration of these varies between five days and three weeks. Thus, there may be, first, a small, dry, itching pimple, coming up on the second or third day, and gradually fading: or, secondly, a papule, with an abortive vesicle on its summit on the fifth day, attended with some itching and tumefaction and irritation in the axilla, and, after the fifth day, shrivelling and drying up; or, thirdly, a vesicle coming to its height on the eighth day, showing an inflamed ring on that day, and forming a scab, which drops off about the fifteenth day, leaving a shallow cicatrix; or, lastly, there may be on the eighth day a transparent vesicle, with central depression, on an areola of a pale rose colour, to which succeeds more or less tumefaction, coming to its height on the tenth day, but not completing its career till it drops as a scab on the twenty-first. This was regular vaccination; and, in both small-pox and vaccination, the more perfect the development of the disease the more slowly are its phenomena shown. Every variety of modified small-pox has its analogue in what may be called the modified vaccination, the essential feature in both being that the disease is shortened and its local phenomena restricted, that superficial destruction which constitutes the pit being greatly lessened or entirely absent in both cases. Most unhappily, much of what is described as the third degree —a dry, flattish vesicle, with an irritable ring (as in the drawing exhibited)—passes as successful primary vaccination. Revaccination is an operation which requires to be performed with more care and circumspection than the original. The lymph ought to be of the most active kind, taken from the arm and used immediately; and as it is inherently less likely to lead to perfect results, so all causes of failure ought to be the more carefully excluded. This being done, the operation should be paid for *simpliciter*, regardless of results, for these are out of the operator's control. He knew some conscientious vaccinators who used to object to calling revaccination successful unless it produced a nearly normal pustule on the eighth day; but, as their trouble is the same in all cases, it is very unfair that they should be deprived of their reward because the original vaccination has retained its protective efficacy. He hoped that the present epidemic will deliver us from the exaggerated statements of those injudicious friends of vaccination, without which all the efforts of the anti-vaccination fanatics would be futile. One of these is the statement that vaccination ought to exterminate small-pox. This confounds two entirely distinct things; the existence, extra, of a morbid poison, liable to epidemic fits of activity, coming—as meteors, thunderstorms, eruptions of volcanoes, cattle-plague, and the like—at intervals more or less regular, and under the influence of laws with which we are very imperfectly acquainted. It is just as reasonable to say that umbrellas prevent thunderstorms, as that vaccination can prevent a small-pox epidemic. It enables us to protect ourselves, but there always must be in the nature of things a margin of persons liable to the disease, and these will suffer. Vaccination must be liable to occasional failures in quality. It is stated by Dr. Gregory, and is confirmed by daily experience, that the scrofulous, rickety, and ill-developed children of our large towns often give an irritable, premature, and hastily-developed vesicle with imperfect cicatrix; and it is probable that a change for the better in the constitution of such children may be attended with revived susceptibility of small-pox. It is possible, too, that the same causes which give greater intensity to the virus of small-pox may also render the constitutions of the people more susceptible. He heard, in the Profession, that never have revaccinations succeeded as they do now. This shows that through some latent changes the populace have been more liable to the bane and the antidote alike. Epidemics of small-pox will recur from time to time; and the cry of the newspapers ascribing the origin to neglect of vaccination is ridiculous and mischievous. We read, sometimes, Brussels is free-from small-pox, whilst Paris is decimated—a striking instance of the value of vaccination. Next week, we regret that small-pox has been introduced into Brussels, and spreads. The same is said of Ireland. But, we may ask, where is the boasted power of vaccination, if it does not defend from imported disease? The fact is, small-pox exists without us; we may hope for its extinction when poverty, filth, sordid houses and sordid clothes, tramps, and beggars shall be extinguished. Meanwhile, we may be content to enjoy the protection of vaccination and revaccination, and not damage them by claiming powers and immunities unwarranted by reason and experience.

Dr. **Letheby** quoted statistics showing that primary vaccination afforded protection up to 20. Dr. Stone's experience at Christ's Hospital gave only one case of death during a very long period among persons under 20 who had been vaccinated. Out of 617 deaths in Berlin in 1864, 41 per cent. were of persons over 20, of whom 11 per cent. had been well vaccinated. The experience at Vienna gave like results. Dr. Letheby was of opinion that it would be advisable for the Association to draw up a memorial on revaccination.

Dr. **Blackman** said he had, since January, vaccinated some 700 persons, and he never knew revaccination so successful as at the present time. Formerly there were about thirty failures out of 100, whereas now there were only about five. He believed that the same fact had attracted the attention of almost every Medical man. He had lately inspected a school in Spitalfields, in which he found 25 per cent. of the children without marks, although many of them had come fortified with certificates to show that they had been vaccinated.

Dr. **Gibbon** expressed doubts as to the efficacy of revaccination. In regard to the Privy Council's system, its effect in his parish had been the dismissal of several good vaccinators. The accommodation provided by the guardians was a room 10 feet by 5; and they might imagine the result at the present time. After waiting for hours, people went away in disgust. Dr. Gibbon maintained that dry lymph was very effectual, even after having been kept for twelve years, and he thought that stational vaccination was a mistake.

Mr. **Radcliffe** said that with careful vaccination from arm to arm he found hardly a single failure. He expressed his surprise at the general confusion in the Professional mind repecting the Privy Council regulations as to revaccination.

Dr. **Blackman** said his instructions from Dr. Seaton were not to revaccinate under 12; in ordinary times not under 15.

Mr. **Radcliffe** thought the Association ought to impress upon Government the equal importance of revaccination with primary vaccination as to payment. He doubted whether the extraordinary success of revaccination showed a more than usual liability to small-pox. He believed that all over the country there had been a great amount of very imperfect vaccination.

Dr. **Cobbold** then read a paper on the ova of parasites in relation to sewage, which will be found in another column. The discussion is reserved till next week.

EPIDEMIOLOGICAL SOCIETY.

Wednesday, January 11.

Dr. Milroy in the Chair.

A paper, by Dr. James Christie (of Zanzibar), was read

ON THE CHOLERA EPIDEMICS IN EAST AFRICA.

In this paper, Dr. Christie described the different cholera epidemics which have occurred in East Africa. The first epidemic of which there is any definite knowledge began in December, 1835, and January, 1836, during the prevalence of the north-east monsoon. The disease was first heard of in the Somali parts, and it extended gradually along the coast in the direction of the monsoon, from north to south, to some undetermined point south of Zanzibar, attacking that island in its course. The second known epidemic occurred in 1859-60. This, like the previously-recorded epidemic, broke out in the months of December and January, during the strength of the north-east monsoon. The disease was first heard of in the Somali parts of Mulreteslea and Brava. It passed rapidly along the coast to the southward, desolating the towns of the populous islands which fringe it, including Zanzibar, and extended as far as the Portuguese settlements on the Mozambique. The third epidemic was first heard of at Zanzibar in April, 1865, as prevailing in the Somali parts, towards the close of the north-east monsoon. The extension was limited, not passing lower on the coast than Mombasse. When the south-west monsoon set in, shutting off all traffic to the southward, the progress of the disease in that direction was arrested; but the epidemic struck off to the interior of Africa from Melinda, and prevailed to a considerable extent in Utrambani. The fourth epidemic, which has hardly yet come to an end, was first heard of as approaching Zanzibar in October, 1869. This epidemic differed remarkably in its line of approach from the previous epidemics. The earliest news of it in Zanzibar came, not from the Somali coast, but from the interior of the continent. It was reported, towards the end of October, 1869, passing through the country of the Wamasai, a district lying between the Victoria Nyanza and the east coast, had been attacked by a deadly plague, and that this fatal disease had extended through the Usambara country, and to the coast towns of Tangi and Pangani. This "plague" proved to be cholera; and on October 27, if not earlier, the epidemic appeared in Zanzibar, between which island and Tangi and Pangani communication by native craft is almost of daily occurrence. Subsequently, the disease passed northward along the coast, against the monsoon, carried by slave-boats to Mombassa, Melinda, and Samoo, and from Mombassa the epidemic passed into the interior among the Wanitra. South of Zanzibar, the epidemic spread to the whole of the coast towns as far as Cape Delgreto, and it was carried by native craft to the Comoro and Johanna Islands. There was a recrudescence of the epidemic in Zanzibar and some of the coast towns in January, or early in 1870, and in May it appeared at Mozambique. Mombassa was not the only point from which the epidemic left the coast to pass inland. It is believed that every infected town on the mainland disseminated the disease to a greater or less extent in the neighbouring country. From Bogamogo, a port nearly opposite Zanzibar, it is known to have followed the great ivory caravan route to the interior, and raged in Wegura, Usagari, Ugoga, and Mgunda Mkhali, at an early period of the epidemic. The mortality from this outbreak was frightful in many localities. It is estimated to have amounted to 15,000 in the town and suburbs of Zanzibar, among a population estimated at 70,000, and to 25,000 throughout the island—the entire population probably amounting to 300,000.

In addition to Dr. Christie's paper, extracts from official communications of Dr. Kirk, H.M.'s Acting Political Agent and Consul for Zanzibar, relating to Cholera in East Africa, and communicated through the Medical Department of the Privy Council Office, were read by the Secretary. The principal facts stated in the official correspondence had been included in Dr. Christie's paper.

The **Secretary** also made known to the Society that information had been received from Tamatane, dated October 10, 1870, to the effect that a disease resembling cholera had broken out at Mojarga, on the North-west coast of Madagascar.

The discussion on Dr. Christie's paper was adjourned to the next meeting of the Society, February 8.

OBITUARY.

COUNT CYPRIAN C. WOLLOWICZ, M.D.

It is with much regret that we announce the death of Count Wollowicz, Staff Assistant-Surgeon in her Majesty's army, as having occurred at Netley on the 20th inst. He belonged to an old and noble Polish family, whose property was confiscated in consequence of the active parts taken by its members in insurrectionary movements for the re-establishment of the independence of Poland. On the failure of the attempt, he studied Medicine at Berlin and Munich, and in 1862 took the degree of Doctor of Medicine at the University of the latter city, and having subsequently adopted England as his country, he became a naturalised subject, and in 1867 obtained the diplomas of the Royal Colleges of Physicians and Surgeons of Edinburgh. In October, 1867, he entered her Majesty's service as Staff Assistant-Surgeon, having taken the second place among fifty competitors. He served in the Abyssinian campaign in 1868, and there probably contracted the disease which eventually proved fatal to him. For several months past he had suffered from attacks of diarrhœa at irregular intervals, and his general health became much impaired. Within the last few months symptoms of dysenteric nature appeared, and were attended by very marked constitutional irritation. Large quantities of pus were latterly discharged from bowels and bladder, and it was evident that some very serious organic lesion had occurred.

The post-mortem examination revealed extensive ulceration particularly of the large intestines, with adhesion between the ileum and the right side of the fundus of the bladder, through which a perforating ulcer of the bowel had effected an opening. All the soft tissues in the true and false pelvis were in a state almost of sphacelation, and the bone was in some places in a carious condition. The inflammatory action had also extended to some distance among the muscles of the right thigh.

The early death of Count Wollowicz is felt as a very serious loss to the Army Medical Department, in which his extensive general and Professional attainments were calculated to have given him a high position, his name having already appeared, associated with that of Professor Parkes, F.R.S., in two papers lately read before the Royal Society on the influence of alcohol on the human body. As a personal friend, he was deservedly esteemed as a true, warm-hearted gentleman, and his loss is deeply lamented by all who knew him.

LEGAL INTELLIGENCE.

COURT OF COMMON PLEAS, February 17.

(*Sittings at Nisi Prius, at Guildhall, before the* Lord Chief Justice *and Special Juries.*)

TRAIL V. BRODIE.

Mr. James, Q.C., and Mr. Gibbons were for the plaintiff; the Solicitor-General and Mr. Morgan Howard for the defendant.

This was an action for slander, imputing to the plaintiff misconduct as a Medical man. In the course of the trial, the Lord Chief Justice said there had clearly been a misunderstanding, and on the Solicitor-General stating that his client denied having uttered the words, or even having them in his mind, a juror was by consent withdrawn. Thus each party pays his own costs.

MEDICAL NEWS.

University of Dublin.—At the spring commencements held on Shrove Tuesday, the 21st inst., in the Examination Hall of Trinity College, the following Degrees in Medicine and Surgery were conferred by the Right Hon. Sir Joseph Napier, Bart., Vice-Chancellor of the University :—

Baccalaurei in Medicinâ.

Crooslè, Franciscus Clements.
Hatchell, Ebenezer Johannes.
Lloyd, Rickard Edvardus.
Morgan, Johannes.
Stoney, Hugo Baker.
Thompson, Edvardus Carolus.
White, Gulielmus Rogerson.

Magistri in Chirurgiâ.

Crooslè, Franciscus Clements.
White, Gulielmus Rogerson.

Doctores in Medicinâ.

Ellis, Johannes.
Morgan, Johannes.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 16, 1871 :—

Briggs, George Chapman, Horncastle.
Burroughs, George Edward Elton, Little Hampton, Sussex.
Renwick, William, Tyr Phil, Glamorganshire.

As an Assistant in Compounding and Dispensing Medicines :—

Savory, Harry Banting, Painswick, Gloucestershire.

The following gentlemen also on the same day passed their First Professional Examination :—

Piggott, Edward Alfred, St. George's Hospital.
Salmon, Alfred Lidgey, St. Bartholomew's Hospital.

APPOINTMENT.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Jones, Mr. C. S., B.A., M.R C.S., etc.—Assistant Dental Surgeon to the Dental Hospital of London.

MILITARY APPOINTMENTS.

Medical Department.—Staff Surgeon Robert Watson, from half-pay, to be Staff Surgeon, *vice* Staff Surgeon-Major Alexander M'Arthur, M.D., deceased.

Royal Artillery.—Staff Assistant-Surgeon Forbes Dick, M.D., to be Assistant-Surgeon, *vice* James Watt, M.D., deceased.

BIRTHS.

Brettingham.—On February 14, at Goodwick, South Wales, the wife of Charles Brettingham, late H.M.'s Bengal Medical Service, of a son.

Clark.—On February 13, at The Cottage, Duuster, Somerset, the wife of Thomas Clark, M.D., of a son.

Gairdner.—On February 16, at Glasgow, the wife of W. T. Gairdner, M.D., of a son.

Gange.—On February 19, at Faversham, the wife of F. A. Gange, M.D., of a son.

Trouncer.—On February 20, at Harford House, Surbiton, the wife of J. H. Trouncer, M.D., of a son.

Warren.—On February 17, at Prince's Risborough, Buckinghamshire, the wife of Thomas Warren, M.R.C.S., of a son.

Winterbotham.—On February 20, at Arundel House, Bay's-hill, Cheltenham, the wife of Lauriston Winterbotham, Surgeon, of a daughter.

MARRIAGES.

Churchill—Beane.—On February 15, at South Bersted, Sussex, the Rev. Edward B. C. Churchill, incumbent of All Saints', Portsea, to Ellen Mary, elder daughter of the late Joseph M. Beane, M.R.C.S., of Peckham, Surrey.

Eastern—Lunn.—On February 15, at Hilston, Holderness, Arthur Henry, youngest son of John Eastern, Esq., to Eliza Gray, second daughter of William J. Lunn, M.D., both of Hull.

Edwards—Wales.—On December 20, at St. James's Cathedral, Port Louis, Mauritius, Charles Frederick Edwards, M.R.C.S. Eng., General Sanitary Inspector and Acting Officer of the Civil Status, to Mary Susanna, eldest daughter of Douglas Wales, Esq., late of the H.E.I.C.S., of Port Louis.

Gorman—Crawford.—On February 15, at the Catholic Church, Brighton, Edmond Anthony Gorman, Esq., to Margaret, eldest daughter of Mervyn Crawford, M.D., of the Mesnuls, Montfort l'Amaury, France.

Harris—Wakefield.—On February 16, at St. George's, Campden-hill, Kensington, Richard, third son of R. D. Harris, M.D., of Elbrook-house, Ashwell, Herts, to Harriett, eldest daughter of Henry Wakefield, Esq., of Teddington, Middlesex.

Jones—Paul.—On February 21, at the Parish Church, Barnes, Surrey, William Harry, second son of George William Jones, Esq., of 25, Essex-street, Strand, to Charlotte, only daughter of James Paul, M.D., of Lonsdale-villas, Barnes.

Lundin-Brown—Stevens.—On February 21, at St. Botolph's, Bishopsgate-street, James Lundin-Brown, M.D., to Sara, daughter of T. G. Stevens, Esq., Overn-hill, Gloucestershire.

Newman—Hoops.—On February 16, at St. Luke's Church, Southampton, A. Perry Newman, M.D., son of A. Newman, Esq., J.P., of Monktown, Cork, to Jesse Maria, only daughter of Richard Hoops, Esq., Commander R.N., of Wilton Lodge, The Avenue, Southampton.

Peart—Mackintosh.—On February 21, at St. Marylebone Church, Robert S. Peart, M.D., of North Shields, to Margaret Ellen, only daughter of the late Andrew Mackintosh, Esq., of Trinidad, W.I.

Reid—Mayo.—On January 4, at Trinity Church, Adelaide, South Australia, the Rev. Richardson Reid, incumbent of Trinity Church, Adelaide, to Mary Jane, eldest daughter of George Mayo, F.R.C.S.E., Adelaide, South Australia.

Smith—Burgess.—On February 15, at the Wesleyan Chapel, Wells, George John Smith, second son of the late Dr. George Smith, of Trevu, Cornwall, to Jane Symons, eldest daughter of Edward Burgess, Esq., of Mountroy, Wells.

Williams—Brittain.—On February 14, at St. Bridget's Church, Chester, Herbert John Mainwaring Williams, Captain 4th (King's own) Royal Regiment, to Wilhelmina, eldest daughter of T. Brittain, F.R.C.S., of Bollands-court, Chester.

DEATHS.

Collins, Robert, youngest son of the late Robert Collins, Surgeon, at Leyton, on February 15, aged 43.

Donovan, Edward Cooke, third son of Dr. Donovan, of 44, Manor-road, New-cross, at Hongkong, on January 9, aged 30.

Fox, Archibald, Esq., son of the late Francis Fox, M.D., of Derby, at Ramsgate, on February 14, aged 71.

Evans, Dr. John, at 40, Queen's-road, Bayswater, after three months' severe illness, on February 18, deeply regretted.

Lovell, Theodore Emil Decimus, third son of Anna Lovell, Willesden, and the late Dr. Henry Lovell, of Aspley, Beds., at Mannheim, Germany, of scarlet fever, on February 18, aged 16.

Sloan, John, M.D., Deputy Inspector of Hospitals and Fleets, at Mount Edgcumbe-terrace, Stoke, Devonport, after a long illness, on February 19, aged 62.

Waylen, Frederick Henry, Staff Assistant-Surgeon, youngest son of the late Alfred Waylen, of Guildford, Western Australia, on his passage home, on January 23, aged 26.

Wollowicz, Count Cyprian, Army Medical Staff, at the Royal Hospital. Netley, on February 20.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham (Parish of).—Medical Officers wanted for five districts of this parish. Candidates must be duly qualified and registered. Applications and testimonials to be addressed "To the Guardians of the Poor of Birmingham," on or before March 15. Election on the 22nd inst.

Bradford Infirmary and Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and copies of testimonials to the Secretary, on or before March 10. Election on the 17th.

Dursley Union.—Medical Officer for District No. 3. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to G. Wenden, Clerk to the Guardians, on or before March 15.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Male Lock Hospital, 91, Dean-street, Soho-square, W.—House-Surgeon. Applications and copies of testimonials to the Secretary, on or before February 27.

North Ormsby Cottage Hospital.—House-Surgeon. Applications to W. Skinnee, Esq., Coatham, Redcar.

Royal South London Dispensary, St. George's-cross, Lambeth-road, S.E.—Honorary District Surgeon. Applications to Mr. Hentsch.

St. Peter's Hospital for Stone and Urinary Diseases, 54, Berners-street, London, W.—House-Surgeon. Applications and testimonials to the Hon. Secretary.

Westminster Hospital.—Resident Obstetric-Assistant; must be qualified to practise under the Medical Registration Act of 1858. Applications and testimonials to the Secretary of the Hospital on or before the 28th inst.

Worcester General Infirmary.—House-Surgeon's Assistant and Dispenser. Applications and testimonials to the Secretary on or before March 1.

York Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary at the Dispensary, on or before March 4.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Gravesend and Milton Union.—Mr. James H. Armstrong has resigned the Milton District; area 703; population 10,887; salary £70 per annum.

Helston Union.—Mr. Vivian Wearne has resigned the First District; area 16,744; population 6593; salary £44 per annum.

Woodstack Union.—Mr. J. G. White has resigned the First Woodstock District; area 4683; population 2580; salary £40 per annum.

APPOINTMENTS.

Barnstaple Union.—Andrew Fernie, M.R.C.S. Eng., L.S.A., to the Third District.

Beaminster Union.—Richard W. Broster, M.R.C.S. Eng , L.S.A., to the Misterton District.

Christchurch Union.—Henry T. H. Mead, M.R.C.S. Eng., L.S.A., to the Western District and the Workhouse.

East Retford Union.—George T. Savile, M.R.C.S. Eng., L.S.A., to the Clarborough District and the Workhouse.

Hackney Union.—Robert T. Graham, L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the West Hackney District.

Hollingbourne Union.—Thos. W. Hubbard, M.R.C.S. Eng., L.S.A., to the Fourth District.

Melton Mowbray Union.—Edward Brewster, M.R.C.S. Eng., L.S.A., to the Waltham District.

Midhurst Union.—Alexander Yule, M.D., M.C. Aberd., to the Milland District.

Neath Union.—Henry Davies, M.R.C.S. Eng., L.S.A., to the Llansamlet District.

Royston Union.—Herbert R. Archer, M.B. Univ. Lond., M.R.C.S. Eng., L.R.C.P. Lond., to the First District; Daniel B. Balding, F.R.C.S. Eng., L.S.A., to the Workhouse.

St. Ives Union.—Wm. H. D. Mence, M.R.C.S. Eng., L.S.A., to the St. Ives District.

Mr. Robert Elliott, having served as a Medical Officer in the Westhampnett Union for a period of nearly forty years, has been granted a superannuation allowance of £30 per annum.

Clinical Society.—Papers are expected at the meeting to-night (Friday) from Mr. Gant, "On the Occlusion in Arteries after Acupressure, with its Relation to the Treatment of Surgical Hæmorrhage, and Compared with Ligature and Torsion;" from Dr. Broadbent, "On Paralysis of the Ophthalmic and Superior Maxillary Divisions of the Fifth Nerve, and of the Branch to the Levator Palpebræ from Syphilis;" from Mr. Henry Lee, "On a Case of Removal of the Tongue for Cancer;" and from Dr. Duffin, "On a Case of Roseola Variolosa."

A **Privy Council** order has been issued, directing local authorities to cause all cattle affected with pleuro-pneumonia within their district to be slaughtered.

The Haberdashers' Company has sent ten guineas, and the Cutlers' Company ten guineas, to the Royal Hospital for Diseases of the Chest.

Prof. Frankland succeeds Prof. Williamson as President of the Chemical Society.

The London teetotalers contemplate starting a Hospital "for the treatment of disease apart from alcoholic medication."

One of the Medical Officers of the Metropolitan Asylums Board, at the usual fortnightly meeting, held on Saturday last, stated that the epidemic of small-pox has not yet reached its height. Out of 979 patients received into the Hospitals at Hampstead and Homerton, 140 had been received from Shoreditch.

Why?—The Director-General at Somerset House has only £1300 per annum, and is undecorated, while his Professional brother at Whitehall has £1500 per annum, and is a K.C.B. The status of the head of an important department such as that which Dr. Armstrong so ably fills, cannot fail to be of consequence to those who may have an intention of entering the Royal Navy, and should not be overworked.

Greenwich Hospital Pensions.—The new Greenwich Hospital pensions (for Medical Officers) will consist of one of £100 per annum for an Inspector-General, and two of £50 for Staff-Surgeons.

The Garden of Medicinal Plants, founded in Paris by an edict of King Louis XIII., dated January 3, 1626, and which became a museum of natural history on May 23, 1794, was nearly all destroyed by a Prussian shell on the night of January 8 and 9th last.

Presentation.—Dr. John B. Welch, late Resident Medical Officer at the General Hospital, Birmingham, has been presented with a secretaire and pocket-case of instruments by the resident officers, servants, and nurses, on his leaving the Hospital to go into practice at Handsworth.

Proposed Infirmary at Lanark.—Sir Symon M. Lockhart, Bart., having proposed to erect an Infirmary at Lanark at his own expense, provided a fund can be raised for its permanent endowment, a public meeting has been held, at which about £300 was subscribed, in addition to £180 annual, and a committee was appointed to raise the further necessary funds, prepare a draft constitution, and report to the next meeting. It is proposed to have twenty beds, the cost of which is estimated at £600 per annum.

Naval Medical Cadets at Netley.—On the recommendation of Dr. Armstrong, the Director-General, the Lords of the Admiralty have applied to, and obtained the permission of, the military authorities to send all candidates for the Naval Medical Profession to Netley, there to undergo a course of study. The advantages which will accrue to the young men who will, for the future, come forward to fill up vacancies in the navy, are numerous and great—they will have the benefit of clinical lectures, which no other College could afford, and the opportunity of becoming accomplished analytical chemists.

Rates on Charities.—Some months ago, when the overseers of Birmingham pressed for the issue of distress-warrants against some of the local charities for non-payment of poor-rates, the sitting magistrates declined to sign the warrants. Since then proceedings have been taken in the Court of Queen's Bench, and an order of the Court has now been served upon the magistrates, directing them to issue the necessary warrants against the Dispensary and the Eye Hospital.

Surgical Science and the War.—The lessons of the war to Surgical science are beginning to be made known. One of the most remarkable facts is, that the French soldiers have suffered more from the Prussian shells than from the needle-gun and the bayonet combined. This is contrary to usual experience, but it agrees with Napoleon's reported remark to King William at Sedan as to the marvellous precision of the German cannoneer. It is also said that the needle-gun bullets, though larger than those of the chassepôt, do not penetrate the flesh so far, and so make less serious wounds. Shell wounds are generally found to heal very easily, if no bones are fractured.

Sailors and Small-pox.—The Board of Trade have issued an official circular to all superintendents of mercantile marine offices, directing them "to take every opportunity of making masters, owners, and seamen acquainted with the fact that small-pox patients are not admitted into the Seamen's Hospital." The circular was issued in consequence of a seaman suffering from small-pox having been sent to London from one of the outports, under the impression that he would be received in the Seamen's Hospital at Greenwich.

Small-pox in the Metropolitan District.—The following are the number of pauper cases of small-pox under treatment by Medical officers of districts and workhouses during the week ending February 11, 1871:—Unions and Parishes: Bethnal-green, 81; Camberwell, 4; Chelsea, 3; Fulham, 7; St. George's, 189; St. George's-in-the-East, 15; St. Giles-in-the-Fields, and St. George's, Bloomsbury, 6; Greenwich, 0; Hackney, 12; Hampstead, 0; Holborn, 68; Islington, 60; Kensington, 2; Lambeth, 23; Lewisham, 1; City of London, 71; Marylebone, 12; Mile-end Old Town, 21; St. Olave's, 58; Paddington, 20; St. Pancras, 39; Poplar, 21; St. Saviour's, 32; Shoreditch, 172; Stepney, 4; Strand, 25; Wandsworth and Clapham, 32; Westminster, 0; Whitechapel, 68; Woolwich, 1; total, 1047. During the week ending February 4, 150 patients had been removed to Homerton and Stockwell.

Health of Scotland.—17,344 deaths were registered in Scotland during the quarter ending December 31, 1870, being in the annual proportion of 215 deaths in every 10,000 persons, or 2·15 per cent. The mean death-rate of the quarter during the ten previous years was 218 deaths in every 10,000 persons, or 2·18 per cent.; so that the mortality of the past quarter has been below its average. The English mortality during the same quarter has been considerably above its average, for 126,060 deaths were registered in England during the fourth quarter of 1870, giving the proportion of 228 deaths in every 10,000 persons, or 2·28 per cent.; the average of the quarter during the ten previous years being 220 deaths in every 10,000 persons, or 2·20 per cent. Scotland and England were therefore in opposite conditions as to mortality during the past quarter. The death-rates in the four groups of districts into which Scotland is divided, closely corresponded with the birth-rates in the same districts, being highest where the greatest number of human beings was massed together, and lowest in the sparsely inhabited rural districts. Thus, for every 10,000 persons in each of the groups, 285 deaths occurred in the principal towns, 249 deaths in the large towns, 204 deaths in the small towns, but only 164 deaths in the rural districts. In the divisions of Scotland, the mortality during the quarter was nearly in the ratio of density of population in each. Thus, for every 10,000 persons in each division, there occurred the proportion of 126 deaths in the northern division, with 36 persons to a square mile; 163 deaths in the southern division, with 66 persons to a square mile; 211 deaths in the east-midland division, with 120 persons to a square mile; 231 deaths in the south-eastern division, with 219 persons to a square mile; but 260 deaths in the densely-peopled south-western division, with 441 persons to a square mile. Of the eight principal towns, the mortality was highest in Greenock and lowest in Perth. Thus, the death-rate during the quarter was in the proportion of 22·4 deaths per 1000 persons in Perth, 24·2 deaths per 1000 persons in Leith, 25·9 in Aberdeen, 26 in Edinburgh, 29·6 in Dundee, 29·9 in Glasgow, 30·4 in Paisley, and 31·6 deaths in Greenock.

CHINESE DOCTORS.—The *Aberdeen Free Press* says that a taste has grown up among the Californians for being doctored by Chinese Physicians, according to the Chinese system of Medicine, and that one Chinese Doctor has refused an offer to leave San Francisco and go to New York, all his expenses to be paid, and 80,000 dollars secured to him for four years. He is chiefly wanted for his skill in the treatment of small-pox.

TREATMENT OF OTORRHŒA BY SPIRIT OF WINE.—Dr. F. E. Weber, in continuation of a former paper on the subject, states that often-repeated experience enables him to state that in otorrhœa, unconnected with caries or polypous growth, spirit of wine constitutes the best topical application, and one that is highly efficacious when there is chronic inflammation of the cavity of the tympanum, with more or less destruction of the membrana. The spirit must be quite pure, highly rectified, and undiluted with water, and its application to the exposed membrane of the tympanum causes no pain, being in this respect, also, a preferable application to most other injections. In some sensitive subjects it produces a burning sensation, which passes off in less than a minute. Before applying the spirit, the ear must be carefully cleaned out by means of the syringe, air-douche, or pencil, when, the patient lying down, as much of it as the ear will hold must be poured in, and retained during five minutes, slight pressure and rubbing of the tragus being employed to assist its effectual penetration. After the spirit has been allowed to flow out again, the meatus must be thoroughly dried and plugged, so as to prevent the access of air. At first it should be applied three times a day, and afterwards twice, continuing it for some time after the otorrhœa has ceased.—*Berlin Klin. Woch.*, January 9.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Lawson Tait.—If possible.

J. O. E.—One cannot be *entitled* to what is granted by *courtesy* alone. Nevertheless, we believe the title is almost invariably conceded.

T. H. (D—— -square) is thanked for his letter. He will much oblige by forwarding to us his anecdotes respecting the late Dr. Kerr, of Northampton.

Celebs should read F. W. Newman, "On Physiology and Sexual Morals," published by Trübner. The system he speaks of is an infamous one, leading to disease of the womb and nervous exhaustion in the woman, beastly selfishness in the man, and to utter demoralisation of the community. Look at France!

An Old Subscriber.—Youatt's is the best.

The Ophthalmic Chair at St. Thomas's Hospital.—It is said that the Governors of St. Thomas's Hospital have offered the chair of ophthalmic Surgery in the new school to Dr. Liebreich, who has taken refuge in this country during the war on the Continent. It always has been the policy of England to attract to herself the best men, and to give them free rights of citizenship, and the present seems a good illustration of the rule. The Governors ought to elect the best men, and if Liebreich be the best man, he ought to be elected. It is well known that large numbers of the English resort to Berlin and Paris for advice in ophthalmic cases. It were well, then, that our rising men should learn what that foreign practice is. No English Practitioners will be injured; on the contrary, if the English Ophthalmic School is made stronger, we shall find German and French patients coming here for advice.

PERCHLORIDE OF IRON A TEST FOR CARBOLIC ACID.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have recently found, on adding a few drops of dilute perchloride of iron to a solution of pure carbolic acid in distilled water, a beautiful purple colour is produced, varying in depth of colour according to the quantity of carbolic acid present. By this test, a very small quantity of carbolic acid may be detected; but the odour of carbolic may be a sufficient test without any chemical reagent. Still, however, we may sometimes require additional proof, and if the test has not been pointed out, it may be worth publicity. I am, &c., HENRY OSBORN, M.R.C.P., Lond.

Southampton, February 17.

J. F. B. may defer his examination with propriety, under the circumstances of the case.

A Member of the British Medical Association.—The journal was originally entitled the *Provincial Medical and Surgical Journal*. It was established by Dr. Hennis Green on his secession from the *Lancet*. Particulars respecting this and other journals will be embodied in a future article.

A Reader.—The story is told as follows:—Among Dr. Cheyne's patients was the celebrated Beau Nash, who, on being one day asked by Cheyne if he had followed his last prescription, replied in the negative, adding—"If I had, Doctor, I should certainly have broken my neck; for I threw it out of a two-pair-of-stairs window."

Liber.—Dr. Niel Arnott, the author of the celebrated works on the "Elements of Physics" is still alive, and, we hope, in excellent health. It is somewhat remarkable that the second volume of the "Elements" made its appearance about thirty-five years after the first, but exhibited the same mastery of the subject and the same charm of composition as its predecessor.

OUT-PATIENT HOSPITAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Kindly allow me to acknowledge in your columns the receipt of the following sums towards the expenses of the Out-patient Hospital Reform Committee:—

Dr. Montague Thomas ...	£2 2 0	Dr. Rumacy...	£0 5 0
Alfred Cooper, Esq. ...	1 1 0	Dr. Parsee	0 5 0
George Lawson, Esq. ...	1 1 0	Dr. Samuelson	0 5 0
Dr. Symes Thompson ...	0 10 0		

I am, &c.

27, George-street, Hanover-square. ALFRED MEADOWS.

"*A Medical Contemporary.*"—The *Observer*, in commenting upon some remarks of the *Shields (sic)*, calls that publication a "Medical contemporary." We should be glad to know what are the claims of that singular little production to be styled "Medical." The *Observer* must have been poking its fun at the *Shield*. The late Mr. C. Matthews used to state that he once asked a waterman at a hackney coach-stand why he was called a waterman. The reply was that he supposed it was "because he opened coach-doors."

Vaccinator.—One of the best portraits of Jenner is in the picture of the Medical Society, over the President's chair in their meeting-room in Great George-street. The great benefactor was, at the time his likeness was taken, in the prime of life. The painter of the picture, Mr. Medley was the maternal grandfather of Sir Henry Thompson, and died at the age of 84, some years since, at Chatham. It is a curious fact that Mr. Medley outlived, by nearly twenty years, the twenty-two members of the Society whom he so ably portrayed in his celebrated picture. If "Vaccinator" were to apply to the Registrar of the Society any day, between the hours of twelve and six, no doubt he would be permitted to view the picture. If he wishes to obtain permission to engrave the portrait of Jenner for public sale, he should make application to the Council of the Society.

VACCINATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Thanks for directing my attention to your Liverpool correspondent at page 203. In the tabular statement of the return, I find two deaths in four cases treated when the arm had four large cicatrices. Out of nineteen cases treated with one large cicatrix no death. Out of fifty-two with one large there were four deaths. So far, the force of the argument is at my side. I see no report as to the death or recovery of one who "had been vaccinated six days previously, the vesicles from vaccination and the variolous eruption going on together." To reach the truth of this question of vaccination and revaccination should be our object. I remember, during the famine fever of 1847, having two cases of small-pox where variola and vaccinia co-existed; both became confluent and died. Two fatal cases of a similar kind are on record in the *Edinburgh Monthly Journal*, September, 1854, by Professor Simpson. A Medical friend, who called on me a few evenings ago, was quite enthusiastic while describing a case of small-pox where one pustule occupied the centre of the cicatrix left by vaccination—to his view, "it was a rosebud with a ring of pearls!"

But to our paper. Out of the 163 cases only 20 were under 10 years of age, and of these 20 there were only 2 under a year; while two also had reached their third year. These figures have led to the following conclusions:—"The comparative immunity of those under 2 years has some relation to the increased efficiency with which vaccination has been performed during that time." On the other hand, we find that in "the past seven weeks of the current quarter, of the 1184 deaths from small-pox in London, 837 occurred under 20 years of age, 268 between 20 and 40, 67 between 40 and 60, and only 12 at 60 years and upwards."

Thus we are left to continue our investigations on this momentous subject. The 16 deaths out of 35 cases of the non-vaccinated or presenting no trace of a cicatrix, speak volumes in favour of a perfect cicatrix, *not* of *four*. I am, &c. R. T. Massey, M.D.

17, Denmark-terrace, Brighton.

COMMUNICATIONS have been received from—

H. G.; Mr. P. O. C. Doyle; Mr. F. J. Brown; Dr. H. Osborn; M. Giraldes; Mr. C. J. Leaf; Mr. R. F. Snape; Mr. Jebb; Messrs. Davidson and Garden; An Old Subscriber; Dr. B. Hawkins; Messrs. W. Wood and Co.; Mr. Lawson Tait; Mr. C. L. Kemp; Mr. Victor de Meric; J. O. E.; Mr. F. T. Proctor; Mr. W. White Cooper; Mr. Lauriston Winterbotham; Mr. J. B. Brown; Cœlebs; Messrs. Southall, Son, and Dymond; Mr. F. R. Wilson; Mr. G. Lawson; Mr. W. W. Reeves; Mr. J. A. Bloxam; Messrs. Domeier and Co.; Dr. R. T. Massy; Dr. Cholmeley; Dr. Gray; Mr. J. Chatto; Mr. H. Arnott: Professor Laycock; Dr. A. Meadows.

BOOKS RECEIVED—

The Descent of Man, and Selection in Relation to Sex, by Charles Darwin, M.A., F.R.S., etc.—Report on the Sanitary Condition of the Whitechapel District for the Quarter ending December 31, 1870—A Treatise on Smoky Chimneys, their Cure and Prevention, by Frederick Edwards, jun.—Packard's Handbook of Operative Surgery—A Treatise on Gout, Rheumatism, etc., by Dr. Peter Hood—Guy's Hospital Reports, Vol. XVI.—Pain, its Alleviation, Suspension, and Cure, by Dr. Ellis—Suggestions as to the Reorganisation of the Army Medical Department, by a Staff Surgeon-Major—Report of the Reigate and Redhill Cottage Hospital—James C. Dickinson on the Tonic Treatment of Gout—The General Structure of the Animal Kingdom, by T. Rymer Jones, Professor of Anatomy in King's College, London.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—Pharmaceutical Journal—American Journal of the Medical Sciences, January, 1871—The Dublin Express—The South London Press—New York Medical Journal, February, 1871—Medical Press and Circular—The Albany Morning Express—Woodhull and Claflin's Weekly—American Journal of Insanity, January, 1871.

APPOINTMENTS FOR THE WEEK.

February 25. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. J. W. Barnes, "A Case of Suffocation by a Portion of Orange lodged in the Rima Glottidis." A Communication from Professor Erasmus Wilson. Dr. John Pennefather, "Obstructions of the Eustachian Tube." Dr. Edwards-Crisp, "On Small-pox: its Prevention."

28. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Anthropological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Althaus, "On Neuritis of the Brachial Plexus." Dr. Hilton Fagge, "On the Sporadic Cretinism occasionally seen in England."

March 1. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Medical and Chirurgical Society, 8 p.m. Annual Meeting.

Royal Microscopical Society, 8 p.m. Mr. James Bell, "Notes on the Microscopical Examination of Water for Domestic Use."

Society of Arts, 8 p.m. Meeting.

2. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

3. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Meeting of Council.

Royal Institution, 9 p.m. Capt. Noble, "Pressure of Fired Gunpowder."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 18, 1870.

BIRTHS.

Births of Boys, 1249; Girls, 1114; Total, 2363.
Average of 10 corresponding weeks, 1860-69, 2155·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	825	800	1625
Average of the ten years 1860-69 . . .	736·3	707·7	1444·0
Average corrected to increased population .	...	...	1588
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	36	2	7	...	12	1	3	2	2
North ...	618210	73	2	14	3	5	4	2	2	3
Central ...	383321	14	...	4	...	5	...	4	1	3
East	571158	53	2	7	3	17	2	4	...	3
South	773175	42	5	16	2	19	4	2	4	3
Total	2803989	218	11	48	8	58	11	15	9	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·923 in.
Mean temperature	42·7°
Highest point of thermometer	54·7°
Lowest point of thermometer	26·5°
Mean dew-point temperature	38·9°
General direction of wind	S.S.W. & S.W.
Whole amount of rain in the week	0·02 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 18, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Feb. 11.	Deaths Registered during the week ending Feb. 11.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2363	1625	54·7	26·5	42·7	5·95	0·02	0·05
Portsmouth ...	125464	13·2	75	53	53·9	29·0	43·7	6·50	0·08	0·20
Norwich	81787	10·9	50	29	53·0	20·0	39·2	4·00	0·45	1·14
Bristol	173364	37·0	142	93	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	63	39	53·5	25·9	43·2	6·22	0·04	0·10
Birmingham ...	378574	48·3	245	172	53·6	26·3	43·5	6·39	0·12	0·30
Leicester	101367	31·7	95	47	53·2	26·2	42·6	5·89	0·14	0·36
Nottingham ...	90480	45·3	61	43	52·4	25·8	41·1	5·06	0·11	0·28
Liverpool	526225	103·0	398	438	53·4	34·9	45·7	7·61	0·05	0·13
Manchester ...	379140	84·5	304	206	54·2	28·0	41·9	5·50	0·63	1·60
Salford	123851	23·9	96	71	55·5	26·2	41·9	5·50	0·16	0·41
Bradford	148030	22·5	120	79	51·4	26·2	42·0	5·56	0·46	1·17
Leeds	266108	12·3	253	124	52·0	27·0	41·5	5·28	0·63	1·60
Sheffield	255247	11·2	174	124	53·7	25·0	41·9	5·50	0·42	1·07
Hull	135195	38·0	88	50	52·0	22·0	39·9	4·39	0·15	0·38
Sunderland ...	103037	31·2	106	42	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	125	68	53·0	25·0	43·0	6·11	0·00	0·00
Edinburgh	179944	40·6	120	101	53·0	33·0	46·7	8·16	0·20	0·51
Glasgow	477627	94·3	374	330	54·7	30·5	44·0	5·67	1·01	2·57
Dublin (City, etc.†)	322321	33·1	195	241	56·0	36·8	48·3	9·05	0·04	0·10
Total of 20 Towns in United Kingd'm	7336941	34·4	5447	3978	56·0	20·0	42·9	6·06	0·26	0·66
Paris—Week ending Feb. 18	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Feb. 4 ...	622087	68	...	379	...	...	23·0	−5·01	...	...
Berlin—Week ending Feb. 18 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·92 in. The highest was 30·09 in. on Saturday at noon, and the lowest was 29·49 in. on Sunday evening, 12th inst.

The general direction of the wind was S.S.W. and S.W.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF ORGANS AND TISSUES, AS INFLUENCED BY THE NERVOUS SYSTEM.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture I.

THE NERVOUS SYSTEM, AND TISSUE PATHOLOGY, AND THERAPEUTICS IN GENERAL.

When speaking on the clinical observation of diseases of the nervous system, I recommended you to consider the mechanism proper, separately from the auxiliary tissues, such as the bloodvessels. In investigating the influence of the nervous system on organs and tissues, it is necessary to make, as to them, a like distinction. The lung, for example, is differently influenced, neurotically, accordingly as the tissue affected is the fundamental air-cell or the auxiliary air-tube. For this reason, you will often see a single pneumonia with double bronchitis, but perhaps never a double pneumonia with single bronchitis; nay, more, for the same reason, I have seen a right pneumonia in a drunkard, with double bronchitis and bilious sputa; yet, on post-mortem examination, it was observed that the coloured sputa came from the right lung alone. A like limitation of colour has been observed in a hemiplegic icterus.

Practically, the air-cell and air-tube are distinct mechanisms, but both have component tissues in common, like those of the nerve-centres. It is these tissues, common to every organ, which we will consider in their relations to nerve influences. To do this comprehensively and practically, we must note the effects of remedies, so as to be able to discriminate what changes belong essentially to tissues, and what to nerves, and to particular kinds of nerves. It is on these principles, and with these practical objects in view, that I shall direct your attention to the clinical pathology and therapeutics of the tissue disorders of neurotic origin which I have named trophesies.

Now, at the outset, I must impress upon you an obvious, yet important, principle—namely, that, except as to the mechanism proper of nerve-cells and fibrils, the changes in the tissues generally represent, for diagnostic and therapeutic purposes, changes in like tissues of the nervous system. For example, the emptiness of the capillaries of the skin, termed ischæmia, upon which nervous pallor depends, is the analogue of the ischæmia of the nerve-centres, which, it is said, causes epilepsy. Heat, applied locally, causes certain changes in the tissues locally; as, for example, increased activity of the capillaries, or hyperæmia. Heat will act on the capillaries of the nerves and nerve-centres in like manner, if produced morbidly therein, and induce morbid activity of function, so that trophesies or neuroses result. To understand, therefore, the therapeutical pathology of these diseases, we must inquire both how a morbid state of the nervous system influences changes in the organs and tissues, and how the nervous system is itself morbified therapeutically by action on its tissues.

To get rid of vague ideas on these points, let us first inquire what normal changes in organs and tissues are modified by the nervous system, and to what extent. 1. Undoubtedly those which subserve to a suitable temperature. 2. Those by which the formation, nutrition, and transformation of the tissues are effected, so that chemical affinity, vital energy, *vis insita* (of contractile and muscular tissues), and vis nervosa, are produced. These we will name chemical changes. 3. The formation of the blood, including the blood glands and secretory functions necessary thereto. 4. The removal of effete matters from the blood and the tissues; this class of changes includes absorption and excretion. 5. The changes in the vessels carrying the blood; as to which we must distinguish those occurring in the capillary system from those of the heart and arterial system. 6. Changes in the lymphatic system, including the vessels and glands; to this series belong, also, various changes in both the blood and tissues. If we consider anatomically how many of these varied changes belong strictly to the vaso-motor system, we can only name those in which the contracting tubes are involved—the vascular, capillary, and lymphatic systems, the ducts of glands, and the muscles of hollow viscera (as the heart, stomach and intestinal canal, bladder, uterus). The other changes belong to a trophic system, as distinct from a vaso-motor.

The next point to determine is, how these two systems are related to each other, and how they influence the tissues. This fact is at once apparent: that, since tissues are nourished and undergo change independently of vessels, the trophical system is before, and more general than, the vaso-motor. In the embryonic stages of development, and in organisable plasma, changes begin and go on independently, not only of blood-vessels, but also of blood-corpuscles. Equally obvious is another fact of great importance—viz., that these same changes go on also independently of direct communication or connexion with the nervous system, even in mammals, although there may be indirect communication. But further, in protozoa and in vegetals, contractility, capillary action, the production of heat, transformation of tissues, and chemical changes ending in formation of basic elements, salts, acids, odours, all go on independently of any trace of a nervous system whatever. These considerations point to the conclusion that we must separate, both in thought and in observation, the chemical and mechanical changes from that agent or property of nerve by which they are regulated, and separate the nerve-tissue which regulates chemical changes from that which regulates mechanism—such as the muscles, bloodvessels, and contractile tissues.

This conclusion leads to another; for since all these changes, whether mechanical or chemical, go on in adaptation to the ends of the organism, independently of a nervous system, it follows that all like changes which we attribute to nerve function—such as all reflex actions—are regulated by an energy identical in its results with the vis nervosa. Since the notion of such an adapting energy enters necessarily into all notions of life, it is termed the vital energy, vital force, vital principle. So far, then, as this *regulative* property is concerned, vital energy and vis nervosa are identical.

I should hesitate to push farther what may appear to be a merely abstract question, were I not convinced, by long experience, that, the more our observations are made under the guidance of general laws, the more practical and successful we shall be at the bedside. Unenlightened experience in Medical art is like the "rule of thumb" in the mechanical arts—liable to disastrous results. Let us, then, inquire what this regulative property means practically. We speak of what is "irregular" and "abnormal" in vital activity as that which is "morbid." What, then, is the rule or *norma* which is departed from in disorder and disease? Now, there is a great rule or *norma* of development, manifested first in the individual as an evolution from a microscopic mass of living matter—so small that about one thousand weigh only a grain; and, secondly, in the great scale of development of living things, of which man is the summit. Taking the word degeneration in its literal sense, it means a going back to a lower evolutional genus, or law of form, structure, function, and vital change; so that retrocession is the law of disease. As regards the individual development, involution, or the changes incident to age, is the law of morbid activity. Now, the vis nervosa, as a regulative property, may be considered to be an evolution of vital energy as a regulative principle; and, in fact, it is manifested and needed exactly in proportion as evolution and differentiation of parts is manifested in the scale of development, and as the organs and mechanisms multiply that have to be regulated and combined into a harmonious whole. If, then, there be a defect in the vis nervosa as a regulative energy, there will be a retrocession of activity, and, with this, a retrocession in development and tissue-changes. This will be manifested by lower forms of development, or by lower kinds of tissue structure and tissue changes.(a)

Let us now see how these views will help us to therapeutical generalisations of practical value. The primary energy or force which the "vital principle" regulates is chemical affinity. In my psychological text-book (b) will be found my views on organic chemical affinity as an evolutional energy. Without chemical combination of certain elements in a *fixed* and evolutional order (be it noted), vital energy fails. You conclude, for example, that in a given case there is loss of power, or "asthenia," or a want of "tone," or "nervous debility," or "general" weakness—all phrases which indicate the use of tonics, stimulants, stomachics —*i.e.*, of things which will restore tone, invigorate the nerves, "give a fillip" to the "system." Now, according to the principle laid down, that which restores vital energy will also restore nervous energy. Classify, then, the things you would prescribe in reference to energy, and you will find that they are either certain chemical compounds which supply or cause the production of molecular energy, or else molecular forces directly applied, as heat, light, galvanism, electricity; and that, as to the operation of these things, their action is analogous, if not identical, in plants and animals. Are phosphates needed to give "tone" to the nervous system? So are they required for the vital energy of plants. Potassa is needed for muscular structure; all we get in diet is that which has already subserved to plant-life. Even the sulphur in the tissues of animals (as necessary as phosphorus) comes from a prior work in vegetals; and so with inorganic elements, like lime and iron, which, if not got in food or in drink, must be given as medicine, or "chemical food." Should any of you become Officers of Health, you will feel the necessity of understanding these broad principles of production of vital energy. Not only is the chemistry of food and water of importance, but of the soil on which the food is produced, and from whence it draws these elementary mineral constituents of living tissues. In all these questions the laws of chemical evolution and accumulation of energy are important.

(a) See the text-book of the class, "Principles and Methods," second edition, p. 234, for the application of this general law of disease.

(b) "Mind and Brain," second edition, vol. i., p. 388, 199.

Nor when, in ordinary practice, we direct the diet and regimen and medicine of convalescents, are the facts otherwise. That the mind remains strong and clear when the body decays is a poetic fiction; the brain shares inevitably in general debility. In convalescence from wasting diseases, especially from those during which the phosphates have been carried off without a due replacement, to exercise the brain in thought is not only difficult but dangerous; so that not a few persons perish from too early mental work when convalescent, because the nervous system breaks down under the strain. In respect to tonics, another useful generalisation is evolved—viz., that those chemical products of plant-life known as "bitters," and used as tonics, stomachics, and stimulants, act both upon the nervous system and the tissues. It is well-known that the bitter lupuline will induce sleep, and strychnine and brucine tetanus—yet all are tonics; but it is not so commonly understood that colocynth and aloes, quassia and wormwood, camomile and gentian act equally on the nervous system as tonics; so that when the drunkard takes his "pick-me-up" or *sirop d'absinthe* he is not taking a harmless "stomachic," but agents which endanger brain-function if taken in excess. When we come to study the psychology of stimulants in summer, you will more fully comprehend the practical value of this fact, and in practice generally it will help you greatly. For example, opium, which, when used in poisonous doses, acts on the tissue of plants, *mutatis mutandis*, as on those of man, may be given as an analeptic and tissue-tonic. Hence its value in diseases of tissues, from chilblains to chronic ulcers and Hospital gangrene. Yet in some persons its local application powerfully depresses, while in others when taken it excites the most wondrous flights of the imagination. Many other drugs that are neurotics to man act on vegetal tissues.

The treatment of diathetic diseases is essentially neurotic, vital, and chemical. Although the nerve-cells and granules evolve vis nervosa specially, all other tissues of the nerves and nerve-centres, in common with like tissues elsewhere, are in relation to both vital energy and vis nervosa. To understand, therefore, practically, the relations of a trophical nervous system to diathetic diseases of tissues, we must take into consideration the action of diathetic remedies on both the nerve-tissue proper and the tissue generally. Lactic acid, for example, is a chemical product of morbid nutrition of muscular tissue; the theory of treatment by potash salts is chemical—viz., that we neutralise the acid. But, then, these same salts may be alterative tonics to muscular tissue, just as phosphates are to brain. To this group belong the iodides, chlorides, and bromides. But how comes the muscle to produce lactic acid? Is it because of defect in the trophical system? and do opium, actæa, quinine, colchicum, and bitters act beneficially in rheumatism and gout by acting on that system as neurotics? If so, what becomes of the hypotheses as to the production, metastasis, deposit, and elimination of morbid products, which are discussed and acted on therapeutically as undoubted truths? We shall find on further inquiry that they are invalid.

Take another general fact of practical weight. I have said that opium produces certain effects, both in the nervous system and the tissues; but you must not infer that morphia or the other alkaloids found in poppy-juice will have the effect of the whole compound of some thirty to forty ingredients. This is a sort of mistake too often made in therapeutics. People, for example, speak of "alcoholic" drinks, generally not noting the great therapeutical and dietetic difference between the distilled and the fermented as to their mineral constituents, nor in the fermented as to the presence of bitters and as to the kind of bitter used. When we remember that the chemical difference between morphia (as a sedative) and apomorphia (the quickest emetic known) is in an atom of water more or less, we can appreciate how presumptuous all that kind of vague language is. It may be well doubted whether phosphate of lime as a pure chemical compound is at all so efficacious medicinally as when given in flesh or bones or vegetable food. And so with a multitude of agents, whether they be simple or highly complex in composition.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

SELECTED CASES OF SEVERE STRICTURE OF THE URETHRA.

By VINCENT JACKSON,
Senior Surgeon to the South Staffordshire General Hospital,
Wolverhampton.

Stricture of the Urethra of many Years' Duration, Impassable to Instruments of late, complicated with Severe Chronic Cystitis and Distension of the Bladder—Health much Enfeebled—Treatment: Application of Potassa Fusa, afterwards Splitting.

F. W., aged 40, was admitted July 9, 1870, into the Wolverhampton Hospital under my care.

History.—Has been a soldier in the Marines for twenty-one years, but is now discharged, having served his full time. Has been much exposed to cold and wet. Habits temperate. Gonorrhœa contracted twenty-two years since, and eleven years after noticed a difficulty in making water, and of such a nature has to compel him to seek relief in the Plymouth Naval Hospital. He says "a passage was made with potassa fusa," and upon his discharge the stream was much enlarged, instruments for that purpose having been introduced from time to time afterwards. Remained well for five months, and then all the symptoms returned, but greatly aggravated. Was now ordered abroad, and soon after was received into the Hospital at Malta, and catheters were passed at intervals; but before complete dilatation of the stricture was effected his regiment left for another station. Returning to England in 1868, he was again admitted into the Naval Hospital at Plymouth, but an instrument could not be passed, nor has one been attempted since.

Patient is a tall man, very thin and pale-looking, and has a worn, anxious, almost cachectic, look; spirits very much broken. His rest is completely disturbed at night, and his appetite is almost gone by day. Is obliged to wear an urinal to catch the constantly dropping urine; his day and night linen are saturated with it, and about him there is a smell of an offensive urinous odour. The bladder is distended half way to the umbilicus; tongue foul; pulse weak. Five and a half inches from the meatus a stricture is seated; at this spot, so tough is the obstacle, that, as the instrument touches it, the contact produces a sound heard and remarked upon by those around the bed, and in the perineum a cord-like feeling is perceived in the situation of the urethra. No soft nor hard instrument of any size would enter the stricture. To remain in bed. Meat diet. Brandy, three ounces. ℞ Pot. bicarb. gr. xxx., sod. pot. tart. gr. lx., tinct. hyoscyam. ♏lx., aqua ad ʒj., to be taken three times daily. Hip-bath night and morning; afterwards a morphia suppository to be used. A linseed poultice over the bladder.

July 11.—Two pints of urine have dribbled away in the last twenty-four hours; it deposits a large quantity of muco-pus—one third.

15th.—Better, and more comfortable. Two pints and a half of urine dribbled away in the last twenty-four hours. Attempted to introduce a very fine, soft instrument, but unsuccessfully. Applied potassa fusa to face of stricture.

16th.—Passed two pints of urine since yesterday; a little scalding complained of as the urine trickles along the urethra.

18th.—Reapplied potassa fusa.

19th.—No untoward symptom. Urine is now passed much more freely, and the deposit is lessened one-half.

21st.—Urine almost voided in a stream. Reapplied potassa fusa.

25th.—No. 3 gum elastic catheter entered stricture, but the patient resisted all attempts to push it beyond; "the parts are sore," he says.

26th.—For the first time the urine is passed in a continuous, although small, stream.

29th.—Patient much objects to attempts to pass instruments; he says in his weakened condition he feels more. Passed No. 5 soft instrument within stricture, but all attempts to press it further were resisted. The urinary stream much improved, and the deposit almost ceased; the urinal in bed is now dispensed with.

August 4.—Under chloroform. Holt's dilator introduced into vesical organ, and stricture split. Bladder evacuated by No. 12 silver catheter; a gum elastic one of the same number was afterwards tied in. A morphia suppository given, and two grains of quinine ordered to be swallowed as soon as possible.

5th.—11 a.m.: Gum elastic catheter withdrawn. Patient comfortable, and free from pain.

7th.—Conical catheter bougie, of No. 12 size, passed, and this instrument directed to be used every third day.

16th.—Discharged cured. Is furnished with a No. 10 soft catheter, which he is able to pass himself.

The next case I report slightly more *in extenso*, and it deserves it, for in many respects it is of Surgical interest. Clinically, it is a very rare event to drop upon a man 70 years of age, the possessor of an urethral stricture of forty years' duration, and who, during a portion of that time, has suffered extremely from the consequences of prolonged and severe urethral obstruction; and yet he successfully passes through a severe cutting operation for the cure of his malady, and, from the beginning to the end of the treatment of his case, never has an untoward symptom.

Severe Stricture of the Urethra of Forty Years' Duration, Impassable to Instruments Ten Years—Perineal Abscess—External Urethrotomy—Cured.

E. V., aged 70 years, admitted August, 1870. Resides at Kingswood, and is employed as a labourer by Lord Wrottesley. Is married, and has children and grandchildren. Has always been temperate in his habits. Dates the commencement of his urinary difficulty from an attack of gonorrhœa forty years back. Up to twelve years ago a small-sized silver instrument was occasionally passed for him by a Medical Practitioner, now dead, but it is ten years since an attempt to do so, which failed, has been made. The urine dribbles from him, and all his efforts to void it have been made with much straining, and whilst doing so about a month since he felt something give way, and soon afterwards noticed a swelling in his perineum. This has since increased in size, and about a week ago redness and œdema of the scrotum supervened, with great smarting pain, but with no enlargement, each time urine was voided. General health has not suffered much.

When seen by Mr. Jackson, soon after admission, efforts were made to introduce instruments into the bladder, but all were arrested at a point five and three-quarter inches from the meatus urinarius.

Under the circumstances of the case, it was determined to give the patient chloroform, lay open the perineum, and upon the point of a staff divide the constricted urethra. This was accomplished in the following manner:—After complete anæsthesia had been produced, my colleague, Mr. Newnham, introduced into the urethra a full-sized silver catheter, pressing it down upon the face of the stricture. Almost simultaneously the patient's legs were bent up in the lithotomy position, and held there by assistants. I now inserted the forefinger of my left hand within the rectum, and placed it against the apex of the prostate. The perineum was next penetrated by a scalpel just above the anus, and freely laid open in an upward direction, giving exit to a large quantity of pus and débris. The forefinger, being now withdrawn from the rectum, was introduced into the bottom of the wound, and a search made for the point of the catheter. This having been found, the urethra in front of it was incised. So hard was this almost consolidated portion that its division was audible to the bystanders, each touch of the knife giving forth a sound similar to the notching of gristle; its length was considerable, judging from the time it took to reach the healthy urethra beyond, a flow of urine giving indication that such had been accomplished. The slit or hole of this portion was then hit by the point of a director, which was pushed into the bladder, and upon it the catheter was guided into the same viscus. A bleeding vessel or two was twisted, and patient removed to bed, a poultice being directed to be applied to the perineum. Milk diet; beef-tea, one pint.

September 8.—No. 8 silver catheter passed, but with a little difficulty; so it was tied in. Meat diet.

14th.—Not the slightest inconvenience has been complained of about the catheter; it was withdrawn. Ordered to be passed daily for the present. Allowed one pint of ale a day.

23rd.—Perineal wound healing fast. One-third of the urine only passes through it now. The catheter (No. 12, silver) to be passed twice weekly.

October 14.—Urine has ceased to pass by the wound; catheter to be passed once a week. To get up.

November 1.—Discharged, and requested to attend at the Hospital occasionally to have an instrument passed, as, owing to slight paralysis agitans of both hands, he cannot manage to use one himself.

A VERY RARE FORM OF STRABISMUS AND ASTIGMATISM;

WITH SUCCESSFUL OPERATION AND PERFECT CURE.

By Surgeon PARTRIDGE,
Presidency Surgeon, Third District, Bombay.

Cases of pure downward squint are of rare occurrence. I have never met with nor heard of one before. Most authors either do not mention them at all, or pass them over with but a casual remark. Wharton Jones says—"The turning up and turning down of the eye appear to be rather examples of luscitas than pure strabismus;" and similarly, Macnamara gives it as his opinion that it is "doubtful if this affection ever occurs, unless in connexion with paralysis." In no book do I find any account of an operation to rectify this malposition of the eye. The following case will therefore, I trust, prove of interest:—

Captain E., aged about 45, came under my care in September, 1869, complaining of defective vision, and strabismus. On examination, I found that he only, as a rule, used the right eye, and had acquired a habit of half closing the lids of the left eye, to avoid confusion of images. If the right eye was covered, he could see, though not clearly, with the left. When directed to look at an object distant about twelve inches, with both eyes open, the left eye turned directly downwards, or downwards and very slightly inwards. The right eye being covered, the left immediately came into position, showing a primary deviation of about two lines. The right eye being observed while the left was coming into position, the secondary deviation was seen to be equal to the primary, thus excluding the idea of any paralysis of the opposing muscle.

Both eyes being uncovered, and he being told to look with the left eye only, the right eye was turned somewhat upwards.

On testing his vision, I found that with the right eye he could read No. 23 Snellen, only at ten feet, and that no spherical glass corrected vision, $V=\frac{1}{2}$. With the left eye he could read No. 20 only at five feet; $V=\frac{1}{4}$; and no spherical glass corrected vision. By means of the stenopaic apparatus, however, I found that in the right eye he had "simple astigmatism," being "myopic" in the vertical meridian ($\frac{1}{50}$), and "emmetropic" in the horizontal meridian; and that a concave cylindrical glass, with its axis horizontal, enabled him to read perfectly at 20 feet. In the left eye he had mixed "astigmatism," being myopic $\frac{1}{60}$ in a direction midway between the vertical and horizontal meridians, while he was "hypermetropic" $\frac{1}{40}$ in a direction at right angles to this. A combination of two cylindrical glasses (— 50) in the semi-horizontal direction, and (× 40) in the semi-vertical direction, corrected vision up to fourteen feet—a certain amount of amblyopia from forty-five years of disease preventing his reading fluently at twenty feet.

Taking into consideration that there was no paralysis, that diplopia could be produced by a prism, that vision could be corrected by suitable glasses, I saw no reason why an operation for the cure of the strabismus should not succeed, although it had existed for forty-five years! Accordingly, I placed him under chloroform, and divided the inferior rectus by the subconjunctival operation. There were no lateral expansions of the muscle, and the eye immediately righted itself, turning at first a little outwards, this, however, corrected itself after the first day. The eye is now quite straight, and all deformity is removed. When I last saw him, he had not received his astigmatic glasses, but I have no doubt that, when he gets them, he will not only be greatly improved in appearance, but will enjoy good vision.

Hope Hall Hotel, Bombay.

CICATRICES OF THE MEMBRANA TYMPANI.

FROM LECTURES DELIVERED

By Professor ADAM POLITZER.
Communicated by Dr. EDWIN MILLINGEN, Assistant to the Otological Clinic, Vienna.

Pathological perforations of the membrana tympani show great diversity of behaviour. Sometimes extensive destruction may be restored by the formation of cicatricial tissue; while in other cases the healing process of small perforations is totally arrested, their margins having been covered over by connective tissue. Cicatrisation of perforations begins by the exudation of plastic elements on their margins, which are by degrees organised. Experience shows how difficult it is to determine under what conditions perforations are likely to close. Artificial openings in the membrana tympani close almost invariably. The size of pathological perforations is not to be depended upon. The most extensive reorganisation of the membrana tympani that Politzer has as yet noticed was in the case of a young man who suffered from a discharge in the right ear for five years. A year ago, the only remains of the membrane were seen near the short process of the malleus. The bare handle of the malleus stood free in the opening, and behind it the dark red mucous membrane of the promontory. Behind and above the processus brevis was seen the articulation connecting the incus and stapes. The hearing was so greatly diminished that the loud tick of a watch was not perceived, when even in contact with the ear. A loud voice was heard at one foot. A few weeks ago Politzer found the membrane restored, with the exception of a small oval opening below the end of the manubrium mallei.

The healing process of perforations begins by the exudation of greyish yellow plasma on the margins of the opening. As this plasma is being organised into cicatricial tissue, the opening diminishes gradually in size until it is obliterated, generally leaving a thin cicatrix which is sunken in and possesses a bright spot at its deepest part. Its borders are very sharply marked.

The structure of such cicatrices varies. They either consist of real fibrous tissue or of a membrane void of structure, but covered on both sides by pavement epithelium. The elastic fibres of the *substantia propriâ* of the membrana tympani are either altogether absent in the cicatricial tissue, or project here and there into its periphery. Not seldom does one meet with new vessels winding into the outer layers of the tissue, which are to all appearance of a venous nature. The functional disorder caused by a cicatrix of the membrane does not stand in any relation to its size. It has been noticed that large cicatrices occupying two-thirds of the membrane have caused very little trouble, while smaller ones have been accompanied by severe deafness. This of course depends on the accompanying changes on the articulation of the ossicula, the products of the primary disease.

Cases have, however, been noticed in which the cicatrix is the direct cause of deafness. This depends on the elasticity and consistency of the cicatricial tissue. A thin and relaxed cicatrix is more likely to interfere with the movements of the membrana tympani or change the tension of the ossicula, in consequence of its incapability of resisting the pressure of the outer air.

Deafness is much more serious when a cicatrix is so far sunken in that it comes into contact with the promontory. The vibrations of the membrane are thus considerably hindered, although the cicatrix is not adherent to the promontory. This is clearly seen when the deafness brought on by such a complaint is greatly ameliorated by inflating air into the tympanum, and thus pushing the cicatrix away; the deafness returns again as soon as the air in the tympanum has been absorbed and the cicatrix resumed its former position. If in such cases it has been confirmed by means of the catheter that no catarrhal thickening or secretion is present, the relapse of deafness may be attributed to the cicatrix itself.

In a previous work Politzer reported a number of cases in which rupture of thin cicatrices followed the use of the catheter and his method. In most of these and similar ones observed by Pagenstecher, Schwartze, and Schurig, astonishing and permanent amelioration was the immediate result, although the treatment previous to the rupture was followed by very slight benefit. Politzer assumes that such durable amelioration is brought on by a change effected in the texture of the cicatrix. A slight degree of inflammation having been brought on by the the rupture, the tissue is endowed with greater power of resistance. Hence the abnormal tension of the membrana tympani and ossicula is diminished, and the transmitting apparatus is enabled to perform its functions with greater regularity. Guided by such experience, Politzer determined to bring on a slight inflammation in cicatrices by making incisions into the tissue, restricting himself only to cases in which the repeated relapse of deafness was caused by the relaxed state of the cicatricial tissue.

An incision should be made in the deepest part of the cicatrix. An ordinary paracentesis needle is very well suited for the purpose. Air should be inflated into the tympanum after the operation, in order to convince the operator of his success. When the cicatrix has been pierced, the air should stream out into the meatus. This operation has never, as yet, been followed by inflammation or suppuration; the borders of the wound generally close on the next or third day after the operation, and the cicatrix is less sunken in. Inflation should not be practised before the third day, and then a weak stream should be used. This may be done by blowing in at the mouth instead of by the air-bag. It has also been noticed that one operation is not sufficient sometimes to secure permanent benefit. It is then necessary to repeat the operation on different points of the cicatrix, at intervals of two and three days. In recommending this operation, Politzer remarks that the excision of a portion of a cicatrix is attended with danger of suppuration.

Taking into consideration the fact that improvement in hearing, following repeated incisions into a cicatrix, can only be attributed to the consequent retraction and thickening of the tissue, it may be assumed that the same change may be brought on in the relaxed tissue of membrana tympani. This treatment, adopted for long-standing obstruction of the Eustachian tube, has been followed by very good results, especially in cases in which the membrana tympani was relaxed, thin, and sunken inwards.

The absorption of serous exudation in the tympanum is greatly facilitated by inflating air into the cavity. Such a rush of air has been considered to act mechanically in expelling the serosity upwards into the mastoid cells, or backwards into the pharynx. It has been, however, experimentally proved that this is not the case, a very slight movement being only perceptible during such an operation. The improvement in hearing following inflation may be attributed to the momentary re-establishment of the equilibrium between the air within the cavity and the outer air, and hence, to the replacement of the ossicula in their normal position. It is probable that watery fluid may be expelled by a rush of air, but in most cases the secretion is stringy and thick. Whenever the hearing is restored or ameliorated by repeated inflation, the deafness is produced by another cause. When the mucous membrane lining the tympanic cavity is inflamed or hyperæmic, the Eustachian tube is also affected and almost always impervious, in consequence of which the air in the tympanum is absorbed. "This vacuum produces pressure on the capillaries of the mucous membrane, and the secretion is thus maintained. Forcing air into the tympanum is the direct means of removing the vacuum, or, in other words, restoring the normal circulation in the bloodvessels and lymphatics, and favouring the absorption of the secretion."(a)

Hence, many cases require no other treatment than inflation of air. In inflating air into the tympanum, in such cases, Politzer advises the patient to lean his head forwards and sidewards, so as to give the Eustachian tube a vertical direction, and make it more possible for the fluid to escape into the pharynx. When the amelioration is of very short duration, without any decided benefit following the mere use of the air-bag, the exudation is thick, and it is necessary to puncture the membrana tympani. The use of the catheter is never indicated in such cases, and experience has even shown that it may prove injurious. The operation for puncturing the membrana tympani is thus made:—The head having been fixed, a short and broad speculum is to be introduced into the meatus. A reflector adapted for being attached to the forehead is best suited for this operation, for thus the left hand is free to hold the speculum, and the right to operate. When the membrana tympani is clearly seen, the paracentesis needle is slowly brought down to it, care being taken to avoid touching the walls of the meatus. The needle is then gently pushed into the membrane, and the cut enlarged on withdrawing the instrument. The best place to puncture the membrane is at its inferior and posterior part, a cut of two lines in length being sufficient. The paracentesis needle is an instrument consisting of a needle about two and a half inches in length, bent at right angles to its handle, and ending in a triangular two-edged point. Immediately after the incision has been made, air should be forced into the tympanum with Politzer's air-bag, so as to expel the serosity into the meatus. Inflation should be repeated several times, until all the serum has been expelled. This should be removed from the meatus with small cotton balls, held at the end of a forceps. In case the fluid is so thick that it cannot be expelled into the meatus, the following procedure may be resorted to:—An otoscope is pushed into the meatus; at the other extremity of the tube an empty syringe is to be introduced, and the piston drawn out by degrees. The fluid is thus easily sucked out if this simple apparatus is air-tight.

(a) Wochenblatt der Ges. der Aerzte. November 17, 1869. No. 46. Politzer.

The results of Professor Politzer's experience in such cases show that one-third were cured by one operation. Among these he numbers cases in which the affection dated several months. In others it was necessary to continue the treatment with the use of the air-bag for several weeks before a perfect cure was effected. At other times it was noticed that the exudation was still in active process, and there it was necessary to puncture the membrana tympani three, four, and even five times. Chronic cases, in which the deafness depends greatly on thickening of the mucous membrane and consequent rigidity of the articulations, are those which admit of little or no amelioration.

ON THE ACTION OF QUININE IN MALARIA.

By GOPAUL CHUNDER ROY, F.R.C.S.

With all the present researches of modern Medicine, the action of quinine on malarious fevers still remains an enigma to solve. The same empiricism which at first introduced this valuable medicine in practice, still guides us in its administration with a blind acknowledgment of its remedial powers. It would well repay our trouble, therefore, to discuss the subject —How does this medicine influence our system? To enable us to enter into the question, we must understand at first the effect of malaria on our constitutions. This subtle poison, the mode of origin of which has yet to be fully ascertained, manifests itself in certain symptoms which primarily cause derangement of the organic functions of life. The stage of incubation in which the general malaise, languor, chilliness, and altered secretions are the marked features of complaint, together with the symptoms of actual invasion of the disease, in which the phenomena of the cold and hot stages are prominently marked, clearly demonstrates that the force of the poison is spent on the ganglionic system of nerves. The circulatory apparatus of our organisation is under the direct control of the sympathetic nervous centres, and we can easily understand how any influence exerted over the latter would alter or modify its governing power. Hence, also, the tendency to rapid death by asthenia when the action of the poison is concentrated, as is observed in the fresh outbreak of an epidemic, or the frequency of inflammations of different organs, as hepatitis, splenitis, meningitis, or dysentery occurring as local manifestations of perverted nutrition of our tissues. When the poison falls short in its virulence, changes less destructive in their nature are observed. The gradation from inflammation to hypertrophy can be traced in such instances in the enlarged ague cake, elephantiasis of scrotum of leg and of forearm, which take on an unnatural growth on account of local determination of blood. The latter are perfectly consistent with the health of the individual, but are classed as pathological formations on account of the hypertrophy being too rapid and bulky, and without any evident demand in the economy.

To sum up, then; the effect of malaria is directed on the ganglionic centres of our system, altering their functions in such a way as to modify the circulation and secretion of our body, to paralyse the bloodvessels, and to lead to death, inflammation, or hypertrophy. In short, it acts as a sedative to the sympathetic nervous centres.

Quinine is admirably adapted as a nervine tonic to the organic system, to counteract its morbid influence. It promotes digestion and secretion, and gives tone to the heart. Under its use the pulse improves in strength and volume. In heat-apoplexy, with pungency of skin, its exhibition reduces the temperature by obviating the paralytic condition of the bloodvessels. In intermittent fever, given before the expected paroxysm, it cuts short the attack by remedying that condition which produces the flush in the bloodvessels and giving them tone. A large dose acts just in the same way as smaller doses, but more quickly and energetically, and inasmuch as the maturation of the poison shows itself in a sudden outburst of symptoms, it stands to reason that a large dose acts more quickly and with greater certainty. This will explain the unknown therapeutic action of quinine, which used to be ascribed formerly to "shock." It has no peculiar virtue in neutralising the poison of malaria, and, given with a belief to destroy its mischevious effect in our system, it often fails in attaining the end. Its use can be extended to other diseases where the same defective function of the organic system is observed, irrespective of malarious origin. In all fevers, idiopathic or Surgical, it is an invaluable remedy, but when the altered circulation leads to inflammation of an organ or some morbid change, as in dysentery or meningitis, I hold its use to be at best doubtful.

Glasgow.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

◆

THE HOSPITAL FOR WOMEN, SOHO-SQUARE.

OPERATIONS.

Paracentesis for Suspected Ovarian Disease (by Dr. Meadows)—Colotomy and Operation for Fæcal Fistula (by Mr. C. Heath)—Removal of Uterine Polypus, and Removal of Vascular Tumour of Urethra (by Mr. Scott).

On Saturday, Febuary 4, some interesting cases were brought into the operating-room of this Hospital. The first was a most instructive case, under the care of Dr. Meadows, in which the difficulties occasionally attending the diagnosis of a case of suspected ovarian dropsy were prominently brought forward. The patient was a young woman, and when placed on the table, the abdomen had precisely the form characteristic of ovarian disease. She seemed in fair condition, and the history appeared to indicate clearly the nature of the complaint. Dr. Meadows, in his remarks upon the case, said that it was of extreme interest in relation to the diagnosis of ovarian tumours. The woman was aged 24, had borne four children, the last eight months ago, and since that time she noticed that she never regained her proper size. She first came under observation three weeks ago, and Dr. Meadows then thought it a case of ordinary ascites. He was struck, however, by the shape of her belly, and on examination found that it was absolutely dull in front, but resonant in the flanks. Two weeks later the swelling had greatly increased, and during the past week the girth of the abdomen had increased by three or four inches, so that if a cyst were present it had filled very rapidly, and some further doubt was thrown on the diagnosis. A consultation was held, and although some difference of opinion was expressed, the pretty unanimous conclusion arrived at was that the disease was ovarian dropsy, the points relied on being the general dulness with resonance in the flanks, the regular ovarian shape of the abdomen, and the absence of any distinct condition which could give rise to ascites. Under these circumstances, Dr. Meadows resolved to extirpate the ovary, but on the patient being placed on the table he commenced by making with a scalpel a cautiously small incision in the middle line, below the umbilicus. A jet of clear fluid issued, and on the opening being slightly enlarged, a free stream flowed out, and was guided into a vessel beneath the table. When a considerable quantity had escaped in this way, Dr. Meadows carefully explored with his finger, and for some time was, even then, uncertain whether a cyst existed or not. Finally, however, it became evident that the condition was one of ordinary ascites, in which the intestines were tied down to the flanks by old adhesions. The opening was then carefully sewn up again, and the woman returned to bed.

Mr. Christopher Heath next performed colotomy for malignant disease of the rectum. While the patient was being brought under the influence of chloroform, Mr. Heath explained that the patient had only on the night before come into the Hospital. There had been a scirrhous condition of the rectum for a long time, the disease being situated three inches from the anus, and being attended by the usual symptoms of painful defæcation, and occasional losses of blood. Mr. Heath had long since advised colotomy, but the patient refused, and it was only two days ago, when, absolute obstruction having been present for a week, stercoraceous vomiting had already set in, that Mr. Heath was sent for, and the woman submitted to the operation. Mr. Heath referred to a similar operation performed by him on the previous Saturday, in which, however, the conditions were more pleasant, as the state of the lower bowel rendered it possible to distend the colon with water, and so render it easily and cleanly reached. Here, probably, also, the bowel would be distended, but with fæces, which would make the operation of a more disgusting character. Before making his incision, Mr. Heath marked with ink, on the left loin, a vertical line, half an inch behind the midpoint of the crest of the ilium, which, he said, was an infallible guide to the colon. He then dissected straight down on this line, at once exposed the distended colon, and, before opening it, passed two sutures through the bowel and skin, keeping them loose, but attached on either side to the edge of the wound. Then, the gut being drawn up and opened, the middle of each thread was pulled up, cut, and the opened bowel at once stitched to the lips of the wound without further trouble. There was an immediate escape of fæces, and as this subsided, a quantity of pulled oakum was packed over the wound, and the patient returned to bed. By this method of procedure, the operation was conducted with a precision, rapidity, and cleanliness which we have not before witnessed.

Mr. Heath also applied the actual cautery to the lips of a fæcal fistula in the abdomen; but as this case will come before the Profession in detail on another occasion, we forbear entering upon it here.

The other two operations were by Mr. Scott. The first was the removal of a polypus from the uterus with long curved scissors, bleeding being checked by plugs of wool on long strings, soaked in solution of perchloride of iron; and in the second a vascular tumour of the urethra was snipped away, and the fresh surface freely cauterised. Neither of these cases presented marks of special interest.

RADCLIFFE INFIRMARY, OXFORD.

UNILATERAL ANÆSTHESIÆ, WITHOUT IMPAIRMENT OF MOTOR POWER, OCCURRING SUDDENLY IN THE SUBJECT OF HEART DISEASE.

(Under the care of Dr. GRAY.)

THE following rare form of nerve-lesion came under Dr. Gray's notice early in January, in the person of an out-patient (W. B., aged 62), who gave the following history :—

Ten weeks previously, while stooping to pick up a piece of wood, he suddenly experienced a painful tingling sensation in the right hand, foot, and side of face. In the face the smarting was so severe that he thought he must have been stung by a bee. On drawing his hand across his face to wipe away the supposed bee, he found, to his surprise, that over the right half of his face, exactly up to the middle line of nose, lips, and chin, the skin was insensible to the touch. There was no headache or other cerebral symptom. After a few hours the foot quite recovered. At the end of two or three days the right hand and cheek ceased to tingle and smart, but did not regain their sensibility, and have not done so since. From the first there has been no loss of power in the affected parts.

On the occasion of his last visit (February 11), his condition was noted as follows :—The palm and dorsum of right hand have their natural feeling, but, from the root of each finger to its tip, ordinary tactile sensibility is lost. A prick or pinch is felt, not as such, but as a scald. Their sensitiveness to heat or cold is exaggerated. Their electro-sensibility not tested. He can grip as strongly with this hand as with the other, but cannot use it for any delicate operation. Thus, in picking up a pencil off the table, the fingers fumble clumsily, and have to be guided by his eyes. (There is permanent contraction and rigidity of the palmar portion of the tendon of the middle finger; but he says this has existed for years, and attributes it to his former trade—shoemaking.)

Precisely the same phenomena of impaired and perverted sensation exist on the right side of the face, within the following limits—viz., forwards, as far as mesial line of nose, lips, and chin; upwards, along the lower and (in less marked degree) upper eyelid and mid-temple; backwards, to the anterior edge of the ear; and below, to about the lower edge of the ramus of the jaw. Beyond these limits—*i.e.*, over forehead, scalp, ear, back and side of neck, sensibility is normal. The right conjunctiva also is normally sensitive.

In the right half of the cavity of the mouth, common sensibility, and in the corresponding half of the tongue, both it and the sense of taste, are almost wholly lost. During meals, from his not feeling the food between the tongue and the right cheek, a little food and drink often escape out of that corner of the mouth. Sight and hearing on the right side are unimpaired. It is doubtful whether the sense of smell is as acute in the right nostril as in the left. Speech and deglutition are normal. He has full control over all the facial muscles, and perfect symmetry exists between the two sides of the face, whether its muscles are still or in action.

He is a strongly-built, healthy-looking labouring man, and declares he never had a day's illness in his life. No trace or history of gout, rheumatism, or syphilis; no dropsy; no albumen in urine. He owns, however, to very slight habitual cough, and (for an uncertain time past) to some little shortness of breath on unusual exertion. Auscultation reveals considerable hypertrophy of heart, with disease both of aortic and mitral valves; and it is conjectured that embolism may very possibly account for the loss of function which has occurred in certain sensory ganglia.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

TETANUS TREATED WITH CHLORAL—DEATH.

(Under the care of Mr. NANKIVELL.)

J. W., aged 5, was admitted April 21, 1870, having fallen, twelve days previous to admission, and slightly cut his left wrist. Six days after the accident, patient's father noticed that the wounded wrist was bent, and the fingers flexed and drawn into the palm of the hand; and six days later, when he was admitted into the Hospital, it was found that the original wound was quite healed, and that the fingers and wrist were completely flexed. On applying force, they could be extended; but on removing it, they returned to the flexed position. In every other respect the boy seemed in perfect health. An incision was made into the cicatrised wound, allowing a few drops of pus to escape, and he was ordered a calomel and jalap powder at once, and chloral gr. iij. ter die. In the evening, patient was reported to have slept well after the chloral, and he seemed comfortable.

April 22.—Slept well all night; no general spasm; but when the injured wrist is touched a quiver runs through the body.

23rd.—Slept all night; was asleep at the morning visit. On extending the wrist to-day, he had a violent spasm, which nearly threw him out of bed. He sleeps soundly for several hours after each dose of chloral. His limbs twitch when asleep.

24th.—Had an attack of opisthotonos when washed; slept well during the night. At 9 p.m. had a violent spasm. Ordered to have a dose of chloral at once.

25th.—Slept well; trismus well marked; deglutition difficult.

26th.—Died to-day. Spasms have increased in severity, notwithstanding that the chloral has been increased in quantity.

TRISMUS FOLLOWING AMPUTATION OF FINGER FOR BITE OF A DONKEY—TREATED WITH CHLORAL—RECOVERY.

(Under the care of Mr. NANKIVELL.)

J. B., aged 14, was admitted September 16, 1870. A week previous to admission, patient's left little finger was amputated, having been severely bitten by a donkey. He was also bitten in the left thigh. Three days later he complained of stiffness of the neck, and inability to open his mouth. A week after the accident he was sent to the Hospital, the Surgeon who had charge of him being taken ill.

On admission, the stump of the finger was all but healed, the wound of the thigh was covered with a scab; the teeth could only be separated for half an inch, and the neck was stiff. The risus sardonicus was well marked; had had no general spasm; had no difficulty in swallowing. Ordered a purgative powder, and chloral gr. x. ter die.

September 7.—Sleeps almost constantly from the chloral. Symptoms much the same.

9th.—Has had some difficulty in swallowing; but the mouth can be opened somewhat more freely. This evening when asleep he had an attack of opisthotonos. Chloral increased to gr. xv.

14th.—Has had occasional spasm when asleep, up to two nights ago; since then none have been observed. His mouth can now be opened freely.

21st.—Appears quite well; to get up.

He left the Hospital cured September 28.

Remarks by Mr. Nankivell.—Chloral produced in these cases its customary effect—viz., prolonged sleep—but did not seem to have much effect over the disease itself, for when the patients were fully under its influence, the spasms, especially in the first case, did not cease. In the second case the spasms were comparatively of a much lighter character; but I do not think that this can be wholly attributable to the chloral, but rather to the slighter nature of the case. With regard to the first case, it may perhaps be thought that the dose was small, but as the child after each dose slept for several hours profoundly, it was not deemed necessary to increase the quantity materially.

EXTENSIVE WOUNDS OF THE LUNG, WITHOUT WOUND OF THE COSTAL PLEURA.

(Under the care of Mr. NANKIVELL.)

J. C., aged 3, admitted August 31, 1870. Patient, when running across the street, fell in front of a loaded four-wheeled waggon, two wheels of which passed over his chest. He was brought to the Hospital immediately. On admission, the child was in a state of collapse, and he died in three-quarters of an hour.

Post-mortem.—Twenty-two hours after death. On external examination no injury could be detected. The left pleura was about half full of fluid blood. There was an ecchymosis under the left costal pleura, near the middle line of the axilla, over the sixth and seventh ribs, which were found to be fractured without displacement. There was no wound of the costal pleura anywhere. The left lung was collapsed, and had two extensive ruptures nearly across it from without, inwards, and through its whole thickness. All the other organs were healthy.

Remarks.—The interest of this case lies in the extensive wounds of the lung and pulmonary pleura without any wound of the costal pleura. It appears to me improbable that the broken ribs could cause such extensive wounds without the costal pleura being injured. I am, therefore, inclined to think that the weight of the waggon drove the very elastic ribs of so young a child on to a distended lung, pressed it suddenly backwards against the spine, and so caused its rupture.

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Medical Times and Gazette.

SATURDAY, MARCH 4, 1871.

THE SMALL-POX EPIDEMIC.

Again the Registrar-General tells us of an increase in the mortality from small-pox. The fatal cases in London, which in the four previous weeks had been 157, 196, 211, and 218, further increased to 227 last week. In nine permanent and temporary Hospitals for this disease forty-four deaths were recorded. This number is less than one-fifth of all the deaths that occurred. The fact is significant, inasmuch as it shows how far the Hospital accommodation provided by the Asylum Board and local authorities (considerable as it is) is from meeting the present requirements of the metropolis. Of course it may be said that many of these—the deaths over and above the forty-four—occurred in private families which are not dependent upon public aid for Medical care; and to some extent this is true, but not to the extent of accounting for the treatment at home of four-fifths of the cases which were so severe as to be absolutely fatal. The fact is quite in accord with the returns of the health officers, so far as they have been obtainable. Only a small proportion even of the cases in public practice were last week removed to a special Hospital. Out of 217 cases newly occurring in fourteen districts, only 80 were removed to Hospital, while 137, or 63 per cent., were being treated at their own homes, to the imminent danger of other residents in the houses they occupy, and to the whole neighbourhood. This certainly is not as it ought to be. If the law is not strong enough to require that persons who seek public aid in such a contagious disease as small-pox at the expense of the community, shall submit to be treated where they shall not endanger the public, on whom they are dependent, and to be so dealt with as to be prevented from adding fresh burthens by spreading the disease to others, the sooner it is made strong enough the better. Parliament is sitting, and Mr. Goschen would, we imagine, have little difficulty in obtaining powers of compulsory removal of patients thus circumstanced. If the Hospital accommodation is insufficient—as it undoubtedly is—why are not temporary buildings erected in the parks and other open spaces around London, sufficient in number and size to receive all the cases that could be sent to them from their vicinity? The present emergency is one which should be dealt with much more firmly than at present, and with a high hand. Public safety is the primary consideration; private sentiment, which, of course, deserves respect when we can afford to regard it, must give way when it clashes with it. No consideration of expense should stand in the way of establishing local temporary Hospitals. A liberal outlay of money in this direction will be the truest economy. Anyhow, the epidemic will be a costly one for the metropolitan ratepayers; but if they will have such luxuries, they must be content to pay for them. No one can doubt that the epidemic would never have reached its present proportions had sufficient encouragement been given to infant vaccination, and especially had guardian boards not absolutely discouraged the practice of revaccination of the lower classes by the public vaccinators. In fact, sanitary authorities and guardian boards alike have been all along, for years past, asking themselves, not how most effectually to carry out the powers conferred upon them for public sanitation, but how little they could do in this way without appearing to do nothing—above all, how little money they could expend in those public measures which the Legislature, following the indications of Medical science and common sense, has directed for the prevention of disease. But the money must be paid notwithstanding. Let us hope that the lesson now being taught will not be immediately forgotten.

Distributing the deaths in Hospitals to the several districts from which the patients came, it appears that they stand in the following order:—The East group of districts furnished 75 fatal cases; the South, 59; the North, 45; the West, 28; and the Central, 20. The fatal cases thus show a decline in the West and North Districts, while they had considerably increased in the East and South. If we assume as the fatality of the epidemic at the present time a death-rate of 17 per cent. (that of the Hampstead Hospital), the 227 deaths last week in London will represent no fewer than 1335 fresh cases of the disease.

But, badly as we are suffering here in London, Liverpool is much worse off—since, while London, with its population of three and a quarter millions (1861), had 227 deaths, Liverpool, with a population of little more than half a million, had a small-pox mortality last week of 129. The Registrar-General puts it thus:—"The annual death-rate from small-pox last week was equal to 3·6 per 1000 in London, while it was 12·9 in Liverpool."

THE HAMPSTEAD HOSPITAL.

The Small-pox Hospital at Hampstead was the first that was provided by the Managers of the Metropolitan Asylum District. It is a model for imitation, not only being admirably adapted for the purpose of providing accommodation for poor people during an outbreak of contagious disease, but also because the plan upon which it is erected is adapted to meet the emergency of a rapidly spreading epidemic. It commends itself to our approval, partly because of its proved capability of rapid extension, partly on the ground of its simplicity, and mainly on the ground of its complete efficiency. As the epidemic has spread, and as the demand for Hospital wards has arisen, so the accommodation has been supplied—the Hospital growing with the epidemic, until the space of land allotted to it has placed a limit to further enlargement. Briefly, it consists of a series of temporary iron pavilions, connected by a long corridor, from which they pass off at intervals.

In the first place, the site is well chosen. It is a field of about eight acres, on the eastern slope of Haverstock-hill, a little to the south of the village of Hampstead. On passing out of the Hampstead station of the North London Railway, and turning to the left, the tops of the pavilions are seen, the side of the hill looking like a small village or town of iron huts. Down this slope, from west to east, runs the corridor, to the distance of an eighth of a mile. On the south side are the pavilion wards, each separated from the other by a space of forty feet; while on the north side of the corridor, and in a short transept about halfway down, are erected the receiving wards and all the buildings required for the administration. The site is approached by a short road, turning off eastward from the main road to Hampstead, at the side of the George Inn, and between this and the new church. The carriage road passes along the north side of the buildings, and the remaining space is now in course of being laid out as a garden and lawn. It was on November 19 that the managers first determined to provide a small-pox Hospital here. They were probably influenced in the selection of this spot by the fact that there were already standing there at the top of the slope three pavilions, with the necessary offices, that had been used in the winter of 1869-70 as a temporary fever Hospital during the prevalence of relapsing fever. These three pavilions were opened as a small-pox Hospital on December 1. Dr. Robert Grieve was appointed as the Medical officer, at a salary of £30 per month, and the domestic management and nursing were placed in the hands of three of the East Grinstead Sisterhood, one of these ladies being appointed as matron, while the other two undertook the superintendence, the one of the day, the other of the night nursing. This commencement was calculated to provide for 130 patients; but, as these wards were rapidly filled and many applicants had to be refused admission for want of space, it was determined to add to the existing buildings the iron pavilion which had been in use the previous winter at the London Fever Hospital. This was, therefore, obtained and removed to Hampstead, the corridor and administrative buildings were extended to correspond, and it was opened for patients on January 5. With this addition, the Hospital was made to accommodate 200 patients, the new ward being appropriated to women and children, and the three old wards to male patients. At the same time, it was found necessary to appoint an assistant Medical officer, at a salary of £12 per month. Since then a second assistant has been appointed. On January 12 it was determined to add four new pavilions, and on the 21st the order was extended to as many as the ground at the disposal of the Board would admit of being erected on the site. The first of these new pavilions was opened on February 2, and the fifth of them on February 23—the day before our visit. A sixth—the last—was nearly ready, and was to have been opened on the 25th.

The three old wards and the six new ones are all single pavilions, of the same size, and agreeing, for the most part, in their arrangements. Each is 160 feet long by 23 feet wide, rising about 12 feet to the spring of the roof, the centre of which is about 6 feet higher. Where these single pavilions are occupied by acute adult cases, the full complement is thirty-four, which allows 1600 cubic feet of space to each bed. The wards are lighted by long, wide windows at the sides, with an interval of 6 feet between them, this interval being occupied by a bed—seventeen beds being thus ranged along each side between the windows. There is also one large window at the southern extremity of the ward. The ventilation is provided for by a swing sash at the upper and lower part of each window, and also by ventilating openings near the floor, protected by wire gauze, and capable of being closed by a flap. In two of the old wards, the opening of the upper part of the windows is interfered with by some ventilating tubes, which would be better away. In the others, there are, in addition, some *louvres* introduced into the roof, which can, if it be desirable, be closed by means of flaps. The warming is effected by means of six open fire-places, placed in pairs, back to back, along the centre of the ward at equal distances. As each pavilion ward is entered from the corridor, there is an apartment on either side—one is a kitchen or scullery, with sink and water supply; the other is the bath-room or lavatory. The closets are built out from the west side of each ward, and are separately ventilated. The pavilion moved to this site from the Fever Hospital is not constructed upon so good a principle as the original and the newly erected wards. It is a broad double pavilion, with a screen or partition running down the centre, so as to form two wards, the atmospheres of which communicate above the screen. It is both darker and less satisfactorily ventilated than the other wards. It was the only part of the building in which the air smelt close. In none of the other wards was any odour perceptible; the air was perfectly fresh and sweet. The iron bedsteads are provided with sacking; the beds and pillows are of feathers. Opposite the entrance to each pavilion, on the other side of the corridor, is a door opening upon the coal cellar appropriated for that particular ward. This is filled from the outside. The male and female receiving wards (each provided with a bath), in which the patients on admission put off their clothes, are situated on the north side of the corridor, in proximity to the male and female wards respectively. The sleeping apartments of the nurses and attendants, their dining-rooms, and offices are also on the north side of the corridor. Both at the male and female part of the building there is a small ward set apart for the accommodation of patients who may chance to be brought in suffering from some other disease than small-pox. In one of these we saw a girl ill with scarlatina. The apartments of the matron and sisters, and the store-rooms, are situated in a transept crossing the corridor between the old and newly-erected pavilions. The kitchen and laundry are erected on the south side of the corridor, between the fifth and sixth pavilions.

The distribution of the patients is effected thus:—The first three pavilions are devoted to females; the first and second, containing 34 beds each, to women in the acute stage, and the third to convalescent females, of whom 46 are placed in the ward. With this number of beds, about 1200 cubic feet of space are allotted to each convalescent. The double pavilion is judiciously devoted to convalescent males, the two wards which it constitutes accommodating 88 patients, each of whom has thus over 1000 cubic feet of space allotted to him. At the time of our visit there were three of the new pavilions, with 34 beds each, occupied by male patients in the acute stage, and there were a few male patients in a fourth. Ward No. 7—that is, the second of the newly-erected single pavilions—was a children's ward, the girls being at one end, and the boys at the other; acute cases and convalescents not being separated. Sixty-four children are received into this ward, 32 cots, each 5 feet by 2 feet, being arranged at equal distances along the two sides. It was at first expected that women and children would constitute the largest part of the admissions, but it was soon discovered that the greatest amount of accommodation would be required for adult males. Out of the whole eleven wards, it has been found sufficient to devote four to the use of women and children.

Three nurses (two day and one night) are told off to each ward except the convalescent wards, where the inmates are expected in a great measure to help themselves and one another. There are three day nurses and one night nurse for the children's ward. The convalescents, as they recover strength, are employed in light duties about the establishment; the women to assist in nursing, and the men in such work as scrubbing and light porterage, for which they get some extra diet. It is said that the children have proved very tractable, and that even at 2 or 3 years old they have been easily managed without their mothers. Only on eight or nine occasions has it been necessary to take the mothers in. They have only been admitted when their infants were being suckled.

Dr. Grieve has established the rule of keeping every case admitted for a minimum period of three weeks. This would be the minimum duration of residence of the mildest vaccinated cases. The severer unvaccinated cases remain in the Hospital for periods varying from four to six weeks. During this time they have clothing provided for them by the Hospital. The clothes they bring with them are retained and disinfected. For the purpose of disinfection a brick chamber has been built, traversed several times by the iron flue of a furnace. The self-registering thermometer, which was hanging in the chamber, marked 250° Fahr. The vapour of carbolic acid is diffused here, and the clothes, being placed upon racks and hooks, are baked for about twelve hours, after which they are deposited in a shed open to the air on all sides by means of *louvre* boards, where they undergo aëration until the patient receives them again on leaving the Hospital. During convalescence each patient has a bath with carbolic soap three days in the week—so that when he leaves the Hospital both his person and his clothing may be regarded as having been submitted to a process of disinfection. For any disinfecting purpose, for scrubbing the floors, etc., the chemical disinfectant preferred is the carbolic acid. In consequence of the popular alarm, the managers are about to provide a carriage for the conveyance of recovered patients to their homes.

The perfect manner in which this Hospital has been worked, under the disadvantages incident to its rapid extension, and the necessity of adapting its resources to a constant increase in the number of its inmates, is highly creditable to the superintending Medical officer, Dr. Grieve, and to the Sisters who have charge of the domestic and nursing arrangements. The task laid upon them all has been no easy one; and the amount of careful thought, energy, and watchfulness to keep every department in efficient order must have been very considerable. Twelve days sufficed to organise the staff and all the arrangements, from the time when the order was given to the day when the Hospital was first opened; and between December 1, 1870, and February 25, 1871, seven additional pavilions were erected and opened, the work going on in each in succession as regularly as if it had been contemplated at the very commencement. We learn from Dr. Grieve's reports to the managers that, between December 1, 1870, and February 4, 1871, 582 cases were admitted from all parts of London; and although it is true that other cases were received into the Highgate Hospital and into some small local Hospitals provided by the guardians in some of the parishes, the statement of the parishes from which those admitted at Hampstead were received affords a fair index of the comparative prevalence of the epidemic in each. We submit, therefore, the following table, constructed from the reports of Dr. Grieve in such a manner as to show the fortnightly variations in each parish and union up to about the time of the opening of the Homerton and Stockwell Hospitals :—

	Fortnight ending				
	Dec. 1 to Dec. 16.	Jan. 7.	Jan. 20.	Feb. 3.	Total.
St. Leonard's, Shoreditch . . .	25	30	19	16	90
St. George's Union	19	9	16	7	51
St. Matthew, Bethnal-green . .	14	23	16	13	66
Holborn	9	16	23	24	72
City of London	7	1	1	2	11
St. George's-in-the-East . . .	7	1	—	—	8
Mile-end Old Town	7	5	5	—	17
Stepney	6	10	2	2	20
Poplar	6	—	—	—	6
St. Mary, Lambeth	5	1	—	—	6
Camberwell	4	1	1	—	6
Whitechapel	4	1	2	2	9
St. Saviour's	4	10	9	4	27
Fulham	4	2	—	—	6
Strand	4	—	1	8	13
Hackney	4	2	2	2	10
Westminster	3	2	10	10	25
Kensington	3	—	2	2	7
Wandsworth	2	3	—	—	5
Lewisham	1	2	2	1	6
St. Luke's, Chelsea	1	3	9	—	13
St. Olave's	1	—	1	—	2
Greenwich	1	—	2	1	4
St. John, Hampstead	—	4	5	2	11
St. Marylebone	—	4	8	20	32
St. Mary, Islington	—	3	9	7	19
St. Pancras	—	4	9	19	32
Limehouse	—	—	1	—	1
St. Giles-in-the-Fields	—	—	—	3	3
St. Giles and St. George, Bloomsbury	—	—	—	4	4
Total admitted . . .	141	137	155	149	582

Up to the 21st of last month, Dr. Grieve reported the cases admitted to have been particularly virulent, but from this to February 3, that they had been of a less malignant character. The death-rate from December 1, 1870, to February 3, 1871, was 17 per cent., which he considers to have been due to the worst cases having been selected to send to Hampstead, in consequence of the demand for Hospital accommodation having been greatly in excess of the supply. He stated to us that he had had fifty cases of the hæmorrhagic form of the disease in the Hospital, all of which had died. This observation of the prevalence of this variety of the affection in unvaccinated persons, and of its certain fatality, corresponds with that of independent observers in various parts of London. He thinks that they mainly occurred in persons who were intemperate. We have, however, ourselves seen several cases, in young persons and children, where this cause could not have been operative. Again, he says that of the whole ninety-nine deaths that occurred, twenty-four, or about one-fourth, took place within forty-eight hours of the admission, and many more on the third day. It was this fact that probably gave occasion for the inconsiderate rebuke of the Poor-law Board to the Medical officers of unions that we commented upon last week. One serious and unlooked-for result has been, to show how much more the epidemic has attacked males than females over 5 years of age. Up to January 21, the number of the former admitted was 237, and of the latter 165. The reverse had been anticipated. The advantages of previous vaccination to those attacked has been shown, both in the lower death-rate and in the lessened duration of the illness in the cases which recovered. Of the 582 admitted up to February 4, 423 had been vaccinated, and of these, 29 died—that is, less than 7 per cent.; while of the remaining 159, who were unprotected by vaccination, 68 died, or nearly 43 per cent. The average detention of the vaccinated cases that recovered in the Hospital was 23 days, and of the unvaccinated, 34 days. Another observation made by Dr. Grieve is, regarding the age of those admitted with small-pox and their vaccination, that whereas, in the first decenniad of age, the unvaccinated preponderated over the vaccinated, this proportion tended to be reversed as the age advanced, until, above 40 years of age, there were very few (only four) who had not been vaccinated. We may look with confidence for some very valuable results from the observations of Dr. Grieve at this Hospital; the statistics he is collecting will, when the epidemic comes to an end, add greatly to our stock of knowledge, both of small-pox and the protective power of vaccination.

PROPOSED TEMPORARY SMALL-POX HOSPITAL AT ISLINGTON.

The Poor-law Board have communicated to the guardians at Islington their intention to take the old and disused workhouse in the Liverpool-road, with the object of handing it over to the Asylum Board for conversion into a temporary small-pox Hospital. So far as the adoption of this building is concerned, it appears to us to be a step in the wrong direction. The main building was erected about a century ago, and a wing for infirmary purposes was added at a somewhat later period, and it exhibits all the faults of construction which might be expected in a workhouse building of this age—low-pitched rooms, bad lighting, and bad ventilation being characters obvious at the first glance. Some more recent additions, however, were made a few years ago, and in this part there are rooms which might be adapted to Hospital purposes; amongst them there is a series of iron sheds or huts, formerly used as dormitories. The fault of the latter is that along one side there is a brick and plastered wall, which is incurably damp, and they are badly ventilated. The reason assigned by the Board is the necessity of providing additional accommodation immediately, and of avoiding the delay that would arise, were it requisite to obtain a new site, in the levelling and draining of land, and in the erection of buildings. We scarcely think this reason is valid, inasmuch as there is still an abundance of unoccupied land in Islington, the temporary use of which could no doubt be obtained by the Board; while the Hampstead experience shows in how brief a time iron huts can be raised and fitted up for use. Taking into account the dilapidated condition of the old Islington workhouse, and the numerous structural alterations that will have to be made in it, we question whether much time, if any, will be saved by the proposed plan. The buildings, which are supposed to be capable of accommodating 150 patients, are just now very unfit for the purpose, unless the Poor-law Board wish to see repeated there the experiences of the old Small-pox Hospital at Battle-bridge. The iron buildings might be made available, but they should be removed to another site. They are very closely hemmed in by the other workhouse buildings and private houses, and there would be a difficulty in properly ventilating them where they now stand. At the same time, we consider the objections raised by the Islington guardians as somewhat unreasonable; nor is that board very consistent in the opposition they have raised to the scheme. They have raised a grand outcry about the danger of infecting the neighbourhood; yet, curiously enough, some weeks ago they themselves devoted a portion of this very building to the reception of cases of small-pox that could not be admitted into the Asylum Board's Hospitals, and up to the present time no fewer than eighty-four cases have been treated there, the number now in the building being forty-four. So far as the transference of this local Hospital to the Asylum Board is concerned, we think that (setting every other objection aside) there would probably be an advantage both to the patients and to the neighbourhood. The Islington guardians, in their use of the buildings, have selected for Hospital purposes the very worst part of the whole block, where the rooms are, in fact, the lowest in pitch and the worst ventilated; and the nursing, we learn, is carried out through the medium of paupers—under the superintendence, however, of a woman who is not a pauper, and who performs her duties very satisfactorily. Should the Poor-law Board persist in their proposal, this part of the buildings would, at all events, have to be abandoned, except, perhaps, for the residence of the administrative staff. But we hope that the Poor-law Board will not persist, but that some more wholesome provision will be made elsewhere on the Hampstead plan, the use of the old workhouse being altogether abandoned. We are sorry to see that one of the local papers, circulating largely in Islington, which publishes the letter of the Poor-law Board and the discussion among the guardians respecting it, counsels active physical opposition on the part of the inhabitants of the neighbourhood.

> "We counsel the inhabitants of the neighbourhood," the editor writes, "to oppose it, if necessary, by actual force. Let them meet together and arrange themselves in companies, and, armed with stout bludgeons, keep watch over the premises day and night; and, if any Poor-law official presumes to approach the place, let him be escorted by a detachment beyond the parish bounds. We advise them that they will be perfectly safe in doing this, for the Poor-law Board is acting illegally in the matter: the property is vested in the guardians, and the Poor-law officials cannot take it from them without their consent. But the Poor-law Board dare not bring their iniquitous project to the test of an open trial of force with the people; their very resolution to employ force, if necessary, and their preparation to do so, will be sufficient to quell the arrogant spirit of the Poor-law Board!"

Lynch law in Islington would be, indeed, a sensational novelty.

DR. LIEBREICH AT ST. THOMAS'S HOSPITAL.

The authorities of St. Thomas's Hospital and Medical School have doubtless felt that, with the ample means at their disposal, they were bound to fulfil both the functions of a scientific school. These are—to teach what is known and established to beginners and students; and to add to the sum of what is known for the benefit of science and of humanity at large. With this view the Medical staff have selected Dr. Liebreich to fill the chair of Ophthalmology in the school, and the Grand Committee of Governors have recommended him to be elected to the office of Ophthalmic Surgeon to the Hospital. This election and recommendation have been quite unanimous, and no one who knows the state of English and foreign ophthalmology will doubt their wisdom.

Schools of art and science (for the same rule holds good with regard to painting, music, Medicine, and architecture) arise in various countries at different times; they flourish for awhile, and perhaps attain great excellence, then become barren and decline; they grow so far as permitted by the scientific knowledge and material means available, and then fade like a plant which has exhausted all the nutriment within reach of its roots. The composition of organ music, for example, must have been unable to attain full development before instruments were constructed with semitones. Then new schools arise, each of which begins at the level of its predecessor, but is enabled to push out deeper roots and stronger branches by the aid of a more advanced mechanical or scientific apparatus. Medicine is a different matter now from what it was before the chemistry of the urine, the stethoscope and clinical microscope were invented. What is true of other branches of scientific art is true of ophthalmology. The English school has attained to a position of great eminence, especially in the operative department; but the Germans have advanced further. They began by absorbing and assimilating all that was taught by the English, and made that the basis of a new school, whose boundaries were enlarged by the discovery of the ophthalmoscope and the application of the science of dioptrics. For example, Graefe has adroitly used Bowman's physiological researches and Critchett's expert methods of extraction of cataract as the basis of his own method. Now, if the English school desires in its turn to become the reigning one, it must begin by assimilating all that Germany can teach. This may be done by sending our young men to Germany; but it were done far more effectually by transplanting hither one who has taken an essential part in the formation of the German school, and putting him in a position to influence a large number of ophthalmic students—to create a school, in fact, in which the acknowledged excellence of the English in operating and in therapeutics may be combined with the most recondite teachings of the ophthalmoscope and of the laws of dioptrics as developed in Germany. Surely it were better policy to establish a new and vigorous ophthalmic school at home than to send our students as pilgrims to Berlin and Paris. It would enhance our Professional repute, and bring its own reward with it.

Now, just at this moment, when a new Medical school is in the act of organisation, there comes to London, *fato profugus*, for a temporary shelter from the hazards of war, Dr. Friedreich Richard Liebreich, who, when a student, carried the first ophthalmoscope from Helmholtz to show it to Graefe at Berlin, who has been intimately concerned in every stage of the most advanced ophthalmology, and since the death of Graefe has been the acknowledged leader and representative of the German school. The Medical staff of St. Thomas's seized the opportunity, and without one dissentient voice invited Dr. Liebreich to associate himself with them in their new school. Their brethren will commend them. If there be any English Surgeon who had desired the post, we are sure that his sense of justice will acknowledge that the right choice has been made, and that he can afford to bide his time.

We are aware that the *Lancet* of last week endeavoured to put a veto on the appointment, for the reason, principally, that Liebreich is a foreigner. If our contemporary is really sincere, and objects, on what he calls "principle," to giving a foreigner a post in a London Medical school, we will not attempt to argue the matter with him; but, in the name of the fairness and hospitality which most people think due to strangers, we must remonstrate against one or two expressions in his article, which, if they are not attempts at unfounded insinuations, are evidence of want of information as to the matters he ventures to write about.

For instance, there is an insinuation about the "whiskered and *soi-disant* count;" as if Liebreich, a quiet, student-like man, had the character of a stage adventurer, all curls and grease and jewellery. There is an insinuation that Liebreich is not one of the most illustrious of the "small inner circle of ophthalmologists." If he be not, who is? There is the insinuation that he cannot speak English; as if a German who has mastered Polish, French, and Spanish, would find much difficulty in perfecting himself in English. There is the insinuation that it is a "Continental custom" to treat patients as so many "assemblages of phenomena," rather than as human beings. Our contemporary does not say that this is a German custom, nor would he venture to say so if he knew of the large clinique of poor patients whom Liebreich gathered round him in Paris by mere force of personal kindness. But enough of this wretched narrow-mindedness! Liebreich comes amongst us as a Professor and teacher, and we can assure him of a hearty welcome.

CARPENTER, LETHEBY, COBBOLD, AND HEWLETT ON TOWN SEWAGE.

How shall town sewage be dealt with—first, with regard to safety, and, secondly, with regard to use? The question seems as far from solution as ever. The most obvious course is to apply it, by means of a system of irrigation, to the roots of rapidly-growing plants, especially to the rye-grass used for the food of milch cows; so that what leaves the town as noxious refuse may return in the shape of milk. Anyone who desires to read a most able exposition and defence of this system should procure the paper on the "Physiological and Medical Aspects of Sewage Irrigation," by Dr. Alfred Carpenter, of Croydon. This writer, who must be well known as having had experience of sewer gases in every form, declares that the evils alleged to follow properly managed sewage irrigation do not exist; and not only so, but that, if a rapid and vigorous process of vegetation be established, the sewage will not only be greedily absorbed and decomposed, but Nature's own disinfectant, ozone, will be developed—so that the more sewage (within reasonable limits), the more growth; and the more growth, the more ozone, till a well-managed sewage farm ought to rival the seaside as a source of invigorating breezes.

It will be evident that Dr. Carpenter demands a certain limitation of *quantity* as the element of safety, and states that one acre is capable of receiving and disposing of the sewage of 100 persons. But it is certain from our knowledge of human nature that where the prime object is, not to utilise the sewage as manure, but to get rid of it, there will be a constant tendency to overdo the application. This was alleged unmistakably by Dr. Letheby, at a late discussion of the Association of Medical Officers of Health, to be the case at Aldershot, where it is said that so great is the excess of undecomposed sewage applied to a limited tract of land, that not only does a large quantity of fresh fæcal matter rest on the surface, where it cakes and hardens, rendering it incapable of absorbing the liquid, but that large quantities pass from time to time into the Blackwater, which is thus converted into a stinking ditch.

Let us, however, grant that the ground for irrigation is properly levelled, channelled, and, if need be, drained, so that the sewage shall flow over or through the surface; that there shall be no stagnation, no putrid swamp, no taint of the air, and no contamination of wells below or of streams on the surface of the earth. We are then sharply pulled up by Dr. Cobbold, who lays before us the danger of the dissemination of parasitic diseases, and especially of trichiniasis, tapeworm, and of the so-called hydatids. We know that in countries where pigs have access to human excrement, the measle is common; the tapeworm may become so in our grass-fed cattle, and a new cohort of diseases be thus propagated. On this point, Dr. Carpenter, Mr. Holland, and other advocates of irrigation by fresh sewage simply defy their antagonists; they deny the propagation of parasitic diseases, and call for proof. Dr. Cobbold, on the other hand, refuses to go *coram non judice*; he will not accept the negative testimony of butchers, or even of Medical men, who do not know what to look for in the flesh of parasite-infected animals, and would not recognise it if they saw it. We may refer to the papers lately read by Dr. Cobbold, and published in this journal, as evidence of the deep and conscientious study he has made of the subject, and will leave our readers to judge if the warnings of such a witness are simply to be laughed out of court.

But there comes evidence from another quarter, which reaches us as we are writing. In the report of Dr. Hewlett, the Health Officer for Bombay, for the fourth quarter of 1870, we find the following passages:—

"During the quarter the carcases of thirteen full-grown cows and one bullock have been destroyed by my orders, on account of the flesh in these animals having been found to be infected with what is popularly called bladder-worm or measle.

"This measle, or as it is more scientifically termed cysticercus (*κύστις* the bladder, *κέρκος* a tail), is known to zoologists as the scolex, hydatid, or larval form of a cestoid (*κεστός* a girdle, *εἶδος* form) worm called in its sexually mature state the tænia medio-canellata.

"The history of these parasites is one of peculiar interest, and has even been styled romantic.

"The scolex or cysticercus cannot arrive at maturity—*i.e.*, cannot become a perfect tape-worm, sexually mature, in the animal into whose body it has found its way. It is not until the flesh of the animal in which it is contained has been received into the human alimentary canal that the cysticercus can be developed into a tape-worm.

"When this cysticercus arrives in the alimentary canal of any individual who may have been so unfortunate as to have eaten the meat containing it, it attaches itself to the mucous membranes of some part of the intestine by the five sucking discs so admirably shown,(a) and thus anchored, it speedily grows into a segmented worm, which may exceed thirty feet in length. Each posterior segment (proglottis) contains both male and female organs of generation, and is, when mature, cast off from the end of the worm and passes out of the body either during defæcation or by itself. It is then capable of an independent existence for a short time, but at last decomposing gives vent to the numerous eggs that have been formed in the uterus of the segment; as each segment is given off a fresh one forms near the head or neck of the tape-worm.

"It will thus be seen that the proper disposal of human excrement affects the welfare of communities in more ways than one; for, although it is true that these eggs may be borne about by the wind, and thus find their way into the fodder of cattle, yet in this country it is more than probable that cattle become infected with cysticerci by eating human excrement upon which either a proglottis itself or the ova of one have been deposited. By such means the "alternation of generations," as it has been termed, is effected. Can there be a stronger proof of the necessity for establishing a really efficient system of sanitation in the Mofussil, which shall embrace not only those matters which directly affect the lives of men, but which shall also supervise the well-being of the brute creation, for so intimate is the bond by which all God's creatures are united, that nature, by a kind of retributive justice, visits on mankind any neglect displayed by them towards the lower forms of animal life.

"I have been unable to trace the exact localities from which the infected cattle were brought, and I have therefore established at Bandora a register of all animals sold to the butchers by the dealers at the weekly fairs, and I hope, as time goes on, to trace the previous history of each diseased animal.

"It is impossible to discover the cysticercus in the animal before it is slaughtered. Most of these cows were in excellent condition, and the butchers are grumbling terribly at the loss they sustain. It would be, of course, entirely out of my power to allow meat containing these parasites to be sold.

"Great credit is due to Mr. Higgins, the indefatigable superintendent of the markets, for the vigilance he has displayed, and I think I may safely say that no meat market in the world is more sharply inspected than our own.

"It is, however, probable that portions of beef containing cysticerci, when they are but few in number, do escape detection, and I wish to warn the European, Native Christain, and Mahomedan communities, that they should themselves inspect the meat brought to their houses, and they should likewise remember that all meat ought to be well cooked, as the chances of eating live cysticerci are very much multiplied by eating underdone meat.

"According to our experience, the buttocks of the cattle are usually more infested than the rest of the body, so that persons who are fond of rump steaks should be more than usually cautious. My thanks are due to Dr. Veale for having on more than one occasion brought to my notice pieces of meat that contained cysticerci and had been sold in the markets."

Granting, then, that sewage should be applied to the land by irrigation, it seems a question whether it ought not to be dealt with in some way, first of all, to avert the plagues of which Dr. Cobbold has warned us. The butchers are not likely to tell tales of their own meat.

THE WEEK.

TOPICS OF THE DAY.

Mr. Headlam has given notice that he purposes to introduce a Medical Acts Amendment Bill early in the present session. We do not intend to offer, on mere rumour, a positive opinion as to the wisdom or opportuneness of his measure. It is sufficient at present to remind our readers that no Bill which is introduced by a private member can have the chances in its favour which seemed to invite the Government Bill of last year. Nor is it probable that any Bill introduced by a private member will, on the whole, be framed with so few glaring evils and defects as was Lord De Grey's Bill before he consented to spoil it. The introduction, for instance, of the principle of direct representation in the formation of the General Medical Council would inflict, we are convinced, a real injury on the Profession, which would not easily be counterbalanced. Yet this is avowedly the price which any member, whatever may be his private convictions or the opinions of the best and wisest of the Profession, must pay for the support of the wire-pullers of the British Medical Association. Again, the experience of last session proved the enormous difficulty of passing a Bill which would erect a real sole portal into the Medical Profession, but the comparative ease of erecting a portal in addition to the nineteen which at present exist. The latter is a sham reform, a mere mockery, which might, perhaps, provoke but little opposition, but which would leave things only worse than they now are. Nevertheless, we are perfectly certain that no Bill which debarred any Medical authority from granting a diploma to any candidate who had not passed through the national examination could be forced through both Houses of Parliament; and yet, as we have repeatedly shown, anything short of this is a mere addition to the present confusion. For these reasons, we are not sanguine as to the value or success of any private Bill. A really good Bill cannot pass at the present conjuncture, and it must be the aim of those who possess the power, to stop a bad or an indifferent one. The Profession must reform itself, and this it may do to a very great extent without the help of Government or Parliament.

It is understood, however, that Mr. Headlam is, on this occasion, the mouthpiece of the "Reform Committee of the British Medical Association." Dr. Edward Waters, of Chester, who, as chairman of that Committee, may be supposed to be well acquainted with what the Bill will contain, in a letter which has appeared in the *Pall-mall Gazette*, writes that one of its main provisions is "to secure for the registered Medical Practitioners direct representatives in the General Medical Council to the extent of one-fourth of its numbers, in order to neutralise the existing preponderance of the representatives of the Corporations." If this panacea of direct representation be, indeed, an integral part of the Bill, we shall have no hesitation in offering it our determined opposition. In that opposition we know we shall be supported by all those of our Profession who are qualified by ability and information to form an opinion, and who are unbiassed by motives of personal vanity and a love of the notoriety which attends agitation. We shall oppose it because we have no wish to see the Associations of a scientific Profession transformed into Medico-political clubs; because we have no desire that the internal economy of the Profession should fall into the hands of mere Medico-political adventurers; because we would not allow the usefulness and prosperity of our Profession to be interrupted by the bitterness of ever-recurring struggles, the clamour of opposing parties, and the tax of election expenses; because we hold that the General Medical Council, although, like every other human institution, it be not perfect, can only be deteriorated and damaged by the infusion of men who would stoop to election tactics, and, quitting the paths of true Professional honour, spend their time and money in canvassing; lastly, because we believe that the true reform of the Profession is utterly different from revolution, and that whatever may have been the shortcomings of the Medical Authorities, which we gather it is the aim of the British Medical Association Bill to neutralise and incapacitate, we shall oppose their destruction, because those Authorities have shown themselves willing and able to raise the standard of Medical education, to maintain the honour and status of the Profession, and because they have already given the British Empire a body of Medical men who, whether as private Practitioners, teachers, scientific workers, or public benefactors, are equalled by no Medical body in the civilised world. The Reform Committee of the British Medical Association has its Bill, and we hear that the editor of the *Lancet* has his, although it does not yet appear whether any Medical or other member of Parliament will be found who will have the courage to stand up in the House of Commons and say that he represents—the *Lancet !*

(a) Dr. Hewlett's paper contains some excellent drawings of measly beef and of the cysticerci, both of natural size and magnified.

The scheme for the Conjoint Board formed by the three English Corporations was discussed in the Council of the Royal College of Surgeons on Thursday. A feeling of regret that the Universities had not been invited to take part in the scheme led the Council to adopt a resolution, which referred the scheme again to the Committee, on the ground that it was not so comprehensive in its scope as was originally contemplated by the Council. There seems to be in some quarters a great misconception as to the mode in which this scheme is to be carried out. One of our Medical contemporaries appears to think that the scheme must receive the sanction of the Government and of the Medical Officer of the Privy Council before it can be brought into play. There can be no greater mistake. The only body whose sanction to such an arrangement must be obtained is the General Medical Council. The Corporations combine in virtue of the 19th section of the Medical Act, and no other authority than that of the General Medical Council is necessary. The scheme is, of course, distasteful to those who dislike a quiet, unobtrusive, but very real reform, because it must do away with their trade of popular agitation, and supersede the revolutionary schemes by which they hoped to attract attention to themselves.

We may direct our readers' special attention to the papers to be read at the meeting of the Epidemiological Society on the 8th inst., when the Society invite the attendance of all who take an interest in their subject. Dr. Seaton, the President, will speak on the present epidemic of small-pox, and Dr. Grieve give an analysis of a large number of cases admitted into the Hampstead Hospital during the same epidemic.

Charles Gerard, B.A. Oxon., a private teacher, of Lincoln's-inn-fields, was sentenced at the Central Criminal Court on Wednesday last to twelve months' imprisonment, with hard labour, for conspiring with Reuben Newport, a printer, to induce one Heatly, a "proof puller" in the service of Messrs. Gilbert and Rivington, the printers to the Apothecaries' Society, by a money bribe, to rob his masters of the papers of questions which were to be used at the last Preliminary Examination at the Hall. At the trial, it was proved that Gerard was an old offender. The printers to the Royal College of Surgeons proved that he had made an unsuccessful attempt to obtain the Fellowship Examination questions in 1866. The printer Newport, who was the tool of Gerard in the matter, was recommended to mercy by the jury, and sentenced to two months' imprisonment. There have long been rumours of underhand dealing with regard to examination papers. We believe that the chief, and, most probably, only offender has been taken, and we are glad that a severe example has been made. Too much credit cannot be given for the manner in which the capture was planned and executed, and the case conducted. Any feeling of reluctance to pass a severe sentence upon an educated man which might have existed in the minds of judge or jury must have disappeared, when it was proved that for years he had been engaged in similar nefarious schemes.

A girl named Emily Sweetnam was tried at the same sessions for the wilful murder of her new-born child. The child was found beneath a table in a scullery, with its skull fractured, the nose broken, and there were other superficial injuries and bruises. The barrister who defended the girl, Mr. F. H. Lewis, had evidently consulted some Medical authorities on the subject. He referred to cases in which fracture of the skull in new-born infants had been supposed to take place from falling during delivery, the mother being delivered in an upright position, or even during the progress of parturition. Whatever were the probabilities in the present case—and the Medical witnesses seem to have believed that the injuries could not have been produced accidentally—the girl was acquitted.

The little hippopotamus which was born and died last week in the Zoological Gardens seems to have been a melancholy instance of the evils of civilised existence. The poor little brute was probably heir to ills bequeathed by the unnatural mode of living of its parents. It seems to have suffered from chronic peritonitis in utero, for its stomach and liver were adherent to the peritoneum. There have been now eight hippopotami born in Europe, and of these only one has survived its birth for any time. The exception, however, only lived to be the most unfortunate. It was born and reared at Amsterdam, and when it was about a year old it was bought by an American, who, on his way to the far West, deposited it at the Crystal Palace, where it was burnt alive in the fire that took place there about three years ago. Fate is evidently against the hippopotami in Europe. We believe that the mother at the Zoological Gardens appeared to make no effort to suckle her infant; an attempt was made to feed it artificially with milk.

Dr. Sanderson's resignation of the Physiciancy at the Brompton Consumption Hospital has made a vacancy in the staff, which will be filled by the promotion of Dr. Charles T. Williams. For the resulting vacant Assistant-Physiciancy, there are, we believe, five candidates in the field—Dr. Franklin Gould, M.D. Edin., B.A. Lond., Acting Demonstrator of Physiology at King's College; Professor W. H. Corfield, M.B. Oxon, Professor of Hygiene at University College; Dr. J. Wickham Legg, M.D. Lond., Physician for Casual Patients at St. Bartholomew's; Dr. Roberts, Assistant-Physician to University College Hospital; and Dr. Edwin Haward, Physician to the Westminster General and Farringdon Dispensaries.

The King and Queen's College of Physicians in Ireland, roused, we suppose, by the strictures of Dr. Stokes on the condition of Medical education in Dublin, has passed the following —to our minds, lame and impotent—resolution :—

"That, in the opinion of this College, a mode of combining clinical education with clinical examination of all students educated, wholly or in part, at the Dublin Hospitals, might *perhaps* (the italics are ours) be devised, that would secure the possession by Dublin Hospital students of a superior knowledge of practical Medicine, in the following way, viz. :—

"That the Physicians of the several Hospitals in Dublin should constitute themselves into an Examination Board.

"That such Board should institute periodical clinical examinations, at each Hospital, of the students attending at such Hospital, who would desire to present themselves for examination.

"That the Examining Board at each Hospital should consist of at least one of the Physicians of the Hospital, with two or more Physicians from other Hospitals; and that a certificate of having passed such clinical examination should exempt all candidates for the licence of this College from examination in Clinical Medicine at the licence examination.

"And that the Physicians of each of the recognised Hospitals of Dublin be requested to favour the College, through its Registrar, with their opinion as above."

The evident doubt in which the College is as to the efficacy of its resolution, may disarm criticism. But even should it be as effectual as perhaps it might, we cannot approve the College delegating its functions as an examining body to the Physicians of the Dublin Hospitals.

Mr. Hillman has resigned the Surgeoncy to the Westminster Hospital, and we should hope, as a matter of course, that Mr. Francis Mason, the senior Assistant-Surgeon, will be elected to the vacant Surgeoncy. Mr. Mason is Lecturer on Anatomy and Teacher of Operative Surgery in the school, and he has the best claims to the post. In order to qualify himself for it, he has had to resign his appointment as senior Assistant-Surgeon. We need not remind the governors that he has, besides the claims of service in their Hospital, the highest standing as an able and sound Surgeon.

Of the ten gentlemen who passed the competitive examination for Assistant-Surgeoncies in the Navy, only one is from a London school—the Westminster Hospital; one is from a Scottish school—the Glasgow University. The other eight are from Irish schools. The Naval Medical Service has either special attractions for our Irish cousins, or very little attraction for Englishmen and Scotchmen.

SUGGESTIONS FOR THE REORGANISATION OF THE ARMY MEDICAL DEPARTMENT, BY A STAFF SURGEON-MAJOR.

The author of the pamphlet bearing the above title commences with the proposal of a question which, whether for good or ill, has latterly been very attractive to British legislators and tax-payers—namely, How can the two ends of increased efficiency and decreased cost be best attained? He thinks, so far as the Army Medical Service is concerned, that he has hit upon the plan which will fulfil both conditions. The change which he proposes is a decided one, but not so radical as the advocates of the general staff system would demand. He considers that it would be a great mistake to do away entirely with the regimental Medical sysem, but would abolish regimental Hospitals, reduce the number of Medical officers in cavalry and infantry regiments from two to one, and abolish Surgeons-Major and Surgeons of artillery. He thus makes a pretty clean sweep of regimental Medical officers. Those whom he would retain under that designation would be Assistant-Surgeons above six years' service, and to whom he would give the title of "Second Surgeons." Their duties would be to take charge of the regimental dispensary attached to each regiment and battery of artillery, and in which there should be only half-a-dozen beds, for the reception of urgent or trifling cases. Patients requiring Hospital treatment should not be detained in the dispensary more than twenty-four hours under ordinary circumstances, but should be sent to the particular Hospital detailed to receive the sick of the regiment. The daily inspection of the regimental prisoners; examination of recruits; the Medical attendance on sick officers and their families and the regimental women and children living in barracks; attendance to assist at operations or in consultation on serious cases at the military Hospital of the station; the preparation and charge of the Medical history sheets, of a register at the dispensary of the diseases and length of time under treatment of all non-commissioned officers and men admitted into Hospital, and officers on the sick-list, and of a case-book for all serious cases occurring among officers, women, and children; the invaliding duties at the head-quarters of the regiment; weekly Medical inspections of the men, also of the rations, barracks, canteens, outhouses, cells, etc.; attendance at ball practice and route marching, when considered necessary by the regimental commanding officer, would also fall to the lot of the regimental Medical officers. Such duties in a regiment of infantry numbering 850 men, and in a battery of artillery with only 150, would appear to us to bear so very unequally upon the respective Medical officers, as to render this part of the plan quite impracticable, although an attempt is made to equalise the duties of Medical officers attached to batteries of artillery, by suggesting that they should be available for ordinary duty at the military Hospital nearest their quarters, but that only at Woolwich should they have to perform the duties of orderly Medical officer of the day.

The proposer of the scheme considers the double sort of Government which now applies to regimental Medical officers to be very objectionable; but we do not see that his plan would in any way remedy it, except by reducing the number of those under its influence. The regimental dispensary, as a half-way house between barrack and Hospital, is analogous to *l'infirmerie* of the French Hospital system, and would tend rather to increase the number and complicate the nature of the records necessary to keep up a detailed history of the health of the regiment as a whole. The fact of these records being kept at the dispensary by one Medical officer, while the patients are being treated in the Hospital by another, would deprive them of much of their value. The invaliding also being carried on by the regimental Medical officers, instead of by those through whose hands the soldiers had passed as patients, would be attended by great difficulties, as regards both the interest of the public and the claims of the individual.

Military Hospitals, according to the plan under notice, would be of three kinds—viz., general, garrison, and detachment Hospitals—and be under the control of the Medical officer in charge. The appointment of military governor of general Hospitals would be abolished, but the Hospitals would be subject to the periodical inspection of the senior military officer of the garrison in which they are located, and would be visited daily by a military officer not under the rank of captain, and in the larger garrisons of field officer. The Medical charge of general and garrison or camp Hospitals would be for three years, and in the larger Hospitals one or more Medical officers would be appointed as second in charge for a similar period. The ordinary routine duties of all military Hospitals would be performed as *garrison* duties by staff Medical officers under the principal Medical officer, independent of regimental interference. The present designations of Medical officers in the administrative ranks would be retained, but in the lower ranks would be altered into "executive" and "assistant-executive" officers, the former to be "senior Surgeon-Major" and "Surgeon-Major," instead of the present Surgeon-Major and Surgeon, the latter to be "Second Surgeon," in place of Assistant-Surgeon above six years' service, and "Assistant-Surgeon."

We have stated some of the most obvious of the objections to the proposed plan; others, no doubt, will occur to many of our readers. We fear that the delay in the appearance of the long-expected new warrant for the Army Medical Service implies that the authorities do not yet see their way to the remodelling of the department. One thing is certain—that no plan will be completely acceptable to Medical officers which does not hold out some prospect of acceleration of promotion; and, as we have frequently said already, the only way which at present appears likely to effect this is to enforce retirement from the administrative ranks after a certain period of service in the same, and to grant better terms of optional retirement to Medical officers from fifteen to twenty years' service—say one shilling per diem for each year of full-pay service.

ALLEGED GERMAN BARBARITIES.

We are glad to observe that the facts as to the alleged burning of a captain of Francs-tireurs by German troops, near Dijon, have been made public by a Medical officer of the Baden division, in a letter in the *Freiburg Gazette*, and quoted in the *Pall-mall Gazette* of the 28th ult. It appears that the officer must have received an instantly mortal wound in the back, from one of his own men, before the château which his party was holding against the Prussians had been set on fire by the latter, in consequence of the Francs-tireurs continuing to fire on them from the upper windows after the officer had come out and offered to surrender. While ascending the stairs to call on his men to cease firing and surrender, he was shot dead by a bullet from above. The fire being still maintained, the Germans set fire to the house, and thereby compelled the Francs-tireurs to come down and give themselves up. The partially charred body of the captain having been afterwards found in the ruins, gave rise to the horrible report as to his having been intentionally burned alive, which, in spite of the representations of the chief Medical officers of the German Hospitals at Dijon, was accepted as true by Garibaldi, and published by him in general orders. The matter appears to have been officially investigated when the German troops recovered Dijon after Bourbaki's defeat. No explanation has been yet given of the statement of some of the correspondents of English papers as to the body having been found suspended from a beam by the hands tied over the head. This may have been done as an after-thought by those who discovered the body, and who desired to obtain credence for the horrible tale.

EXAMINATION OF CANDIDATES FOR THE ARMY AND NAVY MEDICAL SERVICE.

This examination closed on Saturday last, but the results have not yet been officially announced. The number of candidates for the Army Medical Service was fifty-seven, the vacancies being thirty-six. Many of the competitors were of high Professional attainments, so that the competition has been tolerably close. For the Naval Medical Service, the competition was actually *nil*, fourteen candidates only having presented themselves for forty-five vacancies, and of these fourteen only ten, whose names have been already published, came up to the qualifying standard. We understand that it has been intimated to such of the candidates for the Army Medical Service as have obtained the qualifying number of marks, but have been excluded by the more successful competitors, that if they are willing to enter the Naval Medical Service, no further examination will be required of them; but as to how many have accepted, or are likely to accept, the terms, we have no information. The candidates for both Services will commence the special course of instruction at the Army Medical School, Netley, on April 1, this being the first occasion for Naval Medical candidates to do so.

THE ARMY ESTIMATES.

Although the total number of Inspectors-General of Army Hospitals provided for in the estimates for the ensuing year remains without alteration, a change in the distribution of this class of Medical officers is about to be effected. The withdrawal of a considerable proportion of the force from Canada renders unnecessary the retention of an Inspector-General in that colony, but the increased importance of the duties at Portsmouth, in connexion with the overland transport of troops to and from India, has induced the authorities to arrange for an Inspector-General of Hospitals to assume charge of the southern district, of which Portsmouth is the head-quarters. There will thus be five Inspectors-General on duty in the United Kingdom and one in Malta, instead of four at home, one in Canada, and one in Malta, as has hitherto been the case. We are glad to observe that the Army Medical Department has thus escaped tho infliction of such a serious injury to all its members as the loss of one of the highest positions in its administrative ranks would have entailed.

PARISH OF BIRMINGHAM MEDICAL APPOINTMENTS.

Seeing in the Medical papers an advertisement that five Medical officers are required for the parish of Birmingham, some of our Medical brethren may be led to infer that there are as many vacancies in the districts. This is not the case; all the offices are filled up, and their respective holders intend to offer themselves for re-election. From the following remarks, made by the chairman of the guardians at their last meeting, to the effect "that the Medical officers had done their duty to the entire satisfaction of the guardians, to the satisfaction of themselves, and to the entire satisfaction of the recipients," it would appear that other candidates who might be induced to compete for the appointment would be putting themselves only to unnecessary trouble and expense, and would have but little chance of success.

DIED AT HER POST.

The *Liverpool Mercury* states that a service *in memoriam* of the late Miss Jones, the originator of the system of trained nurses for workhouses, took place in the Workhouse Church, Brownlow-hill, on Sunday evening. Miss Jones died of fever, caught in the discharge of her duties. The "Angel of the Resurrection"—a fine piece of sculpture, presented by Mr. Rathbone, M.P.—has been placed in the church as a monument to her memory. The Bishop of Derry preached the sermon.

ARMY AND NAVY EQUALITY.

We are pleased to find that Dr. Brown has introduced the question of the inequalities in the two offices of Medical Director-General of the Army and of the Navy, in the second edition of his pamphlet on the Naval Medical Service. He has asked for equalisation on the following heads:—Emoluments, on the ground that the officers have to maintain an equal position relatively to their respective services, as well as to their Professional brethren of high standing in metropolitan society. Honorary titles, as a compliment to the Naval Medical Department. Civil retired pay, as due to the officer under the provisions of the Superannuation Act. We hope that the rectification of this will follow speedily on its becoming known to the proper authorities.

THE RIGHTS OF WOMEN.

We cannot help thinking that the recent acquittal of Mrs. Torpey, the heroine of the jewel robbery case, supplies the Rights of Woman Association with a very strong case for renewed agitation on behalf of the cause which they advocate. If the right of women to conviction on criminal charges had been established in spite of the obsolete fiction of their being under the coercion of their husbands, where would Mrs. Torpey be now?

THE MEDICAL COMMISSIONERS IN PARIS.

We understand that Doctor Gordon, C.B., and Surgeon-Major Wyatt, Coldstream Guards, the Medical Commissioners with the French Army, have been permitted to remain in Paris till the 15th inst., for the purpose of completing the materials for their report.

THE NAVAL MEDICAL SERVICE.

Fifteen gentlemen only presented themselves at the recent examination of candidates for Assistant-Surgeons Royal Navy. The vacancies to be filled were forty.

DISINFECTING AGENTS.—SANITARY CONDITION OF HOLBORN.

In the fortnightly report to the Holborn District Board of Works of the 20th ult., Dr. Gibbon, Medical Officer of Health, says:—

> "All the means and appliances at our disposal are being employed to check the spread of small-pox. During the past fortnight Mr. Brown has thoroughly fumigated and disinfected thirty-two infected rooms, and the bedding and woollen articles of clothing have been purified and disinfected, in several instances, by Messrs. Garth and Co., who have contracted with the Board to do such work. I believe this work is done in a satisfactory manner. Its only drawback is the inconvenience the poor are put to in being deprived of their beds, &c., for one, if not two, nights. I have made a careful examination of the different chambers that are used in the metropolis for disinfection by means of heat. Messrs. Fraser and Co.'s patent chamber, in St. Giles's stoneyard, in the space of one hour and a half, produced a temperature of 220 degrees in the interior of a flock bed. Messrs. Nelson and Son's chamber, as used in the Marylebone stoneyard, produced in the hour only 95 degrees of heat inside a bundle of linen sheets. The hot-air chamber, as erected by St. Luke's Vestry in Playhouse-yard, produced in less than an hour 240 degrees of heat inside a flock bed. attended at the Small-pox Hospital on Saturday afternoon for

the purpose of testing the chamber as erected there by Mr. May, of Holborn, but was unable to do so, because it was not then in use. I left my self-registering thermometer with the Resident Physician, Dr. Grieve, who promised to let me know what degree of heat was attained inside a flock or feather bed. Unfortunately I have not yet heard from him, but he told me, as I readily believe, that a temperature of 300 degrees was easily obtained in the oven. The oven is constructed on a better principle than the others, because the flue (an iron one) passes several times across the floor of the oven, and thereby greatly economises the heat. In this oven, I believe, the requisite temperature would be more quickly obtained than in any of the others. The erection of any one of these chambers would require a considerable space of ground. The cost of all the really efficacious ones is about the same—viz., £100. Messrs. Nelson and Son's cost only £33; but, in my judgment, it is perfectly useless. I am much satisfied with the process of disinfection we have hitherto used—viz., that by sulphurous acid—for all woollen clothes, carpets, and other articles of room furniture; but there would be no harm—on the contrary, increased security—in submitting them also to the process of heat disinfection. For the disinfection of beds, the heat process is very convenient; but, theoretically, I should think the process we now adopt, through the agency of Mr. George West and Messrs. Garth and Co., is the more efficient of the two. This process combines the use of dry heat, steam heat, and the use of chemical disinfectants."

THE LAW RELATING TO CORONERS.

The Bill to amend the law relating to the election, office, and duties of coroners has been introduced by Mr. Goldney. Those persons—and they are not a few—who desire to see the "very ancient and important public office" of coroner totally abolished, will not wish well to Mr. Goldney's Bill. Mr. Walter and Mr. Thomas Chambers have indorsed the draft, so that it has in no sense the character of a party measure. So far as concerns the election of a coroner for any county, riding, division, or district, the franchise is to be divested out of the freeholders as such, and vested in all the persons on the Parliamentary register. The polls are to be taken at the usual places for polling at Parliamentary elections for the county; and, while penalties are threatened for personation and bribery, the word bribery is to be construed as meaning exactly what it by law or statute means with reference to Parliamentary elections. A reform of the scale of fees payable to witnesses other than Medical men is attempted, the coroners being permitted to apply to the Home Secretary, and the latter being compelled, on such application, to alter the scale. The Bill next provides for the resignation or ejectment of a coroner. The justices at quarter sessions may grant him a superannuation allowance. If the coroner is dissatisfied with the amount, the Home Secretary is, on his appeal, to determine the same. So, also, may the justices in quarter sessions, at the instance of any elector, institute an inquiry into any alleged inability or misbehaviour of a coroner in his office; and, if the justices think that the case has been proved, they must petition the Lord Chancellor to remove the coroner. If the Lord Chancellor takes action upon this petition, and ejects the coroner, the costs of the inquiry are to be paid out of the county rates.

After January 1, 1872, coroners are to be paid by salary, calculated on a five years' average of fees, mileage, and allowances; but this salary is not to include expenses and disbursements paid on the holding of an inquest, as provided by 1 Vict., c. 68. If the Justices and the coroners in each case cannot agree upon the amount of salary to be thus ascertained, the Home Secretary is to be the referee. The quinquennial revision of salaries provided by 23 and 24 Vict., c. 116, s. 4, is to be abolished.

Coroners are henceforth to make returns to the Secretary of State of the particulars of all inquests held by them, and they are also to put in writing all the material parts of the evidence given at inquests, and to give copies, at the rate of 2d. per folio of ninety words, to certain persons named.

Such is the substance of the Bill in question. Possibly, on the second reading, a debate may ensue on the question of coroners or no coroners. The need of coroners at the present day ought, to some extent, to be superseded by the efficiency of a trained police. Murder and manslaughter might surely be discovered by the skill and activity of chief constables, inspectors, and detectives, although cases of secret poisoning form an exception, as requiring more scientific investigation, involving generally the necessity of post-mortem examinations. But as for railway accidents, the Courts of Common Law and the Government Inspectors generally unravel these mysteries in a more thorough and even scientific manner than can be done by the improvised machinery of a coroner's inquest.

FROM ABROAD.—REPORT ON THE EFFECTS OF THE PRUSSIAN ARMS —ACTION OF PAIN ON DIGESTION AND NUTRITION.

We have given, from German sources, several accounts of the effects of the arms employed in the present war, and to-day we notice some of the observations contained in a report of two French Military Surgeons—Drs. Goujon and Féliset—made during the siege of Metz, on the effects of the Prussian arms. We have not yet been able to obtain the original report, but a *résumé* of it is contained in the *Journal de Médecine de Bruxelles* for December. *Bayonet* wounds, the reporters state, have been very rarely observed in Metz, and, as the Prussians do not use the sabre-bayonet, but the old triangular one, these were very slight, and readily healed. *Sabre* wounds were more frequent, and especially after the bloody battles of Borny and Gravelotte. The Prussian cavalry sabre differs from the French in being less long and heavy, but broader. It is considerably curved, so that it cannot be thrust like a bayonet. Almost all the wounded were cavalry, who had taken part in the charges, the left arm being the especial object of attack, the Germans making every effort to cut through the reins of the horse and the hand that holds them. These injuries were, in general, not of a serious character, giving rise, for the most part, to superficial and open wounds, and healing readily.

Artillery.—Of 100 gunshot wounds, the reporters found a mean of 70 produced by shells and 30 by ball; and of 100 wounds produced by fragments of shells, they constantly met with a mean of 60 wounds on the back, or the point of union between the neck and shoulder, and 40 wounds in front, or of the extremities. The shells furnished with a fulminating system burst on encountering the ground by their points. They do not all burst, and a man struck by a shell before the end of its flight suffers infinitely less than at its explosion. The form of the fragments was much varied, as was their weight; for while these have been extracted weighing scarcely 3 grammes, in an instance occurring to one of the reporters the foreign body exceeded 500 grammes in weight. The fragment sometimes penetrates directly, often producing the most frightful lesions; at others, it only affects the superficial parts, turning round projecting parts under the skin, either to a slight or a considerable distance from its point of entry. These differences as to the severity of the action of the shell obviously depend upon the distance at which the wounded person happened to be from the point whereat the shell struck the ground. The reporters have often seen soldiers, struck by the fragments at about 150 metres from the point of bursting, receive only simple contusions. The track of the fragments is usually easy to follow, and their extraction, in most cases, unattended with difficulty—the contact of the probe with the metal giving a "dry" sensation, which leaves no doubt as to the presence of the projectile. The brass portion of the projectile is usually the only part that reaches its end, its leaden neck-piece having disappeared. Small, irregular fragments have been met with, which gave rise to the belief of their being the remains of explosive balls. No Surgeon in Metz, however, has ever found explosive balls. Wounds from fragments of shells, when the bones had not been broken, generally did very well. The cases were, of course, more serious when these were fractured, but not more so than ordinary compound fractures.

"Thus, in our Hospital," the reporters observe, "wherein our patients, for nearly two months, were deprived of salt, condemned to eat horse-flesh, rationed in their bread, deprived of brandy, quinine, etc., and exposed to terrible moral depression, we yet found the recoveries very numerous in the cases of wounds from fragments of shells. There is no special gravity, in fact, attaching to these. The soldier instinctively dreads the effects of these projectiles, which, launched from a battery scarcely visible above the horizon, arrive and burst upon him. The frequency of the wounds caused by this engine served to keep up the intimidation thus commenced. What was the cause of this frequency? We must let these facts reply. At the battle of Gravelotte, entire regiments ordered to lie down flat at about 3000 metres from the enemy, remained in such a position from seven o'clock in the morning until from two to four in the afternoon. Showers of shells came, and many soldiers perished without firing a shot. At St. Barbe several regiments received the same order, and suffered considerable losses. An utter ignorance of the effects of shells immobilised these troops on a spot that was entirely exposed. We have already stated that, of 100 wounds from fragments of shells, sixty occurred at the point of union between the neck and shoulder—these being precisely the wounds received while lying face downwards."

According to the reporters, wounds from fragments of shells are less frequent during charges on the guns. On October 7, the Third Voltigeurs and Chasseurs de la Garde marched at a running pace over about 3500 metres, under a well-sustained fire of artillery, and carried at the point of the bayonet the Château de Ladouchamps, where two batteries were established. In a ward entirely filled with the wounded from this action, forty-seven out of sixty had been wounded by balls, and only thirteen by fragments of shells. The proportion of shell and ball wounds was, therefore, reversed; for, while the ordinary proportion was 70 per cent., here it was only 21 per cent. These figures are not rigorously accurate, as they only relate to the experience of one ambulance; but the soldiers declared that they had suffered little from the shell. It was remarked that, during this combat, at every 500 metres traversed by the soldiers, the German cannonade was arrested, apparently in order to readjust the aim.

Balls.—The Prussian balls, much larger than those of the chassepôt, differ from these also in form. They are quite ovoid, more pointed at one end than the other, and with a larger transverse diameter than that of the French balls. If they do not come in contact with a hard body, the track of the wound they cause is regular, the orifices of entrance and exit not sensibly differing in extent. A great number of these balls penetrate only to a small depth, and are easily found under the skin, which they detach sometimes to a considerable extent without penetrating deeper. Their size renders their extraction more easy, and they are more rarely changed in form than those of the chassepôt. Most of the French wounded were struck in the legs, a circumstance depending upon the habit the Prussians have of not raising their guns higher than the hip. The wounds of the extremities were, for the most part, only simple "seton" wounds, which were rapidly cured. Even wounds of the chest, in the experience of the reporters, were not so fatal as usually believed. Of thirteen patients whose chests were traversed by balls, nine recovered in from a fortnight to two months. The wounds from the chassepôt, which the reporters had the opportunity of observing in the Prussian prisoners, were usually of a much graver character. The orifice of entrance of the ball being very small, and that of exit being three or four times larger, it is evident that great laceration of tissues must have been produced by the passage of the projectile through them. The bones struck by these balls are reduced to a great number of fragments, as many as twelve or even fifteen being sometimes extracted from the wound. The chassepôt ball always penetrates deeper into the tissues, which, joined to its smaller size, renders its extraction more difficult. Almost always it is misshapen, and frequently is divided into several fragments, which are found separated from each other, and sometimes projected to a great distance in the soft parts.

In continuance of former researches on "The Action of Pain on Calorification, and on Respiration," Professor Montegegazza, of Pavia, has just published (*Gaz. Med. Lombardia*, February 11 and 18) an account of a series of experiments he has instituted on frogs and rats, to ascertain "The Action of Pain on Digestion and Nutrition." These, as may be supposed, involved much suffering, and we wish that we could state that the importance of the data supposed to be ascertained by them are of sufficient importance to justify its infliction. This, however, is not the case, for we can see little in them not already known, or that might not have been reasonably inferred. However, here are the conclusions arrived at, from which our readers will be enabled to judge for themselves on this point:

1. Pain disturbs the digestion in many ways—viz., by diminution of appetite, repugnance to food, various forms of gastralgia and dyspepsia, the arrest of stomachal digestion, vomiting, or diarrhœa. 2. We are able to demonstrate experimentally in animals that pain renders gastric digestion much slower, the effect being alike in batrachians and mammals. 3. In the higher animals, prolonged pain produces, on nutrition, as its ultimate effects, a great degree of debility, and much emaciation. 4. In frogs, during winter, when alimentation cannot disturb the effects of pain, prolonged suffering induces, on the part of the animal, the absorption of a larger quantity of water, approaching to the condition of saturation in cadaveric imbibition. This absorption is in direct proportion to the loss of force by the animal, and to its approach to death—the nature of the death not seeming to exert any influence on the absorption of water which takes place after its occurrence. 5. This imbibition of water is so regular that, in the frog, it may serve as a true measure for appreciating, during winter, the amount of debility and the danger to life. 6. Indirect and very grave effects of pain on the general nutrition, are the establishing a greater vulnerability to all noxious causes, and affording a more propitious soil for all pathological germs, whether inherited or acquired. 7. It is probable, but not demonstrated, that pain, besides enfeebling the economy by a direct diminution of the digestive and assimilative processes, may alter the composition of the blood by pouring into it the products of a pathological digestion—true ferments of proximate or remote disease. 8. In the nerves of a limb for a long time tortured, histological lesions may be found after death, which, it is highly probable, are due to the mechanical injury. 9. In the centres of the spinal marrow no sensible changes of structure have been recognised, even when the torture has been uninterruptedly continued during a month. 10. It appears that the most serious traumatic lesions are less dangerous to nutrition and to life when, by means of etherisation, pain is prevented. 11. The disturbances of digestion and nutrition, brought on by pain, are such and so numerous that it is more easy to imagine than to specify them. They traverse the entire scale, from simple anorexia to death from inanition, from vomiting to tuberculosis.

AUSTRALIAN MEDICAL NEWS.

An inquest was held in December last, says the *Australian Medical Gazette*, into the cause of death of a labourer named John Ryan, aged 40, who was killed by a log of timber, weighing nine or ten tons, falling upon and completely crushing the head of the deceased, in the presence of several witnesses. What information was expected to have been brought to light by sending a post-mortem maker from Melbourne—a distance of twenty miles—to make an autopsy of the mutilated remains of this unfortunate man? We presume the Solicitor-General's attention has been drawn to this wanton waste of public funds.

Quackery. — "Medicus" writes to the *Australian Medical*

Gazette that "the Medical Act, intended for the suppression of illegal practice, seems to be inoperative. Where I reside, there are two individuals practising as Medical men without any qualification whatever. One is an ex-publican, the other a working miner. The latter, a worthless, drunken sot, has got up a petition to be appointed public vaccinator for the district. I have been subjected to great trouble and annoyance from having to give certificates of death for their patients—indeed, in some cases I felt disposed to let them form the subject of an inquest." Why does he not?

Phthisis and Deaths in the Melbourne Hospital.—During the four weeks ending December 5 last, eighteen deaths occurred in the Melbourne Hospital, four of which were caused by phthisis. Those dying of consumption had resided nine, six, and fourteen years respectively in the colony. One having arrived in the course of the past year, their average length of residence in Victoria was a little over seven years.

Death from Snake-poisoning—Failure of Venous Injection.—An inquiry was held on December 16 last, at Hamilton, before A. Learmouth, Esq., coroner for the district, on the body of a farmer named Stephen Elliott, aged 34, residing at Byaduk, who died on the 15th of snake-bite. It appears that the deceased, who was in perfect health, was bitten by a black snake on the thumb of his right hand while engaged in haymaking; that a ligature was placed on the cardiac side of the wound; and that the bitten parts were excised and cauterised by the explosion of gunpowder. The deceased, who was treated at first by the internal administration of small quantities of brandy and ammonia, and by the inhalation and local application of ammonia, seems, in the first instance, to have recovered from the effects of the bite. About three o'clock in the morning of the 15th—twelve hours after being bitten, and the same length of time before his death—dangerous symptoms having appeared, the injection of ammonia into the veins, as recommended by Professor Halford, was resorted to, and repeated four times between that time and ten in the morning. The deceased, who retained his faculties to the last, and did not suffer from drowsiness or lethargy, died about twenty-four hours after being bitten.

PARLIAMENTARY. — MEDICAL ACTS AMENDMENT—SMALL-POX AT STOKE NEWINGTON.

In the House of Commons, on Tuesday, February 28,

Mr. Headlam gave notice that on Thursday next he should move for leave to bring in a Bill to amend the Medical Act of 1858.

Sir G. Jenkinson asked the President of the Poor-law Board whether he had noticed a statement in the *Times* of the 23rd inst., and signed by Robert Brett, Surgeon, Stoke Newington-green, containing a description of several families in the parishes of St. Augustine and St. Chad, Haggerstone, in a terrible state of want and destitution, and suffering from small-pox; whether he had taken or intended to take any steps to ascertain the truth of that statement; and whether the authorities of those parishes were fully and adequately performing their duties under the existing poor-law in respect of those families so suffering as stated.

Mr. Goschen replied that his attention had been called to the matter, and that he had taken steps to ascertain the truth of the statement in question by communicating with the gentleman who had written the letter, and with the relieving officer of the parish. No doubt, the locality was in a terrible state of suffering, and when the horrors of small-pox in any household were considered it could be easily imagined what they must be in the densely-crowded dwellings of the poor. With regard to the destitution, Mr. Brett, in his letter, admitted that no blame attached to the parochial authorities. One of the families, which was visited almost daily by the relieving officer, was in the receipt of 10s. a week for Medical comforts and sustenance, besides what was derived from other charitable sources. The relieving officer offered 20s. to a nurse to attend to the children of the family without success. The great difficulty, he might add, was not to find money, but to find nurses. (Hear.) He was bound to state, in justice to the authorities, that Mr. Brett, in his communication, stated that such was the extraordinary feeling they were almost glad to find still existing among the poorer classes with regard to parochial relief, that many of the families concealed from the relieving officers the fact that small-pox existed in their houses, though they had to pay private Medical men small sums for their visits and medicine. Mr. Brett said, "I have heard of the authorities going from house to house to find out cases, and being told there were none a few moments after the Doctor had left." The hon. baronet would see the extreme difficulty which local authorities had in dealing with these questions; but all that could be done had been done by them in the way of providing not only provisions, but clothing, bedding, fuel, and other necessaries.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	Week ending Feb. 18. Cases.	 Feb. 25. Cases.	 Sent to Hospital.
West—			
Chelsea	—	12	2
St. George's, Hanover-square	28	14	7
St. Margaret's and St. John's, Westminster	100	47	15
St. James's, Westminster	14	8	5
North—			
St. Pancras	—	64	2
Islington	36	31	18
Hackney	—	30	4
Central—			
City of London	—	20	4
St. Giles's-in-the-Fields	—	10	10
Holborn	14	5	1
East—			
Whitechapel	31	31	2
South—			
St. Mary's, Newington	25	8	2
St. Olave's, Southwark	—	4	—
Bermondsey	—	20	2
Lambeth	18	28	9
Clapham	—	5	—
Battersea	—	14	2
Wandsworth	—	5	2
Putney	—	—	—
Camberwell	—	5	2
Greenwich	—	—	—
Lewisham	—	2	—
Plumstead	—	4	—

DARWINISM AND ARISTOCRACY IN CONNEXION WITH SOME OTHER QUESTIONS.

By Dr. F. A. HARTSEN.

No important philosophical doctrine can fail to attract the attention of those thinkers who are desirous of weapons in support of their beloved convictions. If such a doctrine is opposed to the convictions of an earnest man, he will try to refute it. If this fails, he will take advantage of it. So Darwinism has been represented as an argument for every opposite social system. This was the more easily done, as Darwinism attracts our attention to the fact of hereditary predispositions, and the very principle of inheritance plays a mighty *rôle* in social organisation.

"Monarchical institutions," says Prof. Häckel, "probably owe their origin to the fact of qualities being often hereditary." As to this, it is possible. It may be, however, that it is not necessary to seek for the explanation of monarchism so far. It is sufficiently accounted for by the intimate link between father and son. The father naturally considers his son as part of himself. If, now, he is powerful, he will try to transmit his power to his son rather than to another. On the other hand, the people will likewise consider the son as part of his father, and so will be led to consider the son the natural representative of his father.

With regard to Prof. Häckel: does he really consider the tendency of inheritance as an argument in support of monarchism? He does not. His objection is that not only *good*, but *bad* qualities also, are hereditary. This objection, however, is not conclusive. In the first place, the chance of inheritance—as I have before remarked—is greater for good than for bad qualities.(a) Besides, the system of monarchism includes this supposition: in the first monarch good qualities so far prevail over the bad that he is superior to all his subjects. Now, suppose that all these qualities, good and bad, are regularly transmitted from father to son, then the son of the monarch will always be superior to the sons of his subjects.

Let us now consider the real connexion between Darwinism and the principle of aristocracy. It has been said that the fact of qualities being hereditary authorises the principle of aristocracy. Here we ask, in the first place, what is meant by the principle of aristocracy? It seems by this is generally meant that the son of a man who occupied a certain rank in society has, *eo ipso*, a right to the same rank, and no right to a higher rank.

According to this principle, the sons of a Prime Minister should necessarily be Prime Ministers, the sons of a Doctor, necessarily Doctors, the sons of a carpenter, carpenters, etc. To carry out this principle literally would meet the great difficulty, that a father has often more sons than it is possible to maintain in his position. It might be that a Prime Minister or a Bishop had twelve sons or more! It has been necessary, in fact, to limit the application of the principle, and it has generally been limited to the *eldest son.* But limited or not, by the fact of inheritance, this principle cannot be defended. It rests upon the supposition that inheritance is the *only* principle which determines the likeness between a son and his father.

Now, this is not the case. Besides inheritance, we have *variation.* And what is very important are the following laws, which I think myself authorised to state:—1st. *The more complicated is the nature of an organisation, the more in its species will variability prevail over inheritance.* 2nd. *The more complicated, the more refined is a quality, the less is its chance of transmission.* For instance—1st. A man will have more chance of deviating from his father than would a beetle. And, 2nd. There will be more chance that a man take the features of his father than his intellectual and moral qualities. These laws stand to reason. For (1st) every element of an organism is a chance of variation; consequently, the more complicated a being is, the more are its chances of variation. And (2nd) if a quality is complicated, it can only be transmitted on condition that each of its elements is transmitted; now, the more numerous these are, the less chance there is of transmission. At all events, if all qualities were necessarily transmitted to posterity, there is no guarantee for their being so in the same degree.

A third law of great importance is, that *the chance of variation in the offspring of an organism increases with the complication of circumstances under which the organism lives.* This law, also, stands to reason. For every elementary influence—an atom, even—acting upon a being from without has the tendency to modify its offspring. So it is clear that, *cæteris paribus*, every complication of a being's surroundings is a chance more for the formation of variety. This last law explains the fact observed by Darwin—viz., that *domestication* of animals and plants increases their variability.

Now, if we apply these three laws to *man*, we shall find that here the chance of variability—that is, of individuality—is very great, especially concerning his most important faculties.

Another reason which makes the son deviate from his father, is the fact that the father has not procreated him *alone.* The influence of the mother, surely, must not be ignored. And although here the risk of bad influence may be annulled in a great measure by a good choice, still it must not be overlooked. For the choice is always imperfect, from our knowledge of a person being in general superficial; and we cannot know what germs may slumber in a woman. Besides, the benefit derived from inheritance may be lost by neglect or abuse. And although education may often prevent this in some degree, education is far from being omnipotent. All this is in perfect accordance with experience. In fact, we see genius spring up where it was the least expected, and we see, on the other hand, many a son of a genius remain merely "the son of his father." Nay, if the son of a gifted man succeeds in the same branch of talent as his father, it may always be asked if this be really the fruit of education or of hereditary genius.

The first is always the more probable. For it is a fact that many a son of a genius, in spite of extraordinary opportunity given him of excelling in the speciality of his father, in spite of the most ardent and powerful efforts, has failed. And how often is it not seen that children of the same parents are utterly divergent in the most important qualities.

But if we were obliged to admit that all excellent qualities of body, intellect, and heart were necessarily transmitted in the same degree from father to son, even then we should not be obliged to allow that they were in the highest degree bestowed upon the *eldest* son. Thus experience teaches us that it can by no means be stated, as a rule, that "every man is best fitted for the rank and profession of his father."

So far, the principle of aristocracy is decidedly condemned by Darwinism. Still, it seems that from Darwinism some profit can be drawn by the principle of aristocracy. "Granted (it will be said) that the inheritance of abilities, as to their quality and peculiarity, is very uncertain; consequently, there is no reason why every man should have a right to the professional rank of his father. Anyhow, there *is* some truth in inheritance, at least, as to *generalities.* The son of a Doctor may not necessarily have Medical talent, but some talent he is most likely to have; he will not, probably, be a stupid man. Supposing his father to have been well matched, any son of his will have a better chance of being a superior man than the son of a Caffre or a Papua. At all events, the sons of a parent refined in manners—in short, of a 'gentleman'—will generate those with a tendency to refinement. In fact, it is but just that the children of excellent and refined parents should be treated with more care and attention than those of the contrary." To this we may reply as follows:—Of course, there is something true in inheritance. There is, indeed, more chance that the union of two superior beings would produce superior children, rather than that of inferior parents.

The only question is, whether this is an apology for aristocracy, even in its mildest form?

Why should the son of superior parents be treated with peculiar distinction? Is it in order to recompense them for the merits of these parents—that is, for the merits of others? This would be simply an injustice. No; it could only be for some just reason. This granted, we shall find that the principle of inheritance, well interpreted, does speak more in favour of democracy than of aristocracy.

What is meant by democracy? The only thing desired by the earnest democrat is this, that each should have a social position according to his personal advantages (merits). Thus, democracy does not exclude the exigencies of inheritance, but, on the contrary, most fervently promotes the carrying out of these exigencies. If really the son of a superior man be superior himself, he has only to show it, and democracy at once assigns him a superior position to that of the son of an inferior man. In this only does democracy differ from aristocracy: the one (democracy) takes account of exceptions, the other does not. If by chance—which is possible—the son of an "inferior man" prove superior to the son of a "superior man," democracy will be just; not so aristocracy. Democracy, then, has all the advantages one looks for in aristocracy, without its drawbacks, and is therefore in itself superior.

Democracy is by no means hostile to children of superior parents. It tries only to be just to all by giving to each the opportunity of developing his germs of genius, and acquiring the social rank due to his personal abilities. In this manner, democracy takes care that no talent is lost to the commonwealth by which the sons even of the aristocracy may be highly benefited.

The principle of aristocracy is the more to be rejected, because it is often impossible to distinguish between two men —which is inferior or superior. It may be that a man who seems inferior possesses germs of superiority which are latent from want of opportunity of development, but which will manifest themselves in the most brilliant manner through his son.

To resume our conclusions, we will observe—

1st. In a complicated being like man, the fact of inheritance cannot be relied upon.

2nd. The principle of aristocracy is not a consequence of scientific investigation, but has probably been enforced upon humanity by the first powerful men, who, by natural egoism, were led to ensure that their sons should in every material manner be their unquestionable successors.

3rd. At the utmost, the principle of aristocracy could be only tolerated in the early stages of mankind, under less complicated circumstances. In our times it becomes daily more objectionable.

(a) See *Medical Times and Gazette*, vol. ii. 1870, No. 1063.

4th. Democracy has all the real advantages of aristocracy, without its faults, and is, therefore, the best base of society.

5th. Those who try to maintain the principle of aristocracy are obliged to mitigate it by artificial means.

We do not, of course, consider our conclusions irrefutable. At the same time, we hope to have succeeded in defending Darwinism against those who may have discredited it or injured its success, either by misinterpretation, drawing false conclusions, or by abusing it in favour of their own favourite views.

As appendix to the question of Darwinism and aristocracy, we would say some words on a very important subject.

Intimately connected with the principle of aristocracy is that of "*mésalliances.*" In aristocratic countries it is generally deemed an act of immorality to marry "beneath one's rank." To many, this will seem to owe its origin to a desire of improving our race by unions of equal superiority. We doubt if the custom have so philosophical an origin. It is certain that among princes these unions are not based upon considerations of race, but rather upon the principle of accumulation of wealth and political influence—*i.e.*, upon personal ambition—and it is not those who are the most superior in reality, but those who enjoy the highest titles, who are thus intermarried. But, granted that a high title were always an infallible token of real superiority, let us inquire—Is really the best way of improving the quality of our race, this, of marrying always the most superior to the most superior? The question is a complicated one. If, indeed, superior be *always* matched with superior, then there may be a great chance of obtaining a progeniture of a very superior kind. But, at the same time, what would, in that case, the inferior people do? Not procreate at all? This is not probable. Then, with whom could they procreate, but with the inferior again? The result would be that mankind were, so to speak, divided into two camps, one of which would be enormously superior to the other —extreme genius in the one, extreme idiotism in the other.

If, on the contrary, we encourage unions between a superior and an inferior being, the result would be that certainly the upper layers of society would be less superior than in the former case; but, on the other hand, it would prevent the inferiority of the latter case being so inferior, and thereby ensure that superiority be more equally divided.

Perhaps this latter case would indeed conduce to the real improvement of race. And if this supposition be right, then "*mésalliances*"—*i.e.*, marriages of which the inferiority of the father is corrected by the superiority of the mother, and per contra—would be the best. There is one thing which makes this question still more difficult to decide upon. "Superiority" is a vague term. Man is a very complicated being. Not one is perfect. He who is intellectually "superior" may be morally "inferior." So there must be a diversity of "superiority," and each case requires inquiry for itself as to the especial quality or "superiority" in which the progeniture is expected or wished to excel. The chance, besides, of latent superiority and all the circumstances above mentioned, which are able to check the effort of inheritance, must be taken account of.

We see, then, that the task of improving mankind by suitable unions would be almost an impracticable one. If we were compelled to fix a law upon this subject, we should be inclined to frame it thus:—The best unions calculated to the improvement of our race would be those between individuals who have a real affection for each other, and in whom good qualities are so dispensed that the inferiority of the one is cancelled by the superiority of the other.

The same remarks are applicable to the question of improving lower races of mankind by crossing them with higher races—for instance, negroes with whites. Are such kinds of crossing to be encouraged? or should the higher races not be allowed to use their powers in such an attempt at improving the lower races? Generally, these questions are answered by the way of *argumentum ad hominem*—that is, lower races are exterminated. Has humanity *nothing* to say in the matter?

But the first step towards the proposed improvements should be a modification of the laws and customs which in most countries rule marriages, which, under the present state of things, are, for the most part, dictated by considerations of wealth and vanity.

The Taunton and Somerset Hospital has become entitled to 2000*l.* under the will of Mrs. Scott Gould, of North Curry.

NOTES ON THE CHEMISTRY OF THE EGG.

No less than three memoirs on this subject have recently been published in Professor Hoppe-Seyler's Reports of the Physiological and Medical investigations which are carried on under his auspices in the Tübingen Laboratory of Applied Chemistry. The first is by J. L. Parke, "On the Chemical Composition of the Yelk of Egg;" the second, by the Professor himself, "On Vitellin and Ichthin, and their relation to the Albuminous Bodies;" while the third is by Dr. Diakonow, of Kasan, "On the Phosphorus-containing Substance in the Egg of the Common Fowl and the Sturgeon." Parke's observations were specially made (1) to determine whether protagon exists in the yelk, and (2) to ascertain the chemical changes which the yelk undergoes during incubation.

Passing over Hoppe-Seyler's memoir, which is of no special interest, we conclude with the results at which Dr. Diakonow has arrived, which are—(1) that the lecythin, described by Gobley (in a footnote to our article on "Protagon," published about two years ago), and the phosphorus-containing body yielded by vitellin and ichthin, yield, when boiled with baryta-water, the same products of decomposition as protagon; (2) that they contain, however, twice as much phosphorus as protagon, and are, therefore, totally different bodies, or are a mixture of protagon with some other phosphorus-containing matter; (3) that, in any case, protagon cannot be the only phosphorus-containing body in the organism; (4) that a qualitative determination of phosphoric acid in alcoholic or ethereal extracts from animal textures is no evidence of the existence of protagon; and (5) that the quantity of phosphoric acid found in an ethereal extract freed from cholesterin and fats affords no means of judging of the quantity of protagon.

REVIEWS.

◆

The Descent of Man, and Selection in Relation to Sex. By Charles Darwin, M.A., F.R.S. In 2 vols. London: J. Murray. Pp. 423 and 475.

In his introduction Mr. Darwin tells us that, during many years, he collected notes on the origin or descent of man without any intention of publishing on the subject, but rather with the determination not to publish, as he thought he would thus only add to the prejudices against his views. Since that time, the general acceptance of his doctrines by, let us say, a very considerable proportion of those best able to judge of their value, has encouraged him to proceed with his task. In these volumes, therefore, he puts his doctrines to the test of an inquiry into the history of one single species of animals —and that of the most interesting species—man. This has hitherto been tried but by one naturalist, though one of undoubted eminence—Ernst Häckel—who, in his "Natürliche Schöpfungsgeschichte," published last year, enters somewhat fully into the subject. Of this Mr. Darwin says, "If this work had appeared before my essay had been written, I should probably never have completed it. Almost all the conclusions at which I have arrived I find confirmed by this naturalist, whose knowledge on many points is much fuller than mine." The subject of sexual selection was found to be indispensable in treating of the history of mankind; and to it, indeed, the greater portion of these two volumes is devoted.

In the present notice, we propose to consider the descent or origin of man, and that rather by way of a *résumé* than of a criticism, which, indeed, should only come after the book has been fairly mastered in whole or in abstract. The first division of the work, then, begins with an account of the analogies in the bodily structure of man to those of other animals, especially apes. These, of course, are palpable. Some here cited are really a little trite. Thus, to say that wounds in man heal in the same way as do those in the lower animals, is surely to extend analogy until it becomes a truism. So, also, in dealing with embryonic development, the comparison of the embryo of a dog with that of a human being—enforced, as it is, by two tolerably good figures placed in juxtaposition—tends to remind one of the crude theories propounded in the "Vestiges of Creation"—how, if the process of incubation were sufficiently prolonged, the goose's egg would produced a swan. We might just as well go back at once to the embryonal vesicle, and point out its resemblance to an encysted monad.

An exceedingly interesting section is devoted to the rudimentary structures found in the human body. These, Mr. Darwin argues, imply descent from some being which employed them in maintaining its existence; that, being disused, they gradually sunk into less and less importance, until, in most men, they now exist as rudiments merely. One of the most interesting of these, and one on which Mr. Darwin lays especial stress, is connected with the ear. Mr. Woolner, the celebrated sculptor, whilst engaged on a figure of Puck, to whom he gave pointed ears, entered into an examination of the normal figure of the ear; and one of the most constant of its peculiarities was found to be a small projection from the helix, pointing forwards, near its upper part. The existence of this most men may verify in their own person; its import, according to Darwin, is as follows:—Owing to other anatomical peculiarities, the margin of the human ear is folded not erect as in most other animals; were it so, this projection would constitute its summit—in short, its presence indicates the tendency in man to pointed ears, and, in accordance with the Darwinian philosophy, implies a descent from an animal—some ancient progenitor with pointed ears.

The numerous rudimentary structures encountered in the human frame in both sexes need not be recited to Medical men, but we may just as well point out an argument used by Mr. Darwin with, we think, all fairness. It has been assumed that these rudimentary structures are necessary to the *type*, as it has been called, of the animal to bring it into correlation with others belonging to the same group, and to this end the well-known archetypal skeleton has been defined; but, as Darwin well points out, this archetype does not, and cannot, account for the existence of these rudiments. The theory has been invented to account for the facts, but does not, which direct descent assuredly does.

In the second chapter we have presented to us a comparison of the mental powers of man and the lower animals. The question is—Do these differ fundamentally or only in degree? It has been argued that the bird builds its nest as perfectly the first time as the last; that bees require no education in the art of constructing honeycombs. Instinct has been assumed as something totally different from reason. But it is plain that animals are capable of education; everyone's experience proves that. Let us cite, as example, the extraordinary pets prisoners have from time to time made in their dungeons. The experience acquired by an animal, partially inherited, we call instinct; but its existence implies a capacity for profiting by experience—that is, of education.

Do animals possess language? If by language we simply mean the power of communicating intelligence from one to another by means of sound, we must say yes. The variety of sounds which can be produced by the human voice corresponds with the variety of emotions and impressions we desire to intercommunicate. With animals, the means correspond with the end; the note of warning, the sound of mutual encouragement, are easily provided for, and are so in many animals. Then, again, there is the power of framing abstract ideas, and of communicating them; do animals possess these? It is tolerably plain that all men do not. A very pat illustration appeared not long ago in the papers, but too late for Mr. Darwin to profit by. In the Zulu translation of the bible, a word *ubomi* is used to imply the highest perfection of excellence, and in this way is applied to the Deity; but, as Dr. Colenso has pointed out, it literally signifies meat more than half putrid and alive with maggots. To this horribly coarse concrete notion was it necessary to reduce our very highest conceptions to render them at all intelligible to the savage mind! Would the savage mind be elevated thereby?

The belief in a God and religious feelings have been urged as grand distinctions between man and the lower animals, but to render them valid we should have to prove that such belief and feelings were universal among mankind; but this, we are assured, is not the case even now, much less ages ago.

Darwin's third chapter is entirely devoted to the moral sense as it exhibits itself in man, and the existence of which he admits to be the most important difference between man and the lower animals. This subject he approaches from the natural history side, and begins with the following fundamental proposition—namely, "that any animal whatever, endowed with well-marked social instincts, would indubitably acquire a moral sense or conscience as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man." This social instinct leads man and other animals to take pleasure in each other's company, and to perform certain acts beneficial to their association, but not to the whole of the same species. With increased mental power, there would be an increased appreciation of duties in this respect, with an increased desire to fulfil them, whilst, with the use of language, the opinions of the tribe as to the manner in which these had been performed, and ought to be performed, would be more readily manifested. Finally, the habit of doing what is commonly called duty would itself facilitate its performance in accordance with that philosophy of habit so well expounded by Bishop Butler. "These," says Darwin, "naturally lead to the golden rule, 'As you would that men should do to you, do ye to them likewise'; and this lies at the foundation of morality." We shall leave the remaining portion of this part of the work relating to the development of man for subsequent discussion.

NEW BOOKS, WITH SHORT CRITIQUES.

A Handbook of Operative Surgery. By J. H. Packard, M.D., Surgeon to the Episcopal Hospital, etc., etc. Philadelphia.

⁂ An excellent text-book for all the operative proceedings in Surgery. The text is well and clearly written, and evidently the work of a thorough Surgeon and anatomist. The only novelties we are able to notice are some few woodcuts of the more modern instruments and their application—probably American. The chief plates are simply (unacknowledged) repetitions (slightly enlarged, with substitution of American instruments) of the plates in Bernard and Huette's "Operative Surgery." The work is, however, well got up, is prettily illustrated, and an excellent addition to a Surgeon's library, as supplying him with many hints and suggestions at a moment's notice.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

February 28.

Some facts illustrative of the social habits of the Liverpool poor were related by Dr. Trench, at a meeting of the Health Committee, on Thursday last, which must surely lessen the surprise of those who have been in the habit of wondering at our continued unhealthiness.

In a cellar in Prince Edwin-street, where a child had died of small-pox, the mother, an infant, and a son 10 years old, slept in the same bed with the corpse. In Chisenhale-street, a woman died of small-pox on February 14. On the 17th, when the house was visited by the inspectors, it was found to contain more than a dozen persons, engaged in holding a wake over the deceased, all of them under the influence of drink, and two of the women so drunk as to require to be carried away. A child died of small-pox, in Gildart's-gardens, on February 18. The father, mother, grandmother, and little brother of the dead child lived by day and slept by night in the same room with the corpse; and, as if this was not enough, a wake was held on the 20th; and it was only on the 21st, and that not until application had been made for a magistrate's order, that burial was proceeded with. Wakes are very common, the close, ill-ventilated room or cellar where the corpse lies being the scene of a constant succession of visitors from the moment of death to that of burial. One case stood out as pre-eminently disgusting. A child died of small-pox on February 16. On the day following, the mother, during her husband's absence, took the corpse from the bed, laid it on a table, and then carried the sheets and blankets, just as they were, to a neighbouring pawnshop.

Something more than flushing sewers and correcting faulty foundations, proper though these be, is necessary to insure healthfulness to a population with habits like those detailed above, and in the facts related by Dr. Trench we see a striking confirmation of the opinion expressed by Mr. Newton in a paper on the causes of the town's unhealthiness, read before the Medical Society, and to which we have before alluded.

To remedy the evils resulting from the retention of the dead in rooms crowded with the living, an arrangement has been made between the Health Committee and the Burial Board, for the use of mortuaries at Anfield Cemetery, situated outside the borough, so that now, on a magistrate's order, the body can be at once removed by the nuisance authority to these safe receptacles, and there await ultimate burial.

The Medical Officer of Health is quite alive to the great injury that may arise from faults connected with the sewers, and, acting on his representations and those of the borough engineer, the Health Committee have resolved to obtain the insertion of a clause in either a public or private Bill, which shall give them control over the discharge into the sewers of hot water, steam, and refuse, and by which they shall also have power to regulate private traps and drains. As yet, there is no indication of a decline in the epidemic, and the public vaccination stations are besieged by hundreds anxious for revaccination.

The proceeds of the simultaneous collections held at the beginning of the year for the Medical charities, and amounting to £4500, were, on the 21st instant, apportioned; the three large General Hospitals—viz., the Royal Infirmary, the Northern, and the Southern—receiving £1440, £720, and £630 respectively, while two small special institutions received £11 5s. each.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, February 10.

Dr. W. W. Gull, President, in the Chair.

Dr. Handfield Jones read a short paper "On Puncture in Anasarca," in which he advocated the making of a single puncture in the calves of both legs with a fine trocar, and, after withdrawing the stilette, leaving the canulas open for several hours, to allow the fluid to drain away. In this manner he succeeded in the first operation in drawing off sixty measured ounces of fluid from the right leg, but only ten from the left, in consequence, he supposed, of the canula not lying properly in the subcutaneous cellular tissue. In a second operation on the same man, three days afterwards, he drew off 120 ounces of fluid, besides a great deal which ran from the punctures for several days afterwards, sufficient to saturate three blankets. For the performance of the operation, the man was placed in a sitting posture; and this he considered important, as it facilitated the draining away of the fluid.

Mr. Cooper Forster asked if the peculiarity of the operation lay in the single puncture or in using a canula and allowing it to remain so long. It had been his practice to make but a single incision, and he thought the canula more likely to irritate than to do good. The incision he made was about an inch long.

Dr. H. Jones thought the incision a more severe remedy than a prick with a trocar. He was sure the practice alluded to by Mr. Forster was not universal.

Dr. Dyce Duckworth commended Mr. Forster's plan, which he thought better than needles. He thought an opening near the outer malleolus was usually most satisfactory. He kept poppy fomentation applied to the part.

Dr. H. Fagge said needles were still often used at Guy's. It was a good plan to keep the surface greased, to enable the fluid to trickle off more readily. This was Dr. Gull's plan.

The President considered that the mode and the seat of operative interference were very important. So also was the form of dropsy. Pricking succeeded admirably in dropsy from heart disease; not so well from Bright's disease. A trocar, as well as a knife, seemed formidable, and many would allow a needle to be used who would not suffer either of the former to approach them. He thought the fluid changed after effusion, gradually becoming more dense. He considered the plan of greasing the limb good.

Dr. Handfield Jones also read a paper "On Two Cases of Chorea," in both of which he gave complete urinary analyses. The conclusions which he drew from these cases were—1. That during the height of the chorea the amount of the urinary excretion was much above what it was when the malady had ceased. 2. That the urea excretion during the chorea period was enormous, being no less than 10 grains per pound of body weight, the normal amount being 3 or 3·5 for an adult. During convalescence the urea amount fell to 3·9 grains per pound of body weight. 3. The phosphoric acid excretion varied like the ureal, being no less than sixty grains during the acme of the disease, and only 14·5 during convalescence. The mean amount adopted by Dr. Parkes is 48·8 grains for an adult. 4. The uric acid was in fair amount during the acme of the malady, but became *nil* when recovery was established. 5. That an increase of seventeen pounds in weight coincided with this great lessening of excretion and cessation of the neurotic disorder.

In reply to Dr. Anstie, the author said the girl was taking a fair amount of meat, but no more.

Dr. Broadbent said the first analysis was made just after admission, and before she was acclimatised to the food of the Hospital. He thought chorea depended on local change in the nervous system, as capillary embolism in the corpora striata. The quantity of urea would depend on the secondary effects of the disease.

Dr. Greenhow said the cause of chorea was not always the same. He thought it sometimes depended on the general condition of the system. He was now attending a child, belonging to a very nervous family, whose brothers had suffered from the disease at the same time of life.

Dr. H. Fagge asked how Dr. Broadbent's theory would fit into the fact that chorea so often follows nervous shock, as frights in children, and so on. It was a curious fact that chorea was very rare in idiots.

Dr. Broadbent said he only referred to the *seat* of the disease; the lesion was not always the same.

Dr. Anstie asked the relation of site and heredity.

Dr. Buzzard mentioned the case of a woman who was frightened whilst pregnant, and became the subject of tremor. When the child was born it had hemilateral chorea.

Dr. H. Jones said that Gairdner narrated the case of a girl who took a very large dose of chloral. It nearly killed her; but the chorea from which she had been suffering was gone.

The President said the chorea of rheumatic children did well with rest and food. He considered the mode of taking food important; generally it was bolted. The horizontal posture was a good thing. The disease was common at about the age of 15. It sometimes assumed an emotional form, and then occasionally proved fatal.

Dr. Broadbent read particulars of two cases of Paralysis of the Soft Palate, resembling diphtheritic paralysis. The first, a boy aged 3, was brought as an out-patient to St. Mary's Hospital on September 10, 1866. In July a bucket of water had been thrown over him, and he had had a cold and sore-throat. Afterwards the voice was noticed gradually to become nasal and articulation imperfect, and for some days all fluids taken had returned through the nose. He was also weak on his legs and liable to fall. The soft palate was pale, flabby, and motionless. The medicine ordered was cod-liver oil and steel wine; sulphate of strychnine, one-sixtieth of a grain; with dilute phosphoric acid, five minims, in water, three times a day. The improvement was rapid, and on October 27 the patient was quite well. In the second case, that of a girl aged 6, admitted out-patient May 23, 1870, there was not only paralysis of the soft palate, but also loss of power in the laryngeal muscles, and great weakness of the lower extremities. The voice was nasal; fluids returned through the nose, and there was danger of suffocation when solid food was swallowed. When she spoke, a great rush of air preceded the production of sound, showing the imperfect adaptation of the vocal cords; and when the fauces were irritated, there was neither sensation nor retching. The treatment was similar to that adopted in the previous case, and recovery took place, but much more slowly. The patient was discharged on August 29. These cases were in many respects, if not altogether, similar to the cases of paralysis following diphtheria, and the interest attaching to them relates to the question whether paralysis of this character is a specific disease or a form of nervous paresis capable of being produced by other acute disease, or by debilitating influences generally.

Dr. H. Weber had three times observed paralysis following angina; not immediately, but after a fortnight from the beginning of the inflammation. It began with changed voice. The patient recovered with tonics. He had also observed paraplegia follow pleuro-pneumonia.

Dr. Silver said he had at present under his care a case somewhat related to that narrated by Dr. Broadbent. The patient came into the out-patient room, walking with difficulty, yet quite able to move his feet; he took off his hat, and sat down. His face had a curious expression, being slightly drawn to the right, and the muscles about the mouth so paralysed that the saliva dribbled from his mouth. He had ptosis of the right eyelid, and there was dilatation of the right pupil. Being asked a question, it was found that he could not speak; and on further examination, it turned out that he was quite unable to swallow. His palate was paralysed, and his tongue could hardly be protruded beyond the teeth. He was admitted an in-patient, when it was found that he had no power of retaining his urine, although there was neither paralysis nor anæsthesia of the lower extremities. He was fed by the stomach-pump, and he has now somewhat improved, and can swallow imperfectly, but cannot, though perfectly intelligent, utter a word. There was antecedent right hemiplegia, and a history giving suspicion of syphilis. This case was allied to those described by Trousseau as labio-laryngeal, but was not progressive in its nature.

Dr. **Fagge** had seen paralysis follow non-specific inflammation of the throat—one under the care of Dr. Barlow, another under that of Dr. Wilks.

Dr. **Anstie** remarked on the frequency of throat affections, and the rarity of paralysis. He had seen it follow mumps.

In reply to Dr. Gull, Dr. **Broadbent** said he had not examined the mobility of the chest walls.

Dr. **Gull** said he had the fortune to write the first paper on diphtheritic paralysis published in this country. He had seen the paralysis without the diphtheria. In such cases the spinal cord simply looked anæmic, so that one could hardly distinguish the white from the grey matter.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, February 18.

Dr. Druitt, President, in the Chair.

ADJOURNED DEBATE ON SPREAD OF PARASITIC DISEASES BY SEWAGE.

(*Concluded from page* 236.)

Dr. **Letheby** said: I do not know that I should have troubled you with any further observations on this subject, seeing that I made it a subject of special inquiry last year, if it were not that the question is still either misunderstood or not at all appreciated; as shown by the remarks, for example, of Mr. Holland, about fluke from sewage. The observations of Mr. Michael, at the last meeting, with respect to the crawling of entozoa up the stems of grass, etc., showed, beyond all doubt, that although at one time a member of our Profession, yet he is at present profoundly ignorant of the physiology and natural history of this subject of helminthology, and is, perhaps, better entitled to be heard in his new profession which he has adopted than in the old which he has abandoned. So, again, the editorial remarks of the *Lancet*, when discussing Dr. Cobbold's paper, are, to say the least of them, puerile in the extreme, and show a total inability to appreciate the most striking facts of the case; for the arguments are founded upon the present condition of things, rather than upon the future, supposing sewage to be largely used for agricultural purposes. The remarks also of many of those who profess to be authorities on the subject, as Mr. Bailey Denton and Mr. Hope, are manifestly superficial in the extreme. Mr. Bailey Denton, for example, who is a great advocate of sewage irrigation, says, in his paper "On the Selection of Land for Sewage Irrigation," which was read last year to the farmers at Maidstone, that the plan adopted by Lord Essex, Mr. Mechi, and others, is objected to, among other reasons, because "it covers the stalk and surfaces of the vegetation with clinging sewage, which has been made a good deal of, in consequence of its having been said—though without proof—that parasitic diseases are communicated by the deposit of sewage on plants consumed by cattle." Mr. W. Hope also, in a recent letter to the *Chemical News*, disposes of the thing in just the same easy manner, by saying that he does not agree with Dr. Cobbold in his peculiar views, because he (Dr. Cobbold) has not a single fact to adduce in support of them. Now, these are rather bold assertions, considering what amount of experimental proof has already been adduced of the way in which these parasitic diseases are mutually propagated by man and animals—how tapeworm, for example, has been produced in man by his eating measly meat, and measly meat in animals by their eating the ova of tapeworm. Let us, however, review the broad facts of the question. 1. *Parasitic Diseases of Man are not by any means rare.*—This is established by abundant proof, obtainable in practice, in the dead-house, and in our pathological museums; and many of these diseases are of a most formidable character—witness trichiniasis, bilharzia infection, hydatid, etc. 2. In every instance of such disease the actual cause of it is traceable to the food we eat or to the water we drink, or to the air we breathe, and to no other origin. 3. At present, the infection of such food or drink is really a matter of accident, for, to take the case of tapeworm in ourselves, although thousands upon thousands of ova are discharged from the infected human body, yet few of them, comparatively, get mixed with the food of animals to produce the measle of pork, of veal, or of mutton. 4. But make this more certain, as is the case in Ireland, where the habits of the people and of the pigs are more intimately connected, and the disease becomes more common. 5. But what must be the condition of things if the certainty is still further realised, as by discharging fresh sewage upon the land where the fodder is growing, and where it will be either eaten at once by the animal or cut for green food? Thousands of pages in the form of Blue-books have been written by Mr. Chadwick and his followers to prove that the best way of utilising sewage is to pump it to the land, and to distribute it over the growing grass by means of the hose and jet—the very grass, in fact, upon which the animals are feeding; and Mr. Mechi and others have testified before Parliamentary committees as to the greediness with which animals will feed upon the grass of such irrigated ground. In the course of my investigations, I have often seen long strips of tapeworm lying upon the stalks of recently-cut rye grass and floating in the dirty effluent channels; and you will remember that every joint of the parasite contains thousands of ova, each one of which is capable of infecting an animal. What further proof, then, do we want of the danger of this practice? and is it right to disregard the plain teachings of experiment, and to wait for the terrible consequences which Mr. Hope and Mr. Bailey Denton, and the editor of the *Lancet* evidently require as proof of the danger? 6. But why run the risk at all, seeing that, if it be necessary to utilise the soluble matters of sewage, it can easily be done by subjecting it to previous processes of precipitation, many of which are not only well suited for this purpose, but are capable of increasing the fertilising power of the miserably weak sewage water, besides rendering the defecated effluent water sufficiently pure to be discharged into running streams when the land will not take it? 7. Looking, however, broadly at all the facts of the question, there can be no doubt, as Dr. Cobbold tells you, that a general and profuse distribution of sewage must tend both directly and indirectly to the propagation of no inconsiderable number of parasitic diseases; and I think we are greatly indebted to him, skilled as he avowedly is in the theory and practice of the subject, for directing our attention to this important matter, and for declaring his opinion of it in so emphatic a way, seeing that it closely concerns the well-being of humanity.

Mr. **Holland** said that, if such dangers existed, they would long ago have been discovered at Edinburgh.

Mr. **Manning** mentioned several cases of Edinburgh men whom he had known, who had sustained great losses in cattle fed upon the Craigintinny meadows.

Dr. **Stallard** questioned the accuracy of the statement of Dr. Letheby as to bucketfuls of tapeworms having been seen on the meadows in question. Again, as to the state of the sewage farm at Aldershot, he had paid a visit to it, but had not found it at all in the condition stated by Dr. Letheby. He agreed with Dr. Cobbold, that the matter ought not to be left in the dark; but he thought that any danger likely to arise might be provided against. His belief was that, under a proper system, sewage irrigation could be made productive of good results.

Dr. **Letheby** maintained the accuracy of his statements, and said that the reason why Dr. Stallard had found the sewage farm at Aldershot so different from what he himself had found it was because he (Dr. Letheby) went down on a Sunday, unannounced and unexpectedly. He found four or five regular outlets into the river were systematically opened when the land became clogged with sewage. Why was this waste if the sewage was so valuable? and why these outlets if the system was so successful? Dr. Letheby condemned the whole system in the strongest terms.

MEDICAL SOCIETY OF LONDON.

Monday, January 30.

John Gay, Esq., F.R.C.S., President, in the Chair.

The **President** read a letter he had received from the chief Surgeon of the army of defence before Charenton, requesting a supply of vaccine lymph. The President had himself forwarded some lymph, and the letter having been forwarded to Lord Granville, had been acknowledged and referred to Colonel Loyd-Lindsay, that action might be taken in the matter.

Dr. **Peter Allen** demonstrated to the Fellows his Method of Inflating the Cavity of the Tympanum. Dr. Allen's plan was an improvement on Politzer's most invaluable appliance, substituting a nasal pad, which is pressed against the opening into the nostrils, for the tube which he inserted into one of them. This plan was an excellent substitute for the use of the catheter in the Eustachian tube, and formed a very successful method of treating deafness when the result of aural catarrh. The air was squeezed in from an elastic bag at the time when the patient swallowed a little water, and when, as the late Mr. Toynbee had shown, the Eustachian tube was opened by the act of swallowing. By this method both tympanic cavities were necessarily inflated at the same time; if there chanced to be a perforation of the membrana tympani, then air escaped with a rushing noise.

Mr. Pennefather said he still preferred to use the catheter with an elastic tube. By Dr. Allen's process much air was lost in the cavity of the mouth, and the bag prevents the possibility of regulating the quantity of air admitted. He did not regard it as certainly proved that the act of swallowing opened the Eustachian tube, whereas the levator and tensor palati muscles, arising from the Eustachian tube partly, and ending in an expansion which goes to form the velum, that the air inspired by the mouth caused the velum to assume a horizontal position. When it passed through the nasal canals the velum became vertical; consequently, it did not require the act of deglutition to act on the opening into the tubes, as each act of inspiration altered the position of the velum, and therefore acted on the Eustachian opening.

Dr. Tilbury Fox said that he had been perfectly relieved by Dr. Allen's method of an attack of catarrhal deafness.

Dr. Brunton had described a method of inflating the tympanum, in the *Glasgow Medical Journal*, by using a nasal tube and a bag which could be compressed by the patient at the same time that he performed the act of swallowing. Dr. Brunton showed the Fellows this method.

Dr. Richardson showed an Apparatus for the Transfusion of Blood. First he alluded to the importance of attending to the details connected with this operation, especially the needle tube for introducing the fluid into the vein. The vein must not be laid bare, but incised with such a knife as the one shown to the Fellows, and then the tube introduced. For introducing the fluid no force should be used, hence all syringes were objectionable. Enough force could be obtained by simply elevating the vessel, as shown by Dr. Richardson. With respect to the agents to be used, the blood of a lamb was found to answer well; to keep it fluid, cold should be used, a temperature of 45° Fahr. being the right to maintain blood in a fluid state. Certain solutions added to blood will also maintain its fluidity, the best for this purpose being solution of ammonia in the proportion of twenty drops of liquor ammoniæ to one ounce of water and one pint of blood. Another solution that could be used was of 100 grains of carbonate of soda with 150 of phosphate of soda in two ounces of water. Blood dried and powdered seemed applicable when mixed in water, and might be used when recent fluid blood could not be obtained.

Mr. Brudenell Carter mentioned cases of the hæmorrhagic diathesis where the blood seemed altered in composition; in one case it smelt very offensively. Might not transfusion of pure blood be used with benefit in these cases?

Dr. Routh thought that transfusion might be tried in cases of malignant fevers and other kinds of blood disease. Also to restore cases moribund from asphyxia.

Mr. Jabez Hogg had examined carefully dried blood, and when mixed with water it was optically quite similar to recent blood.

The President thought highly of Dr. Richardson's apparatus. He asked if it was necessary to use an instrument solely for opening the vein. He had seen valuable time lost on one occasion from the injecting tube being passed by the side of the vein instead of into it.

Dr. Evans inquired as to Dr. Richardson's experience of injections in cases of cholera.

Dr. Richardson, in reply, said that Hook had showed before the Royal Society long ago how asphyxiated animals could be restored by the injection of arterial blood. He had used saline injections in sixteen cases of cholera. The effect was truly miraculous. One patient sat up and conversed, but as soon as this stage of reaction was established the purging returned, and the patient died. Dr. Richardson wished he could find some medicinal substance that might be injected with the saline solution as a cure for the disease. He disagreed entirely with those who said venous blood was to be regarded as an excrementitious matter. Venous blood is as necessary as arterial blood, and a certain amount of carbonic acid in the blood is essential for its arterialisation.

Mr. Henry Smith showed a small Speculum, a fragment of which had broken off, and remained in a patient's rectum. The occurrence was quite recent, and Mr. Smith hoped to hear of the fragment having passed per anum.

The President narrated a case of Strangulation of the Intestine relieved by mechanical treatment. A young man, aged 27, had symptoms of intestinal obstruction, with stercoraceous vomiting, and pain in right side of abdomen. Intestinal constriction by a band was diagnosed, and, the patient being held for a time head downwards, had the abdomen well kneaded by Mr. Gay. After this procedure, the vomiting ceased, and in seven days more the bowels acted in a natural way. The man died of phthisis six weeks later, but no persuasion would allow a post-mortem to be permitted. The President drew attention to intestinal strangulation by means of bands in 1856, in a paper he had read before the Medical Society, when he had collected 120 cases. The band was usually found to be a loop of the mesentery, and generally on its right side. There was no external tumour, no tenesmus, or history of stricture.

OBITUARY.

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DR. JOHN ADDINGTON SYMONDS.

The Profession has sustained a great loss in the death of Dr. J. A. Symonds, F.R.S., of Clifton, which sad event occurred on Saturday last at his residence, Clifton-hill House, in his 64th year. His illness, which commenced in July of last year, is ascribed to excessive study. He was educated at Magdalen College School, Oxford, and graduated at Edinburgh as M.D. in 1828. He was subsequently elected a Fellow of the Royal Society of Edinburgh, and in 1857 became a Fellow of the Royal College of Physicians in London. Dr. Symonds was Honorary Consulting Physician to the Bristol General Hospital. In 1839, he delivered the annual address in Medicine at the general meeting of the British Medical Association, and in 1863 he filled the office of President of that distinguished body. He was elected Member of the Royal College of Physicians in 1853, became a Fellow of the College in 1857, and in the following year delivered the Gulstonian lectures, taking as his subject "Headache." He also delivered an exceedingly able and exhaustive lecture on "Death by Chloroform" before the Harveian Society. In this he declared that the action of chloroform might prove fatal on the heart before it sensibly affected the lungs, and therefore considerable caution was necessary on the part of the Medical man in administering it. The printed contributions to Medical science by Dr. Symonds were numerous and important, and amongst them may be mentioned—"The Medical Topography of Bristol," a treatise on "The Cholera in Bristol in 1832," articles on "Age" and "Death" for the "Cyclopædia of Anatomy and Physiology," papers for Tweedie's "Library of Medicine," "The British and Foreign Medical Review," and "The Cyclopædia of Practical Medicine." He, at a comparatively early period of his Professional career, was the Lecturer on Forensic Medicine at the Bristol Medical School, and subsequently on the Practice of Medicine at the same school. He was the author of some distinguished works, including lectures on "Apparitions," on "Beauty," and on "Waste;" and whilst his intellectual qualities were so high, there were few men of more amiable or benevolent disposition, or more courteous and considerate. He was a native of Oxford, where his father was a Surgeon, and he leaves a son and three daughters—Mr. John Symonds (Fellow of Magdalene College, Oxford), Lady Strachey (of Sutton Court, Somerset), Mrs. W. Cave (of Clifton-park), and Miss Symonds.

Small-pox.—A case of this disease occurred on board the ship *Carlisle Castle*, about two months before her recent arrival at Sydney from London.

Shameful! — "Brace-making in St. Lukes."— Nearly all the braces worn by the gentlemen of England are made in St. Lukes; they are the *spécialité* of the district. The payment is 2d. per dozen pair—the needlewoman finding her own cotton at a cost of three-farthings. A dozen and a half pair may be made in a day by dint of resolution, so that when the cotton is paid for there will be within a fraction of 2d. clear earnings for the industrious. Clear earnings! Not quite. Seeing that the work has to be done in courts and alleys where the sun never, and daylight seldom, penetrates, there is artificial light to be paid for—generally oil at 2½d. the half-pint. How do they live? "On a ha'porth of tea, a pen'orth of bread, and a farthing's-worth of dripping." Such is the day's meal, earned before it is eaten.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, February 23, 1871 :—

Bradley, John Perry, Birmingham.
Drew, William Thomas, Stoke-on-the-Wold.
Fordham, John William, Stepney.
Moore, Arthur Jackson, Debenham, Suffolk.
Reed, James, Stoke, Devonshire.
Williams, Henry, Gloucester.

As Assistants in Compounding and Dispensing Medicines:—

Margetson, James Francis, Aylsham, Norfolk.
Turtle, James Henry, Chatham, Kent.

The following gentleman also on the same day passed his First Professional Examination :—

Spencer, Edward Richard, University College.

Naval Medical Department.—The following are the names of the successful candidates who passed the recent competitive examination for admission into the Medical Service of the Royal Navy, held at the University of London between February 20 and 27th, in the order of merit in which they passed, and the number of marks obtained :—

	Marks.
Thomas Harvey, Westminster Hospital	1770
William Algeo, Royal College of Surgeons, Ireland	1720
Michael Kearney, M.D., Queen's College, Cork	1515
John Lyon, M.B., Glasgow University	1365
William Brown, Carmichael School of Medicine, Dublin ...	1340
John Tyndall, Royal College of Surgeons, Ireland...	1340
Matthew Reed, M.D., Queen's College, Galway	1315
Alexander Richard Joyce, Royal College of Surgeons, Ireland	1255
Charles Atkinson Rathborne, M.D., Queen's College, Galway ...	1245
Thomas Power, Queen's College, Cork	1225

BIRTHS.

Fowne.—On February 24, at 354, Kingsland-road, the wife of Alex. Fowne, jun., M.R.C.S., of a son.

Hardy.—On February 23, at 21, Fitzroy-square, W., the wife of H. Nelson Hardy, M.R.C.S., of a daughter.

Littlewood.—On February 27, at 3, East Circus-street, Nottingham, the wife of J. Littlewood, M.R.C.S.E., of a son.

Lyall.—On February 28, at West Hartlepool, the wife of Dr. Lyall, R.N., Staff Surgeon H.M.S. *Trincomalee*, of a son.

Monckton.—On February 22, at Brenchley, Kent, the wife of William Monckton, Surgeon, of a son.

Nugent.—On February 23, at 9, Military-road, Colchester, the wife of H Nugent, Army Medical Staff, of a son.

Shepherd.—On February 26, at 33, King Henry's-road, South Hampstead, the wife of Frederic Shepherd, Surgeon, of a son.

Stedman.—Recently, at Great Bookham, the wife of Arthur Stedman, M.R.C.S., L.S.A., of a son.

Veale.—On February 20, at Hampsthwaite, Yorks, the wife of R. S. Veale, M.D., of a son.

Waterworth.—On February 25, the wife of Dr. Waterworth, of New Kent-road, of a daughter.

MARRIAGES.

Barker—Wise.—On February 21, at St. Margaret's Church, Plumstead, John, third son of the late Thomas Barker, Esq., of Wanstead, Essex, to Annie, only daughter of Thomas Wise, M.R.C.S., of Grosvenor-villa, Plumstead.

Holmes—Guiver.—On February 18, at St. James's Piccadilly, William Townsend, youngest son of the late Joseph Holmes, M.R.C.S., to Emma, widow of the late Henry Guiver, of Ipswich.

Lind—Battye.—On February 15, at the English Embassy, Alexander Addison Lind, of Canton, China, to Florence Emily, youngest daughter of Thomas Battye, M.D., F.R.C.S., etc., Dingle, county Kerry, Ireland.

Orger—Cother.—On February 21, at Dinan, Brittany, the Rev. John G. Orger, M.A., Chaplain at Dinan, to Marion, widow of the late William Cother, barrister-at-law, and youngest daughter of the late John Warburton, M.D., F.R.S.

Rutherford—Shaw.—On February 1, at Detroit, Mich., U.S.A., William Albert, second surviving son of the late George Shaw Rutherford, M.D., R.N., of London, to Fannie, eldest daughter of Francis Shaw, Esq., of Wirksworth, Derbyshire.

Smith—White.—On February 21, at St. Olave's, York, Charles Smith, Surgeon, Halifax, to Mary, eldest daughter of the late Edward White, of Bootham, York.

Stonham—Smith.—On February 21, at the Old Church, Brighton, Peter Dulney, son of the late Mr. George Stonham, of Ashford, Kent, to Caroline Margaret, younger daughter of the late Dr. Gavin Smith, of Rottingdean, Sussex.

DEATHS.

Bannister, Mary Ann Atkinson, widow of the late John Bannister, Surgeon, at Havant, on February 22, in the 84th year of her age.

Coward, Sisella, widow of the late Charles T. Coward, M.D., of Exeter, at 26, Canterbury-place, Lambeth, on February 23, aged 70.

Evans, Thomas James, Surgeon, at his residence, Brondeg, Briton Ferry, on February 18, aged 35.

Heyward, George Provost, Surgeon, at his residence, C[illegible]nhill, Englefield-green, on February 22.

Judd, Elizabeth, sister of the late W. H. Judd, Surgeon-Major of the Scots Fusilier Guards, and niece of the late Henry Peaton, sen., Esq., some years M.P. for Winchester, on February 20.

O'Bryen, Walter Mary, son of the late John R. O'Bryen, Esq., M.D., at 28, Thistle-grove, South Kensington, on February 24, aged 8 years and 3 months.

Richards, Frederick William, M.B., F.R.C.S., at Winchester, on February 23, aged 29.

Symonds, John Addington, M.D., at Clifton, Bristol, on February 25, aged 63.

Tayler, Mary, the wife of Christopher Tayler, Surgeon, at Trowbridge, Wilts, on February 25, aged 54.

Thompson, Isabella, daughter of the late Dr. H. Thompson, at Hadley House, Hastings, on February 24, aged 48.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham (Parish of).—Medical Officers wanted for five districts of this parish. Candidates must be duly qualified and registered. Applications and testimonials to be addressed "To the Guardians of the Poor of Birmingham," on or before March 15. Election on the 22nd inst.

Bradford Infirmary and Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and copies of testimonials to the Secretary, on or before March 10. Election on the 17th.

Dursley Union.—Medical Officer for District No. 3. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to G. Wenden, Clerk to the Guardians, on or before March 15.

Ennistymon Union.—Medical Officer; must be duly qualified and registered. Applications and testimonials to F. D. Drilk, Hon. Sec., Smithstown, Ennistymon, Ireland, on or before March 8. Personal attendance of candidates will be required.

Hospital for Women, Soho-square, W.—Assistant-Physician; must be a graduate in Medicine of some recognised University, and be M.R.C.S. Applications and testimonials to H. B. Ingram, Secretary, on or before March 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Knighton Union, Radnorshire.—Medical Officer for the Brampton Brian District. Applications and testimonials to E. H. Deacon, Clerk to the Guardians, on or before March 15.

London Fever Hospital.—Assistant-Physician. Applications and testimonials to the Secretary, at the Institution, Liverpool-road, on or before March 7.

Metropolitan Free Hospital.—House-Surgeon. Applications and testimonials to the Committee at once.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

St. Mary's Hospital Medical School, W.—The Chairs of Chemistry and Practical Chemistry are now vacant. Applications and testimonials to J. G. Wilkinson, Secretary, on or before March 6.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

Tullamore Union.—Kilbeggan Dispensary District.—Medical Officer; candidates must be duly qualified and registered. Applications and testimonials to M. M'Manus, Hon. Sec., Kilbeggan, on or before March 13. Personal attendance of candidates will be required.

Wigan Union.—Medical Officer and Public Vaccinator for District of Wigan, comprising the Township of Wigan and the Union Workhouse: Candidates must have both Medical and Surgical qualifications, and be registered, and must also have obtained a special vaccination certificate, Applications and testimonials to Henry Ackerley, Clerk to the Guardians. Wigan, on or before March 7.

York Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary at the Dispensary, on or before March 4.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Evesham Union.—Mr. John N. Beadles has resigned the Fourth District; area 12,339; population 2997; salary £58 per annum.

Neath Union.—The Britonferry District is vacant; population 4496; salary £25 per annum. The Glyncorrwg District is vacant; population 322; salary £10 per annum.

St. Ives Union.—Mr. John T. Leigh has resigned the Somersham District; area 14,942; population 4480; salary £70 per annum.

Warminster Union.—The Longbridge Deverill District is vacant; area 10,860; population 2636; salary £90 per annum.

APPOINTMENTS.

Bellingham Union.—Daniel Heagerty, L.R.C.P. Edin., L.R.C.S. Edin., to the Fourth District.

Keighley Union.—Thomas S. Usher, M.R.C.S. Eng., L.S.A., M.D. St. And., to the Bingley District.

North Witchford Union.—Wm. Stanger, F.R.C.S. Eng., L.S.A., to the Second District.

West Derby Union.—Richard B. Reid, M.R.C.S., L.S.A., to the Walton Workhouse.

The Levée.—At the levée held on Saturday at St. James's Palace by his Royal Highness the Prince of Wales, on behalf of her Majesty, the following presentations were made:—Surgeon F. Bramley Baker, Grenadier Guards, by the Field-Marshal Commanding-in-Chief. Dr. Burrows, on appointment as Physician Extraordinary to her Majesty, by Sir Henry Holland, Bart. Dr. E. S. Cleveland, Surgeon Madras Army, by the Secretary of State. Assistant-Surgeon C. Gray, Rifle Brigade, by Colonel Lord Alexander Russell. Surgeon William R. Lane, Grenadier Guards, by the Commander-in-Chief. Dr. Robert Hall More, R.N., by the Director-General of the Medical Department of the Navy. Assistant-Surgeon Henry Frederick Nathan, R.N., by the Director-General of the Medical Department of the Navy. Inspector-General Salmon, M.D., R.N., on being appointed Honorary Physician to her Majesty, by the Director-General of the Medical Department of the Navy. Assistant-Surgeon John Henry Connel Whipple, M.D., Coldstream Guards, by his Serene Highness Prince Edward of Saxe-Weimar, C.B. The following gentlemen attended the levée:—Sir Henry Holland; Drs. Arthur Farre, Frederick Farre, C. Douglas Phillips, Henry Cooper Rose, Sall, and Sieveking; the Director-General of the Medical Department of the Navy; Mr. Borlase Childs, Mr. Oscar Clayton, and Mr. Erasmus Wilson.

A vacancy in the Medical staff of the Brompton Hospital has been created by the resignation of Dr. Burdon-Sanderson, M.D., F.R.S.

We hear that Mr. Arnott, of the Middlesex Hospital, has not applied for the present vacancy in the Surgical staff of St. Thomas's Hospital, as stated by a contemporary.

With pleasure we learn that eight Assistant-Surgeons of the Royal Navy are shortly to be promoted to the rank of Surgeons.

The Army Medical Department is immediately to be increased by between thirty and forty Assistant-Surgeons, while a further addition will, it is expected, be made in the number of officers in September next.

The Poor-law Commissioners have declined to sanction a proposed arrangement for the relieving officers of the Woolwich Union to act as vaccination inspectors, and consider that some person should be appointed specially for that duty.

We understand that the next meeting of the Hunterian Society, on the 8th inst., will be devoted to a general discussion on the subject of "Small-pox and Vaccination." The Society meets at eight o'clock at the London Institution, Finsbury-circus, and members of the Profession interested in the subject are invited to attend.

On Tuesday last, a boy, named John Wardle, 7½ years old, the son of a policeman, at Stonley, died from the effects of a dog-bite, received on January 14. The child went to school, as usual, till Saturday last, when he first complained of being unwell.

Dr. George Buchanan has been presented with a handsome clock in bronze and marble by the students attending the Popular Anatomy Class in Anderson's University, Glasgow. The clock, which is surmounted by the figure subject Michael Angelo's "Thinker," bears the following inscription:—"Presented to George Buchanan, Esq., M.D., by the students of his Popular Evening Class. Anderson's University, February, 1871."

At the Glasgow Police-board, on the 27th inst., the Health Committee submitted a report recommending that, during the existence of the present epidemic of small-pox, four places should be opened in different parts of the city, in order that opportunities might be given for the vaccination of children and others who might desire to adopt this precaution; and that each station should be conducted by an advanced Medical student under the superintendence of a Medical officer. The report was adopted. Mr. Ure stated that at present there were 149 cases of small-pox in the city, but fortunately the mortality had not been very great.

Dr. H. Charlton Bastian will read a paper on "The Mode of Origin of Bacteria, and on the Bearings of this Subject upon the Science of Medicine," at the next meeting of the West Kent Medico-Chirurgical Society, to be held at the Royal Kent Dispensary, Greenwich-road, on Friday evening next, March 10, at 8 p.m. The attendance of Medical men and others interested in the subject of spontaneous generation is invited.

Vaccination.—With a view to enforcing the provisions of the Vaccination Act, a house-to-house visitation is to be made by the local authorities in Poplar.

Royal College of Surgeons.—At a meeting of the Council on Thursday, the 2nd inst., Mr. William McCormac, of Grosvenor-street, Grosvenor-square, was admitted a Fellow of the College, and the following gentlemen were elected Fellows, viz.:—Messrs. Edward Bradford, of Harrow, Middlesex, Honorary Surgeon to the Queen, and Deputy Inspector-General of Hospitals, diploma of Membership dated June 16, 1826; and Henry Weekes, of Barnstaple, Devon, July 1, 1836.

Mr. Samuel Solly, F.R.S.—This gentleman, who lately resigned the Surgeoncy to St. Thomas's Hospital, an institution with which he had been so long connected, has also resigned his seat as an Examiner at the Royal College of Surgeons, to which he was elected in 1867. Mr. Solly, whose health has been very indifferent, is now, it is hoped, owing to perfect rest and relaxation from all Professional pursuits, much improved. Mr. Solly still retains his seat as a member of the Council, to which he was elected in 1856.

Small-pox aboard Ship.—The vessel *Ranger Loraine*, from Belgium, arrived in the Tyne on Tuesday last with a number of bad cases of small-pox on board. It may be asked—Were the infected passengers allowed to land?

Small-pox.—A correspondent, "H. P.," sends us the following receipt for propagating small-pox:—"Discharge a patient who is without a home from the Small-pox Hospital several days before being cured; admit a houseless patient into different casual wards for several nights; then, after she has been wandering about the streets during the day and resting on door-steps at night, take her into custody, lock her in a police-cell, in the morning take her into court, sentence her to fourteen days' imprisonment, and send her to the Westminster Prison, where the patient is now undergoing her sentence, but is yet capable of communicating the disease."—*Times.*

The late Dr. Thomas L. Evans.—The Neath Board of Guardians, at their last meeting, passed the following resolution, and directed their Clerk to forward a copy of it to the widow:—"That this Board greatly laments the premature death of so good and considerate a Medical officer as the late Dr. Thomas Lewes Evans, and they desire that the expression of their deepest sympathy for his family be conveyed to Mrs. Evans."

The Royal Asylum of the St. Anne's Society.—The Council have altered the rules so as to allow of the appointing of two Honorary Physicians instead of one, and Dr. William Millar Ord has been appointed jointly with Dr. John William Ogle.

A Gift in Embryo.—We hear of a gentleman who is ready to expend some £30,000 in the erection of a lunatic asylum, to be given to the country, for the advantage of the lower middle classes, so soon as he can hit on the best mode of obtaining a model design.

An Animal Sanitary Institution.—The Senate of the University of London are in treaty for the purchase of a site of land in Battersea-fields, for £1200, for the purpose of the "Brown Trust," and upon which to erect a suitable animal institution.

Cottage Hospital, Shaftesbury.—Mr. Corby's design for the Cottage Hospital, as a memorial of the late Marquis of Westminster, has been selected. The Hospital will be erected near the public walk, and will overlook the park and valley of Blackmoor. The site is the gift of the Dowager Marchioness of Westminster.

Death of Professor Rossignol.—Dr. Hippolyte Rossignol, Professor of Legal Medicine, Toxicology, and Operative Medicine in the University of Brussels, has recently died in his 55th year, worn out by disease of the liver and heart, which first made their appearance two years since, after a dissection wound. His investigations on the structure of the lungs and on the pathology of asthma are well known, and his method of treating varices is said to be an important improvement.

Suicide by Carbolic Acid.—An inquest has been held at Liverpool upon the body of John Perkins, a brush-maker, 40 years of age. The deceased had lately been in low spirits, and rambled in his talk. On the evening of his death he went to bed after supper. His landlady, hearing the sound of a fall, went upstairs, and found him lying on the floor in a dying state. There was a very strong smell of carbolic acid; she found a half-pint bottle, with a little in it, on the table, and a tumbler smelling very strongly of the acid. The bottle was labelled "carbolic acid," but not "poison." Dr. Bligh said that the deceased died from poisoning by carbolic acid. The small portion left in the bottle was a mixture of carbolic acid, glycerine, and water, with impurities. Verdict accordingly.

A Druggist Fined for Selling Methylated Spirit without a Licence.—On Monday, at the Huddersfield Police-court, Robert Robinson, chemist and druggist, Lockwood, was fined £12 10s. for selling methylated spirit without having a licence. The Supervisor of Excise stated that the defendant had been served with ample notice that he was not entitled to sell the spirit without having a licence.

A Minister of Health and the Poor.—The report of the Sanitary Commission recommends the detachment of the Health Department from the Home Office, and its association with the Poor-law Board, the two to be under the control of a minister of health and the poor. Another recommendation, we believe, will be the establishment in every district of a local sanitary authority, the formation of a local board being compulsory in places having more than 3000 population. A consolidation of the Sanitary Acts is also one of the recommendations of the Commissioners.

Utilisation of London Sewage.—Some of the sewage of London is to be experimented with on the A B C process, which was condemned by the Sewage Commission. After much deliberation, however, the Metropolitan Board of Works have decided to permit the "Native Guano Company" to erect works at the southern outfall, where 500,000 gallons of sewage will be acted upon daily. Recent alterations or improvements, it is now said, have added to the value of the measure; but whether the process is still entitled to be called "the A B C"—alum, blood and clay, or charcoal, or whatever it was—we do not know.

Charge of Manslaughter against a Union Surgeon.—One of the parish Doctors of Bethnal-green has been committed for "manslaughter" for alleged neglect. It was stated at the inquest that a poor woman was pregnant with twins. After the delivery of the first child he went away for several hours, during which the second child was born. The woman died two days afterwards. The Coroner informed the jury they could not obtain a conviction on their verdict, but they replied they would be sure of a full investigation of the matter, which might lead to the poor being more humanely treated. We have clearly not heard the whole of the case, and quote it as an instance of abuse of the powers of coroners' juries.

British Medical Benevolent Fund.—At the usual monthly meeting, held on Tuesday last, the committee granted relief to the extent of 60*l*., to nine applicants, while two other cases were postponed for further inquiry. Two names were also added to the list of candidates for annuities. A special vote of thanks was passed to Dr. Thorne Thorne, who has acted as Honorary Financial Secretary for the past three years, but retires on his appointment as Medical Inspector to the Privy Council. Mr. Charles S. Webber, F.R.C.S., has kindly undertaken the duties of the office vacated by Dr. Thorne. The following gentlemen have recently consented to assist the Committee by acting as Honorary Local Secretaries for their respective neighbourhoods:—Dr. C. Cocks, Ross; Dr. W. Vawdrey Lush, Weymouth; Dr. J. Thompson, Bideford; E. Pye-Smith, Esq., Hackney; F. Salzmann, Esq., Brighton; W. Bale, Esq., Stockport; H. Stear, Esq., Saffron Walden.

Queen's Hospital (Birmingham) Extension Fund.—A meeting of the *employés* at the "Metropolitan Railway Carriage and Waggon Works, Saltley," was held on Saturday last, in the mess-room, at which the following resolution was passed:—"That we, the foreman and workmen employed by the 'Metropolitan Railway Carriage and Waggon Company,' do hereby concur with the proposal of the Workmen's Committee, to again assist in raising the workmen's fund, for the extension of the Queen's Hospital, and do hereby pledge ourselves to work one-quarter of a day on Tuesday next, February 28, 1871, the proceeds of the same to be presented to the 'Queen's Hospital Extension Fund,' and that the cashier be respectfully requested to deduct the same from each person's wages, and pay over the amount to the delegates appointed by the workmen."

Mysterious Occurrence.—On Monday last, at the Police-court at Newnham, Gloucestershire, Mr. William Mason, a Licentiate of the Royal College of Physicians, Edinburgh, practising at Micheldean, and Henry Edward Coleman, an apothecary, were charged with the manslaughter of Ann Mason, wife of the first-named prisoner. Some time in January the deceased died, and at the inquest Mr. Mason stated that she had taken an overdose of opium for neuralgia, that brandy and water was administed by Mr. Coleman, and that she died forty-eight hours afterwards. Several Medical gentlemen were examined, whose evidence went to show that there had been neglect on the part of both prisoners. A sister of the deceased, who lived with the Masons, stated that they frequently quarrelled. After Mrs. Mason died, her husband tried to induce witness to keep some facts secret, threatening that if she did not, he would cut the body in two pieces, and that it would be buried in the cross-roads. The woman who laid out the body also stated that there were bruises on it. The prisoners were committed to the Gloucester assizes, bail being refused for Mason.

The New York Abortionists.—We are glad to find, from the following paragraph in the *Tribune*, that our Transatlantic brethren are at last bestirring themselves to put down a system that, till recently, had become a public scandal in New York and other great American cities:—Michael A. A. Wolff, an abortionist in New York, was sentenced on Monday to seven years' imprisonment by Judge Bedford. The Judge said to the prisoner: "You are a well-known abortionist. A few days ago Justice Dowling instituted in this city a most admirable system, to be practically carried out by Superintendent Kelso, as regards these dens of abortion, and the people may rest assured that the District Attorney and myself will, on all proper occasions, give every aid and assistance in driving these destroyers of human life from our midst. I wish it to be understood that the authorities, from this day, proclaim bitter war against all the abortionists in this city; and let them take it from myself that, be they rich or poor, male or female, on legitimate conviction, they will, irrespective of influences or of consequences, receive the same penalty which I now mete out to you."

Medical Amenities at the Antipodes.—A Medical man residing in Melbourne was lately favoured with the following choice specimen of epistolary composition from the Resident Surgeon of the Geelong Hospital:—

"Geelong, December 14, 1870.

"My good friend, take my advice. Do not write any more such paragraphs as lately appeared in *Touchstone*, *in re* the late Rosina Oates. Epistaxis and circumorbital ecchymosis might follow. I am afraid that you will find the flexors and extensors of a British seaman rather tougher articles than you would care about contending with.

"Yours very truly, D. B. Reid."

To which the gentleman addressed replied as follows:—

"In reply to a communication from a very vulgar person signing himself D. B. Reid, Dr. —— desires to say that foolish threats of the kind contained in it are entirely wasted upon him. Dr. ——'s only reason for condescending to reply to the communication is, that the person may save himself the trouble of sending any more letters of the same kind."

We may add that the gentleman to whom D. B. Reid addressed his extraordinary communication had nothing whatever to do with the article in *Touchstone*, a ribald publication that has now died a natural death.

Composition and Quality of the Metropolitan Waters in February, 1871.—The following are Dr. Letheby's returns to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·83	0·115	0·125	0·006	16·0	4·2
West Middlesex	21·96	0·076	0·118	0·002	16·0	4·3
Southwark & Vauxhall	21·63	0·074	0·110	0·003	16·0	4·2
Chelsea	21·13	0·096	0·136	0·004	16·0	4·1
Lambeth	20·87	0·081	0·010	0·002	15·8	4·0
Other Companies.						
Kent	28·39	0·004	0·217	0·000	21·2	6·0
New River	21·53	0·037	0·125	0·001	16·0	4·0
East London	23·89	0·070	0·165	0·002	16·8	4·6

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—viz., in that of the Grand Junction, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 102,824,606 gallons; and the number of houses supplied was 485,328. This is at the rate of 31·5 gals. per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 29·3 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

Hy. Letheby, M.B.

Apothecaries' Company.—From the "City of London Directory" we learn the following particulars respecting this Society:—"The Hall is in Water-lane, Blackfriars. The Hall and Dispensary, founded in 1623, were destroyed in the fire of 1666, and rebuilt in 1670-6. Drugs are still dispensed to the public at the Hall. A chemical laboratory was also formed in 1671. Sir Hans Sloane gave to this Company his botanical gardens at Chelsea in 1721-2. Charters: They were anciently part of the Grocers' Company, but by charter, December 6, 1615 (15th James I.), they were incorporated. Another charter was granted to them by 36th Charles II., January 29, 1685. An Act of Parliament was passed for better regulating the practice throughout England and Wales, 55th George III., cap. 194, 1815. By this Act, all apothecaries and their assistants must be examined and certified by the Court of Assistants, before they can carry on their Profession. Upwards of 400 are examined annually. Their bye-laws were approved by the Lord Chancellor and Justices in 1818. Arms: *Azure*—Apollo with his head radiant, holding in his left hand a bow, in his right an arrow, all *or*: supplanting a serpent *argent*. Crest—on a wreath, a rhinoceros statant proper. Supporters—two unicorns *or*: armed, crined, and hoofed *argent*. (Confirmed to the Company in 1617.) Fees Payable: Upon taking up the freedom, by patrimony, £2 10s.; by servitude, £2 3s. 6d.; by purchase, £105. Upon admission to the livery, £21 9s. 6d. Upon election to the Court of Assistants, £12. Charities: Widows' Fund, given in several sums, at different periods, by different members of the Company, and being invested in 3 per cents., now amounts to £6200. The interest is given annually in pensions to widows of the freemen and liverymen of the Company. Twelve or fourteen receive £20 per annum. The selection is made by the Court of Assistants."

More Snake-bite Cures by Halford's Remedy.—Two additional cases have recently come under notice illustrating the efficacy of Professor Halford's remedy for snake-bite. The first occurred on the Bass River, on November 1, at about 1 p.m., when a son of Mr. Patrick Guinlivan, of Bass River, aged 11 years, was bitten just above the ankle by a snake. The punctures of the two poison-fangs were distinctly visible, with a little blood flowing from them. A ligature was applied, and about half a tumbler of strong spirits given in two doses. The symptoms increasing in severity, a piece of skin was removed from over one of the most prominent veins at the bend of the elbow, the point of the syringe carefully introduced into the vein, and about ten minims of prepared ammonia injected. The relief was almost instantaneous. Some time after, the foot being very painful below the ligature, this was removed, and additional poison entering the circulation, the worst symptoms of snake-poisoning returned—viz., total loss of power over the legs, cold clammy skin, and almost imperceptible breathing, while an occasional fluttering was all that could be felt of the pulse. Ten more minims were injected into the same vein. In two minutes the pulse could be again detected, a decided improvement set in, and by seven o'clock in the evening the boy was well, and laughing as heartily as anyone could wish. The other case occurred in Tasmania, and was reported in the *Launceston Examiner* of November 10. A shepherd in the employment of Mr. Williams, of Waterhouse, was severely bitten just below the knee by a large snake. All the symptoms of snake-poisoning set in, but the remedy was applied, and the man speedily recovered. He described the sensation caused by the injection of the ammonia to be that of an electric shock passing through his frame.

The condition of the captives is not as bad as is generally supposed. They may suffer from the want of certain accustomed comforts, but that which most affects them is the absence of regular occupation. As almost all have been accustomed to active pursuits, as well as to the severe discipline of the army, their present forced state of idleness proves naturally anything but agreeable. Even the most indolently disposed, when the severe strain is taken off their energies, find idleness after a while intolerable. Many, accordingly, seek such employment as can be obtained in the adjacent towns and villages. Curious to say, although there are amongst the soldiers many well-skilled artisans whose experience might be found useful in the German manufactories, those who are in general most successful in obtaining employment are the cooks. Let me hope that the ameliorations which they are capable of introducing into the German *cuisine* will tend to the improvement of a system of preparing food which is neither palatable nor good for the digestion. I am glad to say that the Germans themselves show a lively appreciation of the benefits thus obtained; for, on several occasions, the authorities with whom I dined asked me what I thought of their German *cuisine*, and on my expressing my approval of it, told me, with a smile of gratification, that the dinner had been prepared by one of the French prisoners.—*Report made to the Executive Committee of the Society for Clothing the French Prisoners in Germany, by Thomas W. Evans, M.D.*

Lead and Lint.—The use of lead instead of lint for dressing wounds is recommended by a French writer, who says that it feels soft and cool to the wounded parts, and that the formation of a very thin layer of the sulphuret of lead impedes putrefaction.

Clearing Muddy Water.—Water contaminated simply with clay, but otherwise pure, may be at once clarified by adding very minute quantities of some salts of lime. Dr. Schlosing states that one part of chloride of calcium to 1000 parts of water effects this purpose in a moment; the nitrate, bicarbonate, and caustic lime act in the same manner. The precipitated substance may be readily separated from the water by filtration, whereas the filtration of the water containing the suspended matter is very difficult, because the pores of the filters are choked.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Peter.—By reference to the *Register*.

Dr. Clarke (Tweedside, Barbadoes).—Your letter, with enclosure, received with thanks.

Embryo.—Address Dr. G. Murray Humphry, Cambridge. Silver, Bentley, or Henfrey, on Botany; Nicholson, or Milne-Edwards by Knox, on Zoology; Roscoe or Miller, on Chemistry,

Puffing Dentists.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to call your attention to the enclosed paragraph, headed "Improvements in Dental Surgery," from the *Standard* of February 10. Its true character is obvious, and had it appeared in its proper form as an advertisement, it would have been unworthy of notice; but announcements of that kind, under the disguise of editorial articles, are on so many grounds objectionable, that I feel sure you will be inclined to protest against such a misuse of the columns of a high-class London newspaper.

I am, &c., Henry Sewill.

6, Wimpole-street, W., February 28.

⁂ Mr. Sewill's communication refers to a trade announcement which appeared in the *Standard*—not as an advertisement. It is an outrageous puff of a certain dentist, claiming for him to have been the first to administer nitrous oxide gas in this country, and praising his manufacture of artificial teeth.

N.—By consent of the party.

R. P.—There is no penalty for the offence.

L.R.C.P. can register the fresh qualification.

Melbourne.—The unseemly squabble between Drs. Neild and Reid is not creditable to either party. That it should have given occasion to a leading article in the *Age* is to be regretted. Professional squabbles may afford food for scandal, and be amusing to the public; but they are invariably injurious to us as a body. If we have "dirty linen" to wash, we had much better "wash it at home."

Tests for Carbolic Acid.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Dr. Osborne, in the *Medical Times and Gazette* of February 25, has indicated a valuable, but not a new, test for carbolic acid in aqueous solution. I demonstrated the beautiful mauve colour, which is produced by a few drops of solution of a persalt of iron added to a solution containing carbolic acid, at the meeting of the Royal Medical and Chirurgical Society held on March 20, 1869, as well as at meetings of the Medical Society of London. The colour is probably due to the presence of a percarbolate of iron, for proto-iron salts fail to induce the change, and the presence of a small quantity of free acid prevents the reaction. On the other hand, the test readily detects a proportion of one part of carbolic acid dissolved in 1000 of water.

I have endeavoured to investigate some other confirmatory tests. The slip of pinewood dipped, first, into carbolic solution, and afterwards into hydrochloric acid, quoted as a test in the British Pharmacopœia, I consider entirely unreliable. The following, devised by myself, a reversal of Day's modification of Schönbein's test for mucus, I have found to be very delicate and valuable:—A small quantity of the suspected solution is placed in a test-tube, and a little saliva from the mouth is shaken with it; a few drops of alcoholic tincture of guaiacum, exposed for a few minutes to the air, are then added. On agitation, the white emulsion produced by the addition of the guaiacum becomes, in a few minutes, apple-green if carbolic acid be present, the colour deepening on standing.

Another very good test has been communicated to me by Mr. Davis of Messrs. Balmer's. A little of a weak solution of carbolic acid be placed in a test-tube, about a grain of the ordinary chlorinated lime is add and, after agitation, a few drops of liquor ammoniæ; on gently heating, the solution assumes a bright blue colour, with a slight tinge of green.

These tests may, I think, be very useful in Medico-legal cases.

I am, &c., A. Ernest Sansom, M.D. Lond.

29, Duncan-terrace, February 28.

COMMUNICATIONS have been received from—

Embryo; Messrs. Letts, Son, and Co.; Mr. J. T. Purvis; X.; Dr. Felce; Mr. J. Little; Dr. Gibbon; Mr. J. B. Curgenven; Dr. Ogle; Mr. J. F. Collingwood; Dr. Crisp; Mr. Metcalfe Johnson; Dr. Sansom; Dr. J. J. Phillips; Messrs. Collingridge; Medicus; Mr. Henry Sewill; Messrs. May-Davis and Co.; Dr. Day; Mr. Chatto; Dr. Letheby.

BOOKS RECEIVED—

Moore's Australian Almanac and Handbook, 1871—The Nature of the Vital Force, by Dr. R. C. Shettle—Dr. Vintras on Some Advantages of Animal Vaccination for the Prevention of Small-pox—The Ophthalmoscope in the Treatment of Epilepsy, by Dr. R. A. Vance.

PERIODICALS AND NEWSPAPERS RECEIVED—

Pharmaceutical Journal—Nature—Australian Medical Gazette—The Melbourne Age—The Dublin Daily Express—Western Daily Express—Hardwicke's Science Gossip, March—Monthly Microscopical Journal, March—Journal of Cutaneous Medicine, March—New York Medical Gazette.

APPOINTMENTS FOR THE WEEK.

March 4. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Jowett, "Socrates."

6. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Anthropological Institute, 8 p.m. Mr. J. W. Jackson, "On the Racial Aspects of the Franco-Prussian War."

Medical Society of London, 8 p.m. Mr. H. Royes Bell, "Enchondroma of the Thumb." Mr. Jno. Gay, "On a Case of Stricture" (with specimen). Mr. John Pennefather, "Obstruction of the Eustachian Tube." Mr. W. F. Teevan, "Remarks on Stricture."

Royal Institution, 2 p.m. General Monthly Meeting.

7. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Dr. Marcus Beck, "Spindle-celled Sarcoma connected with Posterior Tibial Nerve." Dr. Greenhow, "Cancer of Œsophagus, with Opening into the Trachea." Dr. Dickinson, "Spinal Cord in Tetanus; Mesenteric Tumour." Mr. Weeden Cooke, "Medullary Sarcoma of Cranial Bones associated with Scirrhus of the Breast; Scirrhus of the Brain associated with Scirrhus of the Breast." Mr. Reeves, "Tumour of the Thigh." Dr. Hawkes, "Rupture of Aorta and Tumour of Brain." Dr. Whipham, "Dissecting Aneurism of Aorta." Dr. C. T. Williams, "Aneurism of Aorta bursting into Œsophagus." Dr. Powell (for Dr. Quain, "Caries of Vertebræ, with Dislocation of Axis." Dr. Payne, "Cancerous Growth in Veins and Endocardium."

12, Hinde-street, W., 5 p.m. Lectures on Experimental and Practical Medicine, by Dr. B. W. Richardson, F.R.S.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

8. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Dr. Seaton (President), "On the Present Epidemic of Small-pox." Dr. Grieve, "An Analysis of 800 Cases of Small-pox observed in the Hampstead Hospital during the Present Epidemic."

Hunterian Society. 7½ p.m.: Meeting of Council. 8 p.m.: Dr. H. G. Sutton, "On Small-pox."

Obstetrical Society, 8 p.m. Drs. Braxton Hicks and Phillips, "Remarks on Tables of Mortality after Obstetric Operations." Dr. Brunton, "A Case in which the Ovum was Born Entire, and the Child Rescued Alive Fifteen Minutes after."

Royal College of Physicians, 5 p.m. Goulstonian Lectures—Dr. Gee, "On the Heat of the Body."

Society of Arts, 8 p.m. Meeting.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

10. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Dr. Tilbury Fox, "Three Cases of Tinea Circinata communicated from the Horse." Mr. H. Lee, "Case of Removal of Tongue for Cancer." Dr. Duffin, "Case of Roseola Vario-[illegible]a." Mr. Christopher Heath, "A Case of Complicated Stricture of the [illegible]ethra Treated by Mr. Syme's Operation for Impermeable Urethra."

[illegible] College of Physicians, 5 p.m. Goulstonian Lectures—Dr. Gee, "On the Heat of the Body."

Royal Institution, 9 p.m. Dr. W. B. Carpenter, F.R.S., etc., "The Latest Scientific Researches in the Mediterranean and Straits of Gibraltar."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 25, 1870.

BIRTHS.

Births of Boys, 1278; Girls, 1185; Total, 2463.

Average of 10 corresponding weeks, 1860-69, 2165·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	808	825	1633
Average of the ten years 1860-69 . . .	763·4	732·6	1496·0
Average corrected to increased population .	...	...	1646
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	20	3	5	1	11	...	1	1	5
North ...	618210	75	5	14	...	9	7	7	2	2
Central ...	383321	10	...	5	...	4	...	2	...	...
East	571158	65	2	7	1	18	4	2	3	7
South	773175	57	5	16	...	12	1	3	1	...
Total	2803989	227	15	47	2	54	12	15	7	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·023 in.
Mean temperature	43·8°
Highest point of thermometer	54·8°
Lowest point of thermometer	31·9°
Mean dew-point temperature	38·3°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·06 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, February 25, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Feb. 18.	Deaths Registered during the week ending Feb. 18.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2463	1633	54·8	31·9	43·8	6·55	0·06	0·15
Portsmouth ...	125464	13·2	80	36	54·2	31·4	44·3	6·84	0·14	0·36
Norwich	81787	10·9	58	30	54·0	30·0	43·8	6·55	0·01	0·03
Bristol	173364	37·0	145	84	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	61	22	54·3	31·3	43·7	6·50	0·23	0·58
Birmingham ...	378574	48·3	300	146	54·8	33·6	44·7	7·06	0·19	0·48
Leicester	101367	31·7	82	42	54·2	29·5	43·7	6·50	0·07	0·18
Nottingham ...	90480	45·3	49	27	56·2	28·7	44·4	6·89	0·00	0·0[illegible]
Liverpool	526225	103·0	370	452	54·3	35·2	44·4	6·89	0·17	0·43
Manchester ...	379140	84·5	294	154	55·0	30·5	45·1	7·28	0·27	0·69
Salford	123851	23·9	99	56	53·9	30·0	44·4	6·89	0·28	0·71
Bradford	148030	22·5	140	67	54·4	34·0	45·1	7·28	0·08	0·20
Leeds	266108	12·3	182	122	56·0	34·0	45·1	7·28	0·08	0·20
Sheffield	255247	11·2	183	109	54·5	32·1	44·9	7·17	0·06	0·15
Hull	135195	38·0	88	50	55·0	27·0	43·1	6·17	0·01	0·03
Sunderland ...	103037	31·2	87	58	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	89	66	52·0	35·0	43·7	6·50	0·10	0·25
Edinburgh	179944	40·6	127	83	53·7	41·0	47·1	8·39	0·40	1·02
Glasgow	477627	94·3	403	304	61·7	40·0	49·4	9·66	0·34	0·86
Dublin (City, etc.†)	322321	33·1	241	183	59·1	30·0	45·6	7·55	0·04	0·10
Total of 20 Towns in United Kingd'm	7336941	34·4	5541	3724	61 7	27·0	44·8	7·11	0·14	0·36
Paris—Week ending Feb. 25	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Feb. 11 ...	622087	68	...	...	...	...	...	...	...	...
Berlin—Week ending Feb. 25 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 30·02 in. The highest was 30·26 in. on Wednesday at noon, and the lowest was 29·60 in. on Monday morning.

The general direction of the wind was W.S.W.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

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ORIGINAL LECTURES.

ON TWO CASES OF VENEREAL DISEASE

ABSTRACT OF CLINICAL LECTURE
DELIVERED IN THE LONDON HOSPITAL, FEBRUARY 28.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the Hospital.

Case 1.—*A Lad, the subject of both Hard and Soft Chancres—Adenopathy—Rash—Reproduction of Soft Sores.*

Case 2.—*A Young Man, the subject of Two Hard Sores—Adenopathy—Rash—Sore-Throat.*

After reading the history of the cases furnished by the dressers, Messrs. Coleman and Fox, the lecturer proceeded: The first symptom that attracted our attention in the lad was phymosis; the prepuce was swollen and red, and could not be withdrawn. Now, phymosis may be congenital or acquired, and since it could be retracted a few weeks ago, its condition on admission must have been morbid, and it was for us to determine the cause. There was a discharge from the orifice. Whence came it? It might have arisen from a urethritis (gonorrhœa), from balanitis (inflammation of the mucous lining of the prepuce and glans), from the surface of either soft or hard chancre, or from an epithelial cancer. You will thus see at once the necessity for making a careful diagnosis. It probably did not come from urethritis, because it was rather scanty, and there was absence of scalding on micturition; but it might have had its source in any one of the other maladies mentioned. Careless people, who do not wash, are liable to balanitis from the accumulation and decomposition of the secretion of the odoriferous glands; chancres or cancer might be concealed. The age of the patient was unfavourable to the presence of cancer, and no growth or induration of sufficient extent could be detected, but there was a patch of induration of small extent on the dorsal surface of the organ at the corona. You often hear me say, when in doubt about the nature of a sore, either concealed or exposed to view: Examine the condition of the lymphatic glands associated with the region whence the lymph vessels come on which the sore is situated. We did so in this case—indeed, in both cases—and found a most typical condition of glands, and one which led me at once to say to you, these patients are the subject of syphilis. Several glands in both groins were enlarged and prominent, but quite painless, feeling like nuts under the skin; the skin covering them was quite healthy, non-adherent, and the glands themselves moved readily upon the subjacent tissues. This is the *adenopathy* associated with *hard* chancre; and I may here say that when a gland becomes involved in connexion with *soft* chancre, the signs are those of inflammation—an acute bubo, an *adenitis*, results. There is, however, one source of error against which I must warn you: an adenopathy may be painful, and in rare instances suppurate, should the sore associated with it be in any way irritated, just as you see a gland become inflamed in the groin or axilla in connexion with a source of irritation on either extremity. I was desirous that you should have an opportunity of watching the consequences of contagion in these two cases, and also of verifying the diagnosis, and I purposely omitted specific treatment; no mercury was administered. It is a known fact that some form or forms of secondary syphilis, generally rash or sore-throat, or both, manifests itself after the lapse of from six weeks to three months from contagion. We waited patiently, and by way of placebo painted the glands of one patient with iodine, and using a zinc lotion with a syringe to wash out the foreskin of the other, the subject of a discharge therefrom. I have told you why I avoided specific treatment in these instances, and up to the present time the patients have progressed favourably. The glandular swellings are greatly diminished; the sores, of which there were two *hard* on the skin of the penis of the one man, healed, and the induration is almost gone, while the sore-throat and rash, which appeared as we predicted, in due time, have, the former altogether, and the latter nearly, disappeared. You just now heard the man say he was "first-rate."

In the other lad, the induration diminished, and a rash appeared and paled away. But another and very instructive feature arose, in the shape of two sores on the scrotum, at spots which would readily receive and lodge secretion flowing from within the prepuce. Last week we were able to withdraw the prepuce somewhat, and then discovered several soft suppurating sores on the glans and foreskin, and thus the origin of those on the scrotum was explained; but we found no hard sore. Happily, to-day, for the first time, I am enabled completely to lay bare the glans and corona, and now we have on the same patient, easily appreciable, several *soft* sores and one *hard* sore, with the surface still abraded, but with its base hard and deeply implanted, and in the site of the induration which some of you felt when the lad was admitted. You will come forward presently and examine these sores with the finger and thumb. On doing so you will readily appreciate the specific induration, which is deeply seated, and you will also feel a certain amount of hardness about the edges of the soft sores—and you know why. I am in the habit of using an alum lotion to soft chancres, both to diminish secretion and so the risk of further inoculation and multiplication of sores, and also to harden the surrounding skin with a similar view. The hardness is contemporary with the use of the alum-wash, and the sores are healing.

I have treated these patients without mercury; but do not suppose for a moment that I do not value that drug in the treatment of syphilis. I am sure as one can be of anything mundane, that, in many instances, mercury is essential to the dispersion of symptoms; and the above cases may yet have a relapse, and require a course of that drug. You are aware that most diseases (at any rate, in the young subject) have a tendency to spontaneous cure—a fact which we must always bear in mind in the treatment of disease. Do not pour in physic as a matter of routine; but, on the other hand, do not estimate drugs too lightly. We shall keep an eye on these lads during the next few months, and you will hear of them again.

Treatment.—I have already alluded to this, and have stated the special indication in the case of simple soft sores. At the present time, I am of the number of those who believe with Ricord in the unity of the syphilitic, but the duality of the chancrous poison—that is to say, that constitutional syphilis is a natural consequence of the *hard* and not of the *soft* chancre. We have been fortunate indeed in seeing the two kinds of sore, with some of their attendant consequences, exemplified on the same patient; but this very case might have tended to upset the above theory, had it been seen later. A hard sore will sometimes run its course without the patient having been aware of its existence. The enlargement of the glands, free from pain, often escapes notice, and a mild rash, causing no irritation, is observed only when the above symptoms have disappeared, and thus soft chancres may be accredited with infecting the system. Thus you see a hard sore will sometimes require no treatment, but very often it will not heal without the administration of mercury, either in the shape of blue-pill, inunction, or the mercurial vapour-bath; and black-wash is a useful topical application. Should the alum-wash appear unsuitable to soft sores, treat them on general principles.

ORIGINAL COMMUNICATIONS.

CONTRIBUTIONS TO THE PATHOLOGY OF THE PROSTATE GLAND.

By Dr. KRAUS.

In the course of my investigations concerning catarrh of the male urethra I have recognised the necessity of comprising the diseases of that enigmatical organ, the prostate. These I have had under careful examination several years, and I believe that the positive results which I have arrived at are deserving of being made more widely known. Of late these results have obtained such a degree of precision that they have frequently been favourably noticed by my honoured colleagues, who have not only confirmed the accuracy of my conclusions, but have supplied me with a wider field for investigation.

It may now be laid down as a rule, admitting of but few exceptions, that all diseases of the prostate take their origin in catarrh of the urethra or bladder. Also, the diseases of the seminiferous organs must, without exception, be referred to blenorrhagia of the urethra; so that, in future, what have been considered as sympathetic affections of the vesiculæ, the vasa deferentia, and the epididymis must be regarded as an extension of the blenorrhagic inflammation of the urethra. The fifteen or sixteen of the prostatic ducts, too, which open near the caput gallinaginis are affected with this catarrh when the blennorrhagia extends to the prostatic portion of the urethra. In consequence of the entrance of large quantities of the catarrhal secretion, the gland becomes greatly swollen and enlarged. It would, indeed, be remarkable if these ducts, the office of which it is to discharge the prostatic fluid, should not participate in the general catarrhal process. The enlargement of the prostate about the twenty-fifth or twenty-sixth day of the blenorrhagia is solely attributable to the blenorrhagic affection of its ducts. The considerable muscular elements which the prostate contains is kept, by means of the catarrhal irritation, in a state of constant contraction, inducing increased excretion from its ducts, and contributing to that large discharge from the urethra which is observed when the prostatic portion of this canal participates in the blenorrhagic process. I have exhibited the truth of this statement by injecting blenorrhagic matter into the prostatic portions of the urethras of five dogs, and finding, on making a section of the prostate twenty-four days afterwards, that it was loaded with secretion. Of the blenorrhagic inflammation of the prostatic ducts, and consequent enlargement of the prostate, there can be, then, no doubt. Even in catarrhal affection of the urethra, which to the observer does not seem to involve the prostatic portion, the prostate may still be swollen. This frequently occurs, too, in chronic catarrh of the bladder, when some of the secretion expelled from the bladder, and detained in the prostatic portion of the urethra, excites inflammatory action in the prostatic ducts. I possess two preparations in which the dendritic ramifications of indurated catarrhal secretion, like that observed in the bronchi in croup, are seen within the canals of the prostate. These preparations confirm the observations that I had already made, that in catarrh of the bladder, owing to the loss of tone in the organ, the secretion becomes arrested in the prostatic portion of the urethra, and, subjected to pressure there, is forced into the ducts. The cavity of the caput gallinaginis also becomes filled with the secretion, and from thence the catarrhal inflammation spreads along the ejaculatory ducts to the vesiculæ and epididymis.

I have, in a former work, shown, by exact observation, that in several cases the copulative power becomes lost through the agglutination or entire adhesion of the ejaculatory ducts. These observations have been corroborated during the present investigations on the condition of the prostate. In eight of the preparations of catarrhal affections of the bladder, the ducts of the prostate were found loaded and impermeable, and in two the vasa deferentia were adherent. The so-called bloody semen is a fiction, for neither in the vesiculæ or the other seminal passages have I ever met with it. It is only rendered bloody when, in blenorrhagia or vesical catarrh, the semen is forcibly expelled through the adherent ducts. The patients, especially young persons, are enabled to indicate the point of rupture if they indulge in coitus during the blenorrhagia. There are two possible cases—either the advancing column of semen has power enough to burst through the adhesion of the ducts, and then bloody semen results; or, when it is deficient in this, the patient is aware of a sense of regurgitation, and the semen, remaining awhile in the passages, is soon forced backwards. These conditions may be observed by those who examine the subject with the necessary care.

The tumefaction of the prostate may be only a temporary symptom, disappearing with the blenorrhagia or the vesical catarrh. When, however, there is persistent obstruction or adhesion of its ducts, as my former investigations have shown that the discharge of the prostatic fluid is an indispensable condition of the exercise of the generative faculty, we have to consider carefully the condition of the prostate and its ducts as well as that of the seminal passages. For having demonstrated the blenorrhagic affection of the prostatic ducts we claim entire priority, notwithstanding any accidental recognition of similar results by former authors. We have in former investigations shown that the prostate is to be regarded as no mere accessory organ, but as a *sine quâ non* of the entire generative apparatus, complete generation being impossible in an abnormal condition of this organ. The prostatic fluid must, in its chemical and other conditions, be in a pure state in order that generation may be accomplished. But in blenorrhagia which has extended to its ducts, this function becomes impeded, for the quality of the prostatic secretion often undergoes alteration for a long period; so that persons affected with blenorrhagia of the prostatic ducts and their secreting elements are incapable of generation because the prostatic fluid is in an abnormal condition.

The diagnosis of blenorrhagia of the prostatic ducts is very difficult as regards specially characteristic symptoms, although the participation of the prostate in the diseased conditions of the urethra and bladder can be made out in a somewhat undefined manner. Neither any considerable amount of pain nor enlargement of the lobes of the organ, except of the posterior in an advanced stage of the affection, furnish indications of the blenorrhagic affection of the organ. From the twentieth to the twenty-fifth day of its duration the attentive observer may, however, have an opportunity of observing a change in the colour and consistence of the secretion. The whitish mucus may all at once assume a greenish-yellow colour, and be greatly augmented by pressure on the root of the penis. A prickling sensation in the rectum indicates an abnormal condition of the posterior lobe, without determining the nature of this. An important sign that the prostatic portion of the urethra is affected in vesical catarrh is the difficulty with which a catheter is passed into the bladder. This, which otherwise can be passed in with ease, also now induces severe pain while traversing the prostatic portion, even when the blenorrhagia is in its chronic stage. The lancinating pains shooting down to the testes, and the pains in general which irradiate more or less over the whole genito-urinary apparatus in its inflamed condition, have nothing special about them in this affection. In the dead body, when the prostatic ducts have participated in the blenorrhagia, the whole prostatic portion of the urethra is found intensely injected, and on pressure being made upon the prostate, true blenorrhagic secretion is discharged from the ducts. It is of great interest, too, to note that even when the blenorrhagia has entirely ceased in the urethra, it may still persist in the prostate. We have two beautiful preparations, in which, while the urethra is entirely free from blenorrhagia, the ducts of the prostate, and even the acini, as shown by the microscope, are loaded with blenorrhagic secretion. The secretion was so abundant that on pressure being made it issued abundantly. We had occasion to observe this in a remarkable manner in a patient dying of typhus. Along the entire urethra, no trace of blenorrhagia of recent origin was observable; but the trigonum, the caput gallinaginis, and inner orifice of the urethra were in a condition characteristic of this affection of the prostate—viz., hyperæmic, with small erosions, and swollen.

Some authors who do not pay sufficient attention to the anatomical conditions, and seem not to be aware that the prostate is both in front and behind encapsulated in a very tense membrane, describe abscesses which, forming on the surface of the gland, penetrate into its cavity. In the innumerable cases of diseases of the prostate and bladder which we have hitherto examined, we have never met with such abscesses, except where an unskilful operator has perforated the gland with his catheter. The muscular tissue is so prevalent in its texture, that the formation of abscess in its substance must be a very rare occurrence, seeing how frequent are abscesses of muscle. Isolated by means of ligaments and tendons and its own strong fibrous covering, the prostate does not participate in the diseased condition of surrounding organs, and, with the exception of the parotid gland, there is no organ which so well preserves such independent condition.

On slitting up the prostatic ducts affected by blenorrhagia, they are found to be dilated to three or four times their natural size. In their normal condition there are only five or six of the sixteen ducts that will admit even a fine bristle, the calibre of the others only being ascertainable by the microscope; and their dilatation is entirely due to the presence of so large a quantity of secretion during the blenorrhagia of the prostatic portion. Not only do they become larger, but also longer, some of the ducts, which in the normal condition are scarcely a line in length, becoming two or two and a half lines long. A slate-coloured coloration surrounding the mouths of the ducts is characteristic of their condition, and not only are the ducts pigmented in a similar manner, but they exhibited a slate-coloured deposit, which, under the microscope, is shown to contain crystals of triple phosphate. This coloration is to be distinguished from a post-mortem appearance, and from one which may be artificially produced by passing the knife over the mucous membrane. In the pathological condition, there is a deep blue colour around the mouths of the ducts, disposed in circular stripes, while the post-mortem appearance is diffused without any streaking. In the pathological process there is also a slate-coloured deposit, which is never absent in the *trigonum Lieutaudi.*

After chronic catarrh of the bladder, the careful examination of the prostatic portion of the urethra should never be omitted. Small erosions at the inner end of the urethra should serve as an indication that the prostate may be involved, and lead to its examination. This will, sooner or later, lead to the pathology of the prostate entering upon a new phase. As we have already shown, too, the catarrhal secretion expelled from the bladder may, by the continuous pressure it exerts on the prostatic portion of the urethra, give rise to dilatation of the prostatic ducts and the forcing of the discharge into these, in this way leading to the propagation of the catarrhal condition of the bladder to the prostate. In such cases, we find exactly the same secretion, which is accumulated at the base of the bladder; and it is the near resemblance which this often has to pus which has led some authors to mistake it for suppuration of the prostate. The great difficulty which exists in distinguishing this secretion from pus, leads to the suspicion that suppuration of the prostate is commencing; but if all the cases presenting secretion having this appearance were actually of the dangerous character attributed to them, even by the most recent pathologists, we should have to pronounce a fatal prognosis in one half of the cases of vesical catarrh. In most cases of this affection, after a time, pus is found in the secretion without the condition of the patient undergoing any essential change. This presents us with an unwelcome example of how little the histological investigations concerning the innocent or malignant nature of cells have advanced our science: for nowhere more than with respect to the secretions of the diseased urethra can the worthlessness of the hitherto current theories on the mischievous effects of pus be better shown.

The posterior portions of the prostate, on account of their more intimate connexion with the urethra, participate more readily in its affections, and during the inflammatory stage of prostatic blenorrhagia, these lobes may undergo a considerable increase in size without this being perceptible during life. After death, one or other of the lobes may be seen to have undergone very considerable increase without producing any stricture in the rectum, this being rather dislocated than obstructed by its increase. The examination of the prostate frequently gives rise to deception, for the gland must have increased three or four times in size before it can be reached by the finger, and a lesser amount of enlargement cannot therefore be diagnosticated. An increase of the gland, such as can be ascertained per anum, can only arise from a degeneration of its entire posterior lobe; and at present we have only to do with the blenorrhagic affections of the prostate. The tensity of its capsule prevents any very great enlargement, but sometimes a portion of the glandular substances perforates this and projects in the form of a process into the rectum. The same condition may ensue from a mechanical injury done to the gland while passing a catheter.

Strictures of the urethra from enlargement of the prostate are of extreme rarity, notwithstanding that this is regarded as a frequent cause. The urethra has so large a play between the corpora cavernosa, and can exert much locomotion before being interfered with by an enlargement of the prostate.

THE BATHS OF BORMEO.

By R. WHITFIELD HEWLETT, M.D.,

THE better known and more fashionable valleys of the Engadine have hitherto attracted so much notice that other climatic resorts in neighbouring cantons have not, as yet, received the attention which they deserve, and yet some of them possess a climate superior to any in the Engadine, and mineral waters of considerable reputation and merit. Experience proves that scrofulosis and tuberculosis are only known in the higher mountain regions of Switzerland as exotics.

Cases of both diseases do occur sporadically, but their existence is easily traceable to local causes, while the records of Davos and St. Moritz are year by year yielding most valuable evidence of the benefit which some cases of chronic lung consumption derive from a residence in elevated districts, even during the severity of an Alpine winter. Many more details, however, are wanting, ere we can speak definitely as to the exact altitude, the limit of daily thermometrical fluctuation, and the mean annual temperature required for the proper treatment of chronic lung-consumption on the one hand, or as to the various phases and stages of lung diseases in which a mountain residence is desirable on the other.

Of the great value of mountain air and life in some forms of lung-consumption I am thoroughly convinced; but a residence of three months in the Upper Engadine last summer, no less than the observation of cases that came under my own care, and of invalids who had braved more than one winter in St. Moritz, have led me to believe that the rough climate of the Engadine, however well adapted to some cases, is not only injurious to cases where true tubercle exists in the lungs or other organs, but must be advised with great caution in all cases of chronic lung-inflammation and cheesy infiltration, even where no tubercle is found; and more especially where there is a decided history of family lung-consumption, or when the patient suffers from a feeble heart, languid circulation, with small powers of rallying, and is very susceptible to slight changes of temperature. The mountain treatment of lung-consumption can only be called, at present, tentative and experimental; and as serious results have occurred from injudiciously sending unsuitable cases into the Engadine, it is wiser to select, especially for the early summer, a place which possesses all the conditions of a mountain climate without the roughness and severity of the higher altitudes.

In this respect Bormeo commends itself especially to our notice. Within easy access of Como and Milan on the one side, and the Tyrol on the other, separated from the Upper Engadine only by a long day's journey, Bormeo is situated at the head of the Upper Valtelline, which widens into a large basin-like expansion ere it enters the defile of the Stelvio.

Sheltered from the north and north-east by the majestic mountains of the Stelvio Pass, the new bath-house faces almost due south, and, in consequence of this and of the widening valley, enjoys the full influence of nearly a whole day's sun—a most important advantage, as in mountain valleys the sun generally falls early below the horizon, and the afternoons are cold and chilly. Though situated 4100 feet above the sea, it thus enjoys, from its sheltered position on the north and open aspect on the south, a milder and more equable climate than the rougher seasons of the Upper Engadine, and is, therefore, more suited to delicate and sensitive constitutions which need the bracing tonic of mountain air, without the overstimulating properties of the higher altitudes, and to cases with a decided tendency, inherited or acquired, to lung-consumption, or where there may be even a greater or less amount of cheesy infiltration in the lung, in which the climate of the higher Alpine regions may be considered too great an experiment.

For most cases, I think, the altitude of Bormeo will be found sufficient. In some instances, especially during the summer months, it may, however, be well to move for a while to higher and cooler districts; but in every case of predisposition to tuberculosis and lung-consumption, and in all cases where the apices are affected, or where there is evidence of cheesy infiltration, I think it is better to approach the higher altitudes gradually; and nowhere can the experiment be tried better than in Bormeo. The mean yearly temperature of the old bath (4460) is 44° Fahr., according to Dr. Meyer-Ahrens, and of the new bath-house 44·6° Fahr. He states that no other Alpine or Pyrenæan station between 4000 and 4900 feet high reaches the summer temperature of Bormeo—viz., 61° Fahr. in the new bath-house. The summer temperature of Bormeo approximates to that of Barèges, though the latter lies 670 feet lower than the old bath. The mean daily summer fluctuation of temperature at the old bath at Bormeo is nearly 11° Fahr. In Madeira the daily fluctuations in the winter months, after two years' observation, averaged almost exactly the same; so that the old bath of Bormeo shows the same daily fluctuation in summer as Madeira in winter. The following observations were taken in July and August during three years:—

	July.	August.
Mean humidity	68·4°	68·3°
Minimum	30·3	30·
Maximum	83·3	83·3
Clear days	21·8	23·5
Mixed days	4·1	5·2
Cloudy days	5·3	2·3
Rainy days	2·6	1·5

I may mention one case in which a month's residence at Bormeo was followed by most satisfactory results:—

A. B., about 36 years of age, was under my care in Naples with typhoid fever. For several years he had suffered on and off with occasional cough and expectoration, which was sometimes tinged with blood, but his lungs had been pronounced sound by an eminent London Physician. During his convalescence he flagged; his pulse ran up, and symptoms of bronchitis at the base of one lung came on, with high skin-temperature, sweats, loss of flesh, loss of appetite, great debility, and free expectoration. It was then May, and very hot, with sirocco wind. I had him taken to Castellamare, where, after a few days, he rallied, and was carried day by day into a boat, in which he passed several hours.

He gradually improved; the pulse fell, though still high, the lung symptoms improved, the night sweats diminished, and his appetite returned.

As soon as he was strong enough for the journey, I sent him to Bormeo, where he remained four or five weeks; and when, in August, he came to see me in the Engadine, *en route* to England, I should hardly have recognised him as the same individual. The lung mischief had gradually subsided, the night sweats had ceased, he was no longer troubled with cough, and he had grown stout and strong. His voice still remained somewhat husky.

In this case, a suspicious family history, the existence for some years of lung irritation on slight exposure, and the symptoms which supervened during convalescence led me to fear the development of rapid lung-consumption. His rapid improvement I ascribed entirely to change of air, and especially to the mountain air.

Secondly, as a spring residence, Bormeo seems to me to supply a want that is very much felt by a large class of invalids who winter in the Riviera, Sicily, Egypt, or South Italy, and are driven away by increasing heat at a time when the higher mountains are impassable from the melting of the winter's snow and ice. St. Moritz, for instance, is not to be recommended until quite the middle or end of June. Monsieur André de Planta, whose analyses of mineral waters are so well known, speaks most highly of Bormeo as a spring residence during the second half of March, April, May, June. He describes its air as excellent, strengthening, and less exciting than the Engadine and other stations in Switzerland, and comments on the absence of snow and the cold winds, which render the Engadine impossible for delicate constitutions during March, April, and the beginning of May.

Thirdly, Bormeo may be strongly recommended as an excellent *point d'arrêt en route* to the Engadine, where patients may become prepared for the altered conditions of life in valleys over 5000 feet. Some valuable local springs and a powerful iron spring at the neighbouring village of Santa Caterina assist the general tonic action of the air. The local springs are rich in lime, and contain also salts of soda, potash, and magnesia. The quantitative analysis by Monsieur de Planta showed, in 1000 parts—sulphate of soda, 0·0604 parts; sulphate of potash, 0·0181; sulphate of magnesia, 0·2520; sulphate of lime, 0·4863; carbonate of lime, 0·1735; chloride of sodium, 0·0112; free and half-free carbonic acid, 0·0474; besides silicates and traces of iron and manganese. They are especially valuable in squamous skin diseases, lymphatic enlargements, scrofulosis, chronic enlargements of the spleen and liver, chronic rheumatism, diseases of the uterine system, and other affections. Such are some of the reasons why we think Bormeo deserves a foremost place in the list of mountain climatic resorts; and on the ground of pure, invigorating, unexciting Alpine air, its dry and equable climate, its sheltered position, and its rich mineral waters, we venture to predict it will prove far superior to any other spring mountain-residence, and will ere long rival the Engadine as a winter resort for patients suffering from threatened or developed lung-consumption.

I am authorised to state that the hotel will be opened early in the spring if a sufficient number of applications be made to the Director, Bormeo.

Naples.

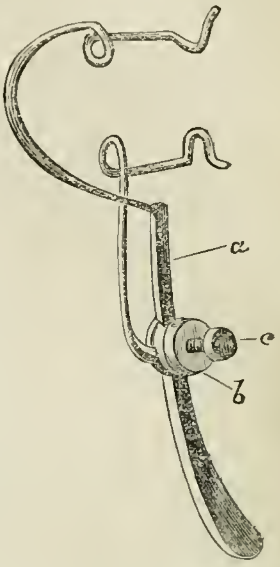
NEW WIRE SPECULUM.

By Surgeon W. P. PARTRIDGE, M.R.C.S.E., L.M.,

Bombay Army, Presidency Surgeon, 3rd District Bombay; in Medical charge of County Gaol, House of Correction, etc.

All ophthalmic Surgeons who have been in the habit of operating much have felt the necessity of having a speculum which combines the following points:—(1) It must be capable of being easily applied; (2) it must be easily removable; (3) it must be so constructed that it will resist the pressure of the lids which sometimes occurs; (4) it must not be liable to become displaced; and, above all, (5) it must not interfere with the operator's movements in any way. I have seen specula of various kinds, but have not been fortunate enough to meet with one in which all these qualities are found. I have therefore been led to construct the one of which I now send you a sketch, and which will, I think, be found to fulfil every requirement.

The instrument differs from the ordinary ones in having no spring, and in the apparatus for checking closure of the lids being removed from the vicinity of the eye, and placed on the cheek. A squared curved stem (*a*) has a piece of wire firmly attached to its upper end, which is so bent as to avoid the inner canthus of the eye, and supports the upper lid while the lower lid is hooked and drawn downwards by a corresponding piece of wire attached to a round piece of metal (*b*), perforated by a square hole, which is made to run easily up and down the squared stem. On the upper part of this portion is a nut and screw (*c*), by turning which, the instrument is at once fixed at any desired point. The object of the stem being curved is, that the hook for the lower lid, when drawn downwards, may have an inclination also backwards, and thus the chance of slipping is avoided.



The application is simple: hold the instrument by the lower part of the stem; insert the hook under the upper lid; take the screw-nut in the right hand, and, pushing the other hook up till it touches the upper one, make it seize the lower lid and draw it downwards to the desired extent; then fix it by a half turn of the screw. A speculum for each eye is required (my drawing represents the one for the left eye); but in cases in which it is desired to have the inner angle free (as in operating for pterygium), I use the speculum for the opposite eye. I may mention that I have sent a pair of specula to Mr. Bowman, and have asked him to show them to Weiss, who will doubtless be willing to make them, if required.

Bombay.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

TORSION OF ARTERIES AFTER AMPUTATION OF THE LEG.

(Under the care of Mr. COOPER FORSTER.)

Judging from the general experience at the Metropolitan Hospitals, the question as to the best method of arresting arterial bleeding in Surgical operations seems to be still *sub judice*. Nor is it singular that it should be so when we consider the glowing terms in which the rival methods have been severally eulogised by their enthusiastic supporters. It is only a very few years since the triumphs of acupressure were sounded with no uncertain note by the two chief Surgeons of Aberdeen, and we were promised immunity from, at least, secondary hæmorrhage and pyæmia by the adoption of this lately revived procedure. Nor was the admonition wasted upon English Surgeons. Some of our greatest operators made a pilgrimage to the north to see more of the reported marvels, and spoke in terms of unqualified praise of much which they saw. And yet the grave has hardly closed upon the distinguished man who so eloquently defended the new practice at the expense of the old one, before it has come to this, that the practice of acupressure is almost unknown in the Hospital practice of London. We believe that the explanation of a good deal of this change of opinion is to be sought in the unfounded charges brought by the supporters of acupressure against the ligature. That these charges—comprising "the insertion of bits of dead flesh into recent wounds," with all the attendant horrors of consequent blood-poisoning—produced at first a grave feeling of mistrust in Paré's great discovery was not unnatural; but when this surprise was recovered from, and Surgeons began to see the fallacies and errors underlying the energetic attack upon their tried friend, the ligature, there was an almost necessary revulsion of feeling, and many, wearied by the mechanical difficulties of acupressure, and disappointed by its frequent failures, were glad to fall back upon the discarded thread. Others, however, now that attention had been fairly called to some drawbacks inseparable from the use of the ligature—as the occasional occurrence of secondary hæmorrhage on the separation of the threads, and the nuisance of the forced presence of foreign bodies in the wounds—looked out for some other simple method which should be free from these inconveniences. The revival of torsion by some of Sir J. Simpson's opponents in Edinburgh furnished a ready alternative, and forthwith many zealous advocates of acupressure became equally loud in their praises of torsion. Amongst these, Mr. Cooper Forster, of Guy's Hospital, was conspicuous as an earnest supporter of both methods in turn, and as a Surgeon whose eminence and experience give great weight to his practice. Mr. Cooper Forster has been singularly consistent in the matter, for he has now twisted every vessel, large or small, in all his amputations for four years past, having been previously as much wedded to acupressure for a considerable period. The result of his experience is remarkable, for we learn that he has not had a single case of secondary hæmorrhage during the whole of this period. And the list of vessels twisted includes many arteries of the first size, for he has amputated through the thigh nine times in the last six months, and there are four of his patients with twisted femorals in the wards at this time. We were, therefore, very pleased to have an opportunity of observing closely his *modus operandi* in an amputation of the leg lately. On Tuesday, February 28, a middle-aged man was brought into the theatre with a deformed, useless leg, which it was proposed to remove. The man was a very stout, big fellow, and his left leg, from old disease, was atrophied, the knee flexed and displaced, and the dorsum of the foot occupied by a large gangrenous and exceedingly offensive ulcer. This ulcer had been before healed, but now resisted all treatment, and the man, worn by the distress and inconvenience of the disease, gladly acceded to Mr. Forster's suggestion that he should lose his leg. The only question was whether the limb should be severed above or below the knee, and this point Mr. Forster decided in favour of the minor operation, on discovering, whilst the man was under chloroform, that there was a fair amount of movement in the joint. The operation was performed by two equal flaps, and, the bone being sawn through, the vessels were twisted one after another. The forceps employed were such as are familiar to our readers as torsion-forceps, but the blades were broader and stronger than those we have usually seen, and terminated in broad, well-rounded points. Each vessel was seized and rapidly twisted some six or seven times, the wrist turning with the demi-circuit some twelve or thirteen times, until, in fact, the operator felt something "give;" and the safe completion of the torsion was tested by seeing the twisted bit of tissue pulsating away in the face of the flap. This point is specially insisted on by Mr. Forster. It happened that in this case torsion was particularly difficult. The deformity of the limb made it not easy for the Surgeon to see the wound well, and the larger vessels, as so often happens in leg amputations, retracted considerably, and were caught with much trouble. It was just such a case as has caused many an operator to throw aside the forceps and call for the threads; but Mr. Forster, with more confidence in the method, persevered time after time, until the refractory vessels were secured, and the flaps might be safely sewn up. The impression made upon us by the operation, which, we were assured, presented very unusual difficulties in the application of torsion, was that with such experience as Mr. Forster's before us (and his is not exceptional, for we believe that Mr. Bryant has had equally favourable results in the same Hospital), and with the manifest advantage of having no threads remaining in the wound—although we confess to being slow to credit the ligature with the many evils attributed to it of late—Surgeons generally would do well to give torsion a genuine trial. We know that it is employed now in many Hospitals, but we believe that if operators saw more of its use they would be glad to adopt so simple and effective a substitute for a process which requires an extra assistant, and is certainly attended by some few evils from which torsion is apparently free.

EDINBURGH ROYAL INFIRMARY.

DEFECTIVE CUTANEOUS SENSIBILITY IN CASES OF PSORIASIS.

Professor Laycock has repeatedly called the attention of his class to the fact that in certain kinds of syphilis and psoriasis there is a defect in the sensibility of the skin—a trophic nervous debility—and that in this and other respects these constitutional diseases are to be classed with certain kinds of leprosy. Mr. Robert Lawson, one of Dr. Laycock's clinical clerks, lately made, at Dr. Laycock's request, a series of observations on the sensibility of the skin in cases of psoriasis, which we are able to publish. The following are the cases as reported by Mr. Lawson:—

Case 1.—J. D., clerk, aged 23; admitted into Edinburgh Royal Infirmary, November 25, 1870.

Disease.—Psoriasis inveterata.

History.—Seven years ago this patient was in Hospital for the treatment of an eruption resembling the present. Under the care of Dr. Laycock, the diseased condition gradually yielded to treatment. About three and a half years ago the present derangement appeared. The scalp was first affected, and in course of time the eruption extended continuously downwards till neck, trunk, and extremities were all implicated. Between the present and former attacks he enjoyed good health, and he can trace the recurrence to no particular cause. Investigation elicits a definite rheumatic family history.

Condition on Admission.—All over the scalp, upon the trunk, anteriorly and posteriorly, and over the legs and arms there are patches of an eruption presenting a broad red base covered to a great extent by white, hardened, adherent scales. Healthy patches of skin, surrounded by zones of diseased structure, are present on the left forearm, and on the legs and trunk. This insular condition is not the primary manifestation of the eruption, but has been artificially produced by domestic treatment. Investigation regarding the sensibility of the integumentary surface shows that there is a uniform and considerable diminution of tactile discrimination.

Treatment.—To meet the indications of nervous change, and to test the reliability of that principle of treatment, a sectional plan will be adopted—one-half of the body to be treated with blue-stone, the other with sulphur ointment.

Subsequent Observations.—The treatment with blue-stone has been very successful. A confirmatory therapeutical argument has thus been supplied, supporting the theory that nervous alteration constitutes an important part of the disorder under consideration. As no symptoms have arisen which in any way qualify the success of the sulphate of copper, its use is, in the meantime, to be continued. As the sulphur ointment has produced no marked progress towards a cure, it will be substituted by liquor arsenicalis in glycerine. Dr. Laycock observed that caution was necessary in using cupri sulphas. In a case of psoriasis of the forearm under his care, a paralytic condition of the arm followed upon its continued use. Subsequently the solid nitrate of silver was applied in front of the spreading margin of the patches, which assumed the appearance of *lepra vulgaris*, with the effect of arresting the spread at that point.

Case 2.—J. P., flax-dresser, aged 54; admitted into Edinburgh Royal Infirmary November 2, 1870.

Disease.—Psoriasis vulgaris.

History.—For a period extending over twenty-seven years this patient has suffered from occasional eruptions, corresponding in every respect to that of which he now complains. On five several occasions he has been admitted into the Royal Infirmary for the treatment of the same disorder, and, after varying periods of residence, has, on each occasion, been dismissed cured.

Condition on Admission.—His whole surface exhibits an almost uninterrupted expansion of diseased texture. This diffuse eruption consists of red basilar patches, surmounted by hardened epidermic scales. The sensibility of the skin, as tested by the æsthesiometer, is found to be considerably impaired.

Treatment.—Sulphur ointment, and the internal use of metallic tonics.

Observations.—The patient showed early and progressive appearances of improvement. The same treatment has been employed throughout the management of the case. At the present date the eruption is almost imperceptible.

Case 3.—H. W., mason, aged 30; admitted into Edinburgh Royal Infirmary November 10, 1870.

Disease.—Psoriasis vulgaris.

History.—The eruption made its first appearance two years ago. It broke out simultaneously on the scalp and on one leg. From these points it gradually extended till the whole cutaneous surface became involved.

Condition on Admission.—Skin almost entirely covered by an eruption which consists of large red patches, surmounted in most places by morbid epidermic scales. The application of the æsthesiometer shows a decided diminution of tactile sensibility.

Treatment.—Pitch ointment twice daily.

Observations.—The diseased condition soon underwent favourable modification. The scales fell off, and the redness of the exposed patches became gradually fainter. At present the case is rapidly advancing towards a satisfactory termination.

Case 4.—J. C., dock labourer, aged 36; admitted into Edinburgh Royal Infirmary November 8, 1870.

Disease.—Psoriasis guttata.

History. — The patient, when admitted, presented every appearance of depraved nutrition. His whole symptoms pointed to a specific origin, and the eruption which appeared on the second day after his admission strengthened the indication. This eruption consisted of a general crop of brownish-red papillary elevations, separated from each other by about half an inch of unaltered skin. In a short time each elevation began to present a delicate silvery scale upon its summit, and the nature of the eruption became defined.

Treatment.—Both the skin disease and the other morbid conditions indicated constitutional treatment. Small doses of bichloride of mercury were administered. The result was a marked improvement of the general state, and a gradual disappearance of the skin affection.

Observations.—It was observed that the eruption remained on the hands and forearms after it had disappeared elsewhere, and Dr. Laycock remarked that this was probably due to a difference in the trophic innervation of the hands and feet. On turning down the patient's stockings, the skin of the feet and lower leg and ankles displayed exactly the same eruptive condition as that of the hands and forearms.

A special integumentary examination, by means of the æsthesiometer, of these patients suffering from psoriasis authorises the following statements:—1st. That in this form of disease tactile sensibility is uniformly diminished. 2ndly. That the diminution is directly proportionate to the diffusion of the eruption. 3rdly. That the greatest reduction is exhibited by the diseased patches themselves. 4thly. That relative changes in the appreciation of heat, cold, and pain cannot, in psoriasis, be determined by such appliances as are at present available.

With regard to the first observation—that, in psoriasis, sensibility to touch is uniformly diminished—it requires to be mentioned that the decrease is a comparatively small one; but if the change can be called in question on account of its minuteness, a strong corroborative argument is supplied by its unmistakable uniformity. In all the cases examined the average decrease was equivalent to 1·6 lines of the æsthesiometer. For instance, in the case of the dorsum of the great toe, the normal distance at which the points of the æsthesiometer cease to give separate impressions is 7 lines. But in psoriasis the corresponding distance in the same situation averages 8·6 lines, showing a diminished sensibility of 1·6. In a similar manner the gross average has been ascertained. The observation that the diminution of tactile sensibility is directly proportionate to the diffusion of the eruption, might be naturally anticipated after remarking that the general reduction of sensibility is intensified at the diseased patches. In a very diffuse eruption the points of the instrument cannot be so adjusted as not to impinge upon abnormal surface. Possibly, however, the diseased patches and the diminished æsthetic power, instead of being respectively related or mutually dependent on each other, may both arise from a common atrophic condition. Whatever the relation may be, investigation shows that great comparative loss of sensibility is found in diffuse psoriasis vulgaris—the diminution averaging 2·2 lines on the æsthesiometer. In another case of the same kind there is an average reduction of 1·3 lines, notwithstanding the great advancement which has been made towards recovery. And a comparison of these two cases of psoriasis vulgaris shows that, at an earlier stage, both of them must have been characterised by greater tactile defect.

It is, perhaps, worthy of notice that, in the case of psoriasis guttata, where the points of the instrument can be placed between the diseased spots, the diminution of tactile sensibility is relatively least marked. This observation again indicates that if the eruption and the æsthetic change have not a relation of cause and effect, they are at least coincident, and most probably have a common origin.

The fact that the diseased patches are themselves least sensitive, is founded upon manipulation of the eruption subsequent to desquamation. In the case of psoriasis inveterata, the difference between the sensibility of diseased area and a corresponding patch of healthy skin is six lines. In the cases of psoriasis vulgaris, there is a difference of two or three lines. The accompanying table will show the modifications in detail.

Tabular View of the Modifications in Sensibility in Four Cases of Psoriasis under Dr. Laycock's care.

	Smallest Distance at which Two Points of Æsthesiometer can be separately felt, in—										Average Diminution of Sensibility.
	Fore-arm.	Palm.	Deltoid.	Between Scapulæ.	Anterior Surface of Thigh.	Posterior Surface of Thigh.	Leg.	Sole of Foot.	Dorsum of Great Toe.	Over Malar Bone.	
Normal state	1 inch	5′	1 in. 6′	1 in. 9′	1 in. 4	9′	2 in.	7′	7′	5′	Lines
P. inveterata	1 in. 3′	7′	1 in. 7′	1 in. 11′	1 in. 5′	11′	2 in. 1′	9′	9′	6′	1·4
P. vulgaris...	1 in. 5′	10′	1 in. 8′	1 in. 10′	1 in. 6′	12′	2 in. 2′	8′	7·50′	7′	2·6
P. vulgaris...	1 in. 2½′	8′	1 in. 7½′	1 in. 10′	1 in. 6′	12′	2 in. 2′	10′	10′	7′	1·3
P. guttata ...	1 in. 4′	8′	1 in. 7′	1 in. 10′	1 in. 5′	10′	2 in. 3′	7·50′	8′	6′	1·3

We add the following note supplied by one of Dr. Laycock's assistants:—

"*Psoriasis following upon Artificial Local Anæsthesia.*—In the course of some experimentation on local anæsthetics, I applied a mixture of chloroform and acetic acid to two portions of my left forearm. There was not any visible change in the parts, but loss of sensibility was immediate and complete over the entire surfaces to which the solution had been applied, so that the skin could be pinched and transfixed by needles without any pain. From one of the patches (A) to which the application had been longer, a slough of the surface of the derma was thrown off after a few days; the other (B) desquamated its cuticle. On both the resultant cicatrices, patches of psoriasis appeared, extending as far as the primary applications, and terminating abruptly at the margins. After about a fortnight, B was covered with pityriasis, and A showed several spots of psoriasis with intervening pityriasis. During this period both caused some itching. A fortnight later, B was desquamating furfuraceous scales, which gradually ceased, so that, in about six weeks from the experiment, it was quite recovered, yielding no mark. A gradually cast off all its crusts of psoriasis, and became covered with pityriasis, which ended as on B; but three months elapsed before the part was natural. No pigmentation or depigmentation occurred. Frequent microscopic examinations were made, but no parasitic organism was discovered. I was in good health at the time, but somewhat overworked (preparing for examinations), and was daily attending cases of disease in and out of the Infirmary. I had never before, nor have I since, had any cutaneous disease.—L. S. H., M.D."

SOOTHED TO DEATH!—Two infants have been poisoned in Manchester by "soothing medicine." In one case the mother had administered five drops of laudanum; in the other, some paregoric.

HEAT AS AN ANÆSTHETIC.—M. Sédillot, of Paris, by means of an electrical apparatus, raises the temperature of his instruments to a white heat, and then performs any Surgical operation, which is scarcely felt by the patient, as burns at that intense heat cause little or no pain.

POISONED WITH SWEETMEATS!—This sentence threatens to take its place among the verdicts of coroners' juries, if we may judge from what we hear of the sale of poisonous confectionery. A correspondent of the *Pharmaceutical Journal* writes—"A short time since I purchased some comfits of a most respectable tradesman in Oxford-street, and my suspicions being aroused by the brilliant colours of some of the sweets, I examined them, and found that chromate of lead, vermilion, and other metallic poisons had been used in their manufacture." The idea of this may well strike terror into the hearts of those who superintend the nursery. There is, however, one great safeguard, which may be condensed into the moral, Never buy sweetmeats which are coloured brilliantly. A still safer moral is, Never buy sweetmeats at all.

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Medical Times and Gazette.

SATURDAY, MARCH 11, 1871.

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THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS AND THE CONJOINT EXAMINATION SCHEME.

BY the narrow majority of one, the Council of the Royal College of Surgeons, at its meeting on Thursday, last week, passed a resolution to send back the conjoint scheme drawn up by the Committee chosen by the two Colleges and the Society of Apothecaries, and confirmed by the Comitia of the Fellows of the College of Physicians, to the Committee for reconsideration, on the ground—first, that the scheme in question did not perform a legal impossibility—that is, practically prevent any of the Medical authorities in England from granting registrable diplomas to persons who had not passed the Conjoint Board; and secondly, because the Committee had not invited the co-operation of the Universities in the appointment of examiners or assessors. The mover of this resolution was Mr. Simon, who may not unnaturally feel that if the conjoint scheme were perfected and carried into effect, the arguments for the re-introduction of the Government Medical Bill would be at least diminished, and so far the occupation of the Medical Department of the Privy Council, which that Bill foreshadowed, would be gone. We have never asserted that the scheme was perfect, but we maintain fearlessly that it is excellent as far as it goes—a piece of real reform, which will cover a large part of the ground over which any reform is necessary. With regard to the first objection—that it does not unite all the Medical authorities in a league not to grant registrable diplomas to persons who have not passed the Board—the supporters of Mr. Simon's resolution ought to know that no scheme can do this—nay, that it seems very improbable that any Act of Parliament can be at present passed which will do it. This was one of the rocks on which the Government Bill split last year. But the scheme at least will do thus much: It will prevent the three great Corporations, which between them license nine-tenths of the Medical men in England, from granting their most useful and popular diplomas and licences to persons who have not passed through the same portal of examination. If this be not a very real and very valuable reform, we should like to be told what it is! With regard to the co-operation of the Universities, we should be glad to see it obtained, but this is no reason why the acceptance of the scheme should be postponed for a single day. Fortunately, before the Council are finally pledged to Mr. Simon's resolution, the minutes of their last meeting must be confirmed, and an opportunity, therefore, will occur for rediscussing the whole matter. There are three courses open to the Council. First, they may reaffirm their acquiescence in Mr. Simon's resolution. This would simply throw back the Committee to the point from which they started, compel them to go through all their work again, and perhaps end in a declaration of hopeless difference of opinion and mutual antagonism. This, we say, would be the natural result of the final adoption of Mr. Simon's resolution. Secondly, it is open to the Council to refuse point-blank to confirm the minutes of the last meeting, and to take no further steps in the matter. This would save the conjoint scheme, the value of which is great, but it would leave the Council open to the complaint that they passed a scheme without any communication with the Universities, and that therefore that scheme, measured by a standard of uniformity, could only be looked on as temporary and incomplete. But a third course, and one which we most strenuously recommend, is open to them. Let the Council of the Royal College of Surgeons make sure of the excellent work done by the Committee, by refusing to confirm Mr. Simon's resolution and by adopting the scheme; but having done so, let it pass a resolution requesting the Committee to communicate with the three Universities of Oxford, Cambridge, and London—Durham, we think, may be left out of the question at present—inviting them to co-operate with the three Corporations, by naming assessors to be present at the examinations, and by making a regulation that their graduates, previously to receiving their M.B. and M.C. degrees, shall pass the Board. The Universities, it must be remembered, would lose none of their ancient privileges by such a regulation; for they would not be legally bound, as by Act of Parliament, to forego the granting of degrees to any but licensed persons; they would only voluntarily make a regulation with regard to their graduates, which they may rescind when they like, and by which they forfeit no liberty of action. We think it more than probable that the Universities would accept these terms, and that thus a truly national Board would be formed, without the interference of the Legislature or the dictation of any minister or officer of State. If they refuse, the offer will have been made, and the principle of uniformity will have been vindicated. After all, it is but "the idea" which is at stake, for the Colleges of Physicians and Surgeons could between them nominate every living man of eminence in Medicine and Surgery which the three Universities have produced. This, then, is the advice we have to offer: Let the Council of the College of Surgeons accept unreservedly the scheme worked out by the Committee as far as it goes; but let it also use its great influence to obtain the co-operation of the Universities. We see that a special meeting of the Council is called for Wednesday next, and we hope that some such plan as that we have now sketched will be adopted.

THE SMALL-POX EPIDEMIC.

FOR the first time for many weeks the Registrar-General records a slight diminution in the number of registered deaths from small-pox. For reasons assigned in a former article we must not hastily accept this as evidence of commencing subsidence of the epidemic. The total deaths registered from small-pox were 213, being fourteen fewer than in the previous week. After the distribution of the deaths in the Hospitals, it appears that the Eastern districts still stand pre-eminent for fatality; the order being—East districts, 63 deaths; South, 56; West, 41; North, 39; and Central, 14 deaths. The fatal cases show a decline last week in each of these groups of districts, except the West, where they were more numerous.

There is some reason for believing that the variations of the epidemic from week to week are influenced to a certain extent by atmospheric conditions, and more especially by variation in temperature. If anyone will take the trouble to look back at the tables furnished by the Registrar-General, he will at once see what we mean. Small-pox has an incubation of about a fortnight. Allow another week or ten days for the full development of the disease and fatal issue, and then compare the registered mortality from small-pox in London with the mean temperature as recorded three weeks previously, and a remarkable illustration of this relation may be noticed. Thus:

Week ending	Three weeks later—viz., week ending
Nov. 12, the mean temperature *fell* from 44·1° to 39·1°	Dec. 3, mortality *rose* from 41 to 60
Nov. 26, the mean temperature *rose* from 37·6° to 46·8°	Dec. 17, mortality *fell* from 61 to 44
Dec. 3, the mean temperature *fell* from 46·8° to 38·9°	Dec. 24, mortality *rose* from 44 to 82
Dec. 10, the mean temperature *fell* from 38·9° to 32·5°	Dec. 31, mortality *rose* from 82 to 110
Dec. 17, the mean temperature *rose* from 32·5° to 42·8°	Jan. 7, mortality *fell* from 110 to 79
Dec. 24, the mean temperature *fell* from 42·8° to 33·0°	Jan. 14, mortality *rose* from 79 to 135
Dec. 31, the mean temperature *fell* from 33·0° to 25·7°	Jan. 21, mortality *rose* from 135 to 188
Jan. 7, the mean temperature *rose* from 25·7° to 31·1°	Jan. 28, mortality *fell* from 188 to 157
Feb. 11, the mean temperature *rose* from 34·9° to 41·6°	March 4, mortality *fell* from 227 to 213

We do not wish to place too much stress upon these comparisons, but they are interesting and instructive, and may assist in forming an opinion as to the probable course which the epidemic is about to follow. Absolute temperature, although not without an influence, seems to have less to do with the amount of small-pox arising week by week than its variations; a marked fall of temperature favouring the spread of the malady, a marked rise of temperature tending to arrest it. Again we must regret the absence of an official record of attacks week by week; the lack of a registration of public sickness is depriving us of the full benefit which some might derive from the lessons of this remarkable epidemic. The Association of Health Officers are furnishing an imperfect return of public cases newly occurring; but it is valuable so far as it goes. We can expect nothing much better so long as the inspection of the books kept by Poor-law Medical Officers and public institutions is not a matter of right. The Metropolitan Health Officers are not yet everywhere furnished with the only information on which they can found a sufficiently early application of sanitary art for the arrest of such an epidemic as is now upon us. It is one of the penalties we pay for divided jurisdiction. Still it would appear that the epidemic violence of small-pox has been for two weeks abating considerably in Westminster, where it had been very severely felt. The greatest increase of public cases in any district on the list took place in Islington, where last week the number of cases was double that of the previous week. Of the several groups of districts, the Northern group last week shows on the list the largest number of cases—St. Pancras, Islington, and Hackney, adjoining parishes, with a total population (1861) of 437,424, giving between them 160 new cases; while St. George's, Hanover-square, and Westminster, with a total population of 208,736, gave only forty-nine new cases.

Dr. Crisp, in his paper, an abstract of which appears in our report of the proceedings of the Medical Society of London, raises two questions, which we cannot regard as unimportant. The first relates to revaccination. He considers that the statistics of small-pox demonstrate the liability of young children, under 13 years of age, to suffer from the disease out of all proportion to the adults, and hence that revaccination should be extended to them as well as to the latter in times of epidemic prevalence. We think that, apart from the numbers quoted from the Registrar-General's returns, there is something to be said in favour of this advice. A case was reported to us, the other day, in which an infant, who had, to our knowledge, been thoroughly well vaccinated about a year previously, had been successfully revaccinated. The operation was performed by a Medical man upon his own child as an experiment; and although it by no means proves that the infant would, if exposed to the contagion, have taken small-pox, it shows that there may be exceptional instances in which the power of developing vaccine, and therefore, probably, small-pox also (if the virus were introduced similarly by inoculation), is recoverable very quickly. The experience of the epidemic also shows that young children, although vaccinated, do take small-pox casually, and also that at various periods under 13 years they do develope normal vaccine vesicles on revaccination. Still we must add that, so far as their own protection from a fatal issue is concerned, children well vaccinated in infancy are, on the whole, safe. Ill-vaccinated children may die if they take small-pox; but this is only in small proportion to those attacked, when compared with children not vaccinated at all. But when we look at the question from a different point of view—namely, not in regard to the individual, but in regard to the arrest of the epidemic, and recollect that mild cases of modified small-pox may contribute to the spread of the epidemic, it does seem worthy of consideration whether it is wise to draw a hard-and-fast line of age below which revaccination need not be performed. The operation is so innocuous, and the public benefit that may be derived is so apparent, that we confess ourselves very much of Dr. Crisp's mind in this matter. Certainly we should not hesitate to revaccinate the children of all ages in a family or school into which a case of small-pox had chanced to drop.

The other practical question which Dr. Crisp raises requires to be dealt with more delicately. We refer to the use of lymph from adult subjects. So long as an adult vaccinifer is healthy, although lymph from such a source is not to be preferred when an infant arm is obtainable, there can be little objection to vaccinate from his vesicle, provided it be a primary vesicle, and of normal character. But we imagine this is not all that Dr. Crisp means. For the most part, the pocks upon the arm of an adult will be the result of a secondary, and not of a primary vaccination, and the question arises whether, under any circumstances, it is allowable to vaccinate from a revaccination pock. The directions issued to public vaccinators by the Privy Council prohibit altogether the use of revaccination lymph, and Mr. Simon, in his recent memorandum upon the subject, says that, "even when good vesicles result from revaccination, their lymph cannot properly be used for other vaccinations or revaccinations." Dr. Seaton also condemns it, on the ground that its use is apt to be followed by spurious vesicles, degenerating into sores, and by erysipelas; and in another place in his book he alludes to the mischief, positive as well as negative, which he has known to result from using the lymph from revaccinations. He says, "Several instances of this have fallen under my observation. The practice cannot be too strongly reprehended." Others, who believe in the communication of syphilis by vaccination, condemn it on the ground of the larger number of chances that there are in favour of an adult being syphilitic. Nevertheless, it is not to be forgotten that there are others who are not so exclusive in their views or in their practice, and that among these there are many experienced vaccinators. Thus, in some parts of the Continent, revaccination lymph has been preferred for the purposes of revaccinating adults; and Heim, an authority whose opinion cannot be ignored, seems to have thought that more frequent successes were obtained when the lymph for revaccination of adults was taken from persons who had good vesicles from revaccination on their arms, than when the lymph was taken from an infant. We have mentioned Dr. Seaton. What he says about the "selection of the lymph to be used in vaccinating" is this:—"The lymph must be taken only from perfectly healthy subjects and from thoroughly characteristic vesicles. No second-rate vesicles should ever be used to take lymph from. Babies are in general much better lymph-givers than elder children or adults." But there is no prohibition here of the use of revaccination vesicles so long as they correspond to the description given. We have mentioned all his allusions to the subject, and it is noticeable that he does not state whether the mischiefs he has observed have resulted when the vesicles of revaccination have been normal or only when spurious or injured.

Another recent writer, Dr. Ballard, expresses himself thus:—"The general opinion in the Profession is distinctly opposed to the use of revaccination lymph at all. I cannot help thinking that there is a little prejudice in this, based upon the commonly incomplete character of a secondary vesicle. I have, however, seen revaccination pocks as fine and as well developed as any primary pocks obtained from the use of lymph such as is currently employed; and I cannot see myself why, in such a case as this, the lymph taken at a sufficiently early date should not be availed of when infant lymph is scarce, as it sometimes is in epidemic seasons. I know that in 1863 revaccination lymph was, as a matter of fact, largely made use of in the lack of primary lymph. But no one with a proper sense of the responsibilities of his Profession would presume to vaccinate from a pock that did not present to the eye the perfect characters of the vaccine vesicle." Neither does this author notice among the causes of post-vaccinal erysipelas, etc., the use of revaccination lymph, although he mentions, we believe, every other cause to which it had been attributed by previous writers, or in published cases of the accident. No doubt unfortunate results may follow the use of the best revaccination lymph, as they may the use of the best primary lymph, but unless a statistical record be furnished, showing that they are more common (in proportion to the number vaccinated) in the former case than in the latter, the mere fact of their occasional occurrence can hardly be fairly put forward as absolutely prohibiting the use of a good characteristic revaccination pock; and, strictly speaking, this is all that Dr. Seaton has done. He has observed cases in which erysipelas, etc., have followed the practice, and, without telling us whether the pocks used were normal or spurious, perfect or injured—whether there was areola or no areola—nor yet the day on which the lymph was taken, he utterly reprehends the taking of lymph from revaccination pocks; and Mr. Simon adds to this, "even when good." But, for all this, revaccination lymph is used. We have been at some pains to inquire privately of several Practitioners, who are known as careful and experienced men upon this subject, and although they naturally, and we think properly, have abstained from making their results public, yet they have assured us that they have on several occasions used revaccination lymph from very perfect and characteristic pocks, not only without mischief resulting, but with the result of producing fine and normal vesicles. We may venture to say even more than this. We were recently in conversation with one of the veterans in the Profession, to whom we owe one of the most important discoveries in connexion with vaccination, and whose name is honoured throughout the world—than whom, perhaps, there is none whose opinion on the subject can be more valuable—and he informed us that he had frequently availed himself, at a pinch, of revaccination lymph, and with the very best results, not only for secondary, but for primary vaccination also; and that, when the vesicles are well selected, he has observed no difference whatever, either as respects appearance or course, between the pocks thus created and those produced from the primary vesicles upon an infant's arms. But he added—the revaccination vesicles selected should be perfect and characteristic, and the lymph should be taken rather earlier than usual, before a trace of areola appears.

Let us guard against misapprehension. We are discussing a scientific question—namely, whether revaccination lymph will produce normal pocks, and whether there is any special danger from its use when the vesicles are absolutely normal—and the verdict of science seems to be an affirmative to the first part of the question, and a negative to the second. And this verdict, if sustained, as we believe it would be by an extended experience, will be an inestimable relief to the minds of many conscientious Practitioners, who have not felt themselves warranted at any time or under any circumstances in breaking through a rule of practice which is sanctioned by the almost universal consent of the Profession, and is authoritatively laid down by our official guides. Nevertheless, it is to be kept in mind that the question is one rather verging upon the transcendental in practical Medicine. The cases in which it can arise are exceptional; and however true it may be that revaccination lymph may be used when properly selected and at the proper date with good results, and without evil ones, yet there can be no doubt that the preference should always be given to primary lymph from a healthy infant. Nor, indeed, do we wish to dispute the propriety of the ordinary rule of practice: to abstain from the employment of revaccination lymph. The rule is a good one. Rules of practice are made for the multitude, not for exceptionally careful and prudent men, and they are therefore drawn from general and not from exceptional observations. Nay, more—in framing them, the very suspicion that evil may occasionally result from a particular line of practice must be allowed more weight than would be accorded to it in a mere scientific discussion. We adhere to the rule, as a rule which should generally be observed. Still we hold that there is no scientific reason why revaccination lymph should not be availed of occasionally under the conditions mentioned by Dr. Crisp—viz.:—1. During an epidemic season (when, by the way, revaccination appears to be unusually successful). 2. When primary lymph cannot be procured. 3. When the vaccinifer is absolutely free from disease or constitutional taint. 4. (Most emphatically) When the revaccination vesicle exhibits in its course and appearance all the characters of a normal primary vesicle. 5. On condition that the lymph be taken about the sixth day, or before there is a trace of areola.

THE WEEK.

TOPICS OF THE DAY.

At the meeting of Governors of St. Thomas's Hospital on Thursday, the 9th, Mr. McCormac was elected Assistant-Surgeon to the Hospital. Mr. Barwell withdrew from the contest, which therefore lay between Messrs. McCormac and West. The ballot closed at three o'clock, when it was found that Mr. McCormac was elected by a large majority of votes. The nomination by the Grand Committee of Dr. Liebreich to the post of Ophthalmic Surgeon was confirmed by a unanimous vote. Mr. Wagstaffe's appointment by the Grand Committee as Resident Assistant-Surgeon was also confirmed.

Mr. Solly's resignation of his office of Examiner at the Royal College of Surgeons has left a vacancy in the Court, which the Council of the College will proceed to fill up on Wednesday next. The Council will not necessarily choose an Examiner from its own body, but may select from the general body of Fellows; but, on the other hand, a seat in the Council must certainly not be held to be a disqualification. Several probable candidates are mentioned. Amongst them are Messrs. Birkett, Curling, and Holden, members of the Council, and Messrs. De Morgan, Callender, Holmes, Power, and Wood. Any one of these gentlemen would prove undoubtedly an efficient Examiner, and some of them have had practice in the art at the University of London.

A deputation from the Poor-law Medical Officers' Association, and from the British Medical Association, had an interview with Mr. Simon, on Saturday last, on the subject of vaccination. Dr. Rogers, the President of the Poor-law Medical Officers' Association, said that the consolidation of vaccination districts had thrown too much work on one officer, and was unjust to the Medical officers who had discharged this duty, a number of whom had been dismissed to carry out the views of the Privy Council, and their work thrown upon those remaining. He explained at length and recommended the Irish system of vaccination. Mr. Benson Baker pointed out the facilities which the Poor-law Medical Officers have of acting efficiently as vaccinators—for, knowing where small-pox existed among the poor, they would instantly vaccinate all the residents of a house where it showed itself. Mr. Harding represented that the system of payment for results only in revaccination involved hardship, inasmuch as revaccination was most important as a test, and involved as much labour whether pustules were produced or not. He held also that stational vaccinators should be paid for all vaccinations performed by them at their stations, whether of persons in or out of the district. Mr. Simon said that he would reconsider the mode of payment for revaccination, with respect to which he thought a case had been made out, and also, he thought, there was a case for the payment for vaccination at stations of extra-parochial cases. We are glad that the department of the Privy Council which Mr. Simon represents is prepared to concede this. To make the payment for revaccination dependent on the complete success of the operation is, as every Medical man knows, as unjust as it is absurd, considering that in a large number of cases pustules cannot possibly be produced. Revaccination, however, is proved by the spread of the present epidemic to be essential to the immunity of a population.

On Friday, last week, there was a meeting at the Charing-cross Hotel, called by the British Medical Association, to hear a paper by Mr. Fairlie Clarke, and to discuss questions connected with the Medical relief of the poor. Dr. Heckstall Smith presided, and Sir Charles Trevelyan, Mr. W. H. Smith, M.P., Mr. Corrance, M.P., and some of the most active members of the British Medical Association were present. The general tenour of the speakers was in favour of making the poor more independent of public or charitable aid in sickness. Mr. Fairlie Clarke urged in his address the formation of provident self-supporting clubs as a remedy for pauperism. Sir Charles Trevelyan's speech was an echo of much that has been said in this journal. He said that the physical and moral evils connected with pauperism had mainly arisen from a suspension in some degree of the primeval law, "By the sweat of thy brow thou shalt eat thy bread." It had been suspended; for people in this city were born receiving relief; they were sent to school free; as they grew up, soup-kitchens and other agencies fed them; there was always free relief in sickness—and, in fact, from the cradle to the grave there were on all hands ready means of pauperisation. These vast charities which existed in London attracted people from all parts, and even from abroad, and the result was they overcrowded into this city, bred disease, and thus sowed the seeds which the Poor-law Medical Officer had to reap. We want, he said, a reform of our charities, especially of our Medical charities. He was in favour of the provident institutions proposed. Mr. Corrance, M.P., advocated the charging upon the Consolidated Fund of such expenses as Medical salaries and the cost of drugs. Mr. Smith, M.P., spoke at some length upon the chaotic condition of our sick-administration, as shown in the fact that not less than five departments, without co-operating with each other, had charge of something in connexion with vaccination. We trust that a thorough reform of the Poor-law Medical Service is at hand. The subject is attracting the attention of practical men, and Mr. Goschen's successor, Mr. Stansfeld, has before him a splendid opportunity for achieving distinction as a statesman and philanthropist, and, should he prove himself equal to the occasion, we are certain he will receive the active support of men of all parties in the House of Commons.

THE PROPOSED SMALL-POX HOSPITAL AT ISLINGTON.

We learn that, in consequence of representations made to them, the Asylum District Managers have abandoned the design of converting the old Islington workhouse into a Hospital for small-pox in its acute stage, and propose now to use it as a place for the reception of convalescents from the other Hospitals; thus liberating a certain number of beds in the latter which were occupied by persons who were merely detained until it became safe to send them home. The building is to be given over to them almost immediately. We congratulate future sufferers on this change: so much the better for their chance of recovery.

LEGISLATION AGAINST ADULTERATION.

The effect of any legislation based upon the ideas so ably enunciated in Dr. Letheby's interesting paper, probably would be that the public, finding they were protected against the use of deleterious combinations alone, would proceed to protect themselves against the minor evil of harmless mixtures, by setting up co-operative societies or exercising greater caution in the selection of their tradesmen. At present, they are invited to undertake an invidious task. Scarcely sufficient confidence would be placed by the public in the label of an ordinary dealer, and although the absence of a proper label attached to wholesome mixtures would be evidence of fraud, the difficulty would always be to define what was a proper label, and to inspire a public confidence in its assurance.

MR. FORSTER AND THE "LANCET" MEDICAL BILL.

The editor of the *Lancet*, accompanied by certain Medical gentlemen, has waited on Mr. Forster, to explain to him the various provisions of the *Lancet* Medical Bill. This was done by Mr. Brudenell Carter. They were supported by the presence of Dr. Anstie, Dr. Steele, Dr. Stallard, Dr. Glover, and Mr. Christopher Heath. Mr. Ernest Hart was also present. The gentlemen were introduced by Mr. Mundella, M.P., and, when they had expressed their views, Mr. Forster replied that "Their Bill was of a character to excite opposition, which would make the passing of the Bill hopeless, and they would have to educate up to it, not only the public, but the Profession, and that, so far as his information extended, the Profession did not agree with the scheme now laid before him, and that it had no backing. If it ever got into the House of Commons, it would have to reckon with the nineteen Corporations with which they summarily dealt. They seemed to distrust the Privy Council as much as the General Medical Council, and he could hold out no hope of Government support. Mr. Mundella would be able to inform them what chances such a Bill would have so introduced. He had understood that the Government Bill in its general features was considered as a boon by the Profession at large; and this had been confirmed to him by the statements of the British Medical Association. He was not a little surprised at being told the contrary. He thought it best to be candid; and he wished them good morning." Most London Practitioners will so far understand the proceedings as to thoroughly enjoy the joke.

ST. THOMAS'S HOSPITAL.—DR. DUCHENNE'S LECTURE ON LOCALISED ELECTRISATION OF MUSCLES.

Invited by the authorities of St. Thomas's Hospital, Dr. Duchenne, of Boulogne, delivered a very interesting lecture in the Museum theatre of the Hospital on Monday, March 6. Dr. Barnes, the Dean of the Medical School, acted as interpreter. He commenced by showing the action of the muscles of the hand, using, for the purpose of bringing out their action, a powerful galvanic apparatus lent by the National Hospital for Epilepsy. Mr. Wagstaffe rendered very material assistance to the Professor by demonstrating the action of his own muscles when stimulated by the induction coil. Dr. Duchenne showed admirably the movements obtained by stimulus applied to the different muscles, and even to the different bundles of compound muscles like the common extensor and flexors of the forearm. The results he obtained seemed to show conclusively that certain muscles have not been correctly named, and that others have very peculiar actions; but we do not think the majority of these inaccuracies of nomenclature or peculiarities in the action of muscle have been unknown or untaught in England—as, for instance, the action of the abductor pollicis, flexor brevis pollicis, interossei, and lumbricales. It was rather startling, however, when he showed the supinator longus to be a pronator, and the extensor communis digitorum to have no action on the second or third phalanges. After this, he showed the action of the deltoid and serratus magnus, as antagonists to one another, the deltoid acting more upon the scapula than upon the humerus. He concluded the very interesting lecture by an account of the results he had arrived at in determining the action of the intercostals. His conclusions from clinical and physiological grounds agreed entirely with those demonstrated only a few weeks before by Mr. Wagstaffe upon anatomical and mechanical grounds. Most anatomists are of opinion that the external intercostals are inspiratory muscles. The relative action of these muscles has been always a subject of controversy, some anatomists, as Haller, considering that the two muscles have a common action in the direction of the diagonal between them. Others consider the internal intercostals as depressors of the ribs. Cruveilhier was of opinion that the intercostals are not essential agents in elevating or depressing the ribs; he considered that they render tense the intercostal spaces. Dr. Duchenne considers both internal and external intercostals to be inspiratory muscles. Some photographs Dr. Duchenne exhibited of cases of muscular atrophy bearing upon the subject were particularly interesting. They showed the result of loss of power in the intercostals in one case, and of atrophy of the diaphragm in another.

THE HEALTH OF LIVERPOOL.

On Thursday, the 3rd inst., Drs. Parkes and Burdon-Sanderson commenced the inquiry into the sanitary condition of Liverpool which they were invited to undertake some time ago by the Corporation. Their opinion has been especially asked on the effect of the present disposal of ashpit refuse in levelling brickfields and filling up ponds, so as to construct foundations for subsequent houses; on the methods of construction, ventilation, and trapping of the sewers of the town, and the effect of injecting into them steam and hot-water; and on the substitution of trough and syphon water-closets for privies and cesspits. They have also been requested to give their views on any other matters which might be considered by them to affect the general health of the town.

In the week ending Saturday, 26th ult., there were 129 deaths from small-pox in Liverpool, being an increase of twenty-four on the number in the previous week. Of the 129, fifty-nine were reported vaccinated, fifty-eight unvaccinated; and of twelve no return as to vaccination was made.

The *Liverpool Mercury* of Wednesday last says that the mortality from small-pox is rapidly decreasing, the number of deaths in the week having fallen from 129 to 89.

TESTAMENTARY CAPACITY.—AMERICAN LAW RELATING TO CAPACITY AND EVIDENCE IN WILL CASES.

The question of testamentary capacity is one which must always give considerable trouble to lawyers and jurors, and every new phase of it must necessarily be interesting even to the general public, and especially to the Medical section of it. An American decision on this subject has recently been imported from the Supreme Court of Michigan, and is an opinion of Mr. Justice Christiancy. It is thus stated—

> "The question in this case was upon the validity of a paper claimed by the appellers as the last will and testament of Thomas Paterson, deceased. The main ground on which its validity was assailed was that, at the time it was executed, the testator was not of sound mind, but that his mental faculties were so enfeebled by disease that he was incapable of understanding his relations to others, the particulars of his property, etc. It was not claimed that the testator had ever exhibited any symptoms of insanity, or any weakness of intellect after he was attacked with the disease of which he died, which was pneumonia, or pleuro-pneumonia. This attack was experienced some two days before the will was made, and he died on the night of the succeeding day. The will was drawn up in the presence of the testator, and duly witnessed and executed. The witnesses were a lawyer, named Clark, and Dr. Abbott, who on that morning saw him for the first time. He remained there during most of the day, and on the next day, about noon, another Physician was called in. The contestants offered the opinions of several Physicians who had not seen the testator during his illness, and the main question arose as to such testimony. It was held that no question could be put to such a witness, which allowed him to decide upon the truth or falsehood of any evidence in the case, as this is entirely a question for the jury. The facts which are to be assumed by the witness in giving his opinion must be distinctly stated and brought before the jury, so that, if they negatived these assumed facts, they may understand that the opinion is no longer of value."

FROM ABROAD.—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR—CHLOROFORM AS AN ANTIDOTE TO STRYCHNIA.

Professor Billroth commences his twelfth letter with some account of the mortality of the wounded that came under his notice. During the first week after the battle of Weissenburg, of the large numbers arriving and being evacuated it was not possible to keep any exact register. After this, he and his assistant, Dr. Czerny, took the cases of 220 patients, having severe wounds, and of these seventy-nine, or 35·9 per cent., died. This is an enormous mortality, but not greater than experience in military Surgery would lead one to expect. Of course its amount is, upon the whole, principally determined by the nature of the injury received, but there still always remains much to be done which may increase the chance of life. That gunshot wounds of the head and abdomen for the most part prove fatal, and that many cases of injuries to the chest, pelvis, and lower extremities will die, whether operations have been performed or not, is admitted by military Surgery. Pleased may we be for every step that enables us to vanquish by the weapons of science any of the border-land between the dead and the living; and that we are entering on this struggle with renewed courage is itself a vast progress. The greatest trouble for military Surgeons of former times was that the simplest cases and the slightest wounds did badly in their Hospitals—patients with mere flesh wounds, and these in a state of healing, dying from erysipelas, Hospital gangrene, or diphtheria. These affections became endemic, not only in the Hospitals, but among the population of the towns, and gradually increased in severity. Such endemic or epidemic outbreaks of these "wound-diseases" have never occurred in any of the Hospitals inspected by Professor Billroth, and this is a progress that can only be appreciated by those acquainted with the ravages committed by erysipelas and gangrene described by the old military Surgeons. The necessity of fresh air as one of the most important factors in the life of healthy and sick is accepted now both by the Profession and the laity; and the ventilation question, as regards Hospitals and schools, the importance of sewerage, and many other sanitary maxims, have at last penetrated the minds of the elders of our towns. This popularising of sanitary police has admirably paved the way for the erection of Hospitals by our aid societies; and the wounded, truly, have to thank the men who have so untiringly laboured to enlighten public opinion on these matters. The Doctors and architects, upon whom devolved finally the providing accommodation in Hospitals with sheds, or in houses, found their working committees prepared with some knowledge of these matters, and ready to lend a willing ear. The rapid distribution of the wounded by means of the railways was as important as the providing them with erections in well-ventilated localities. If all the wounded had to be treated, until their recovery, near the scene of action, how could suitable habitations be found or erected with sufficient rapidity? and in case of accidental "wound diseases" breaking out, how numerous would be the subjects of infection among patients who are now distributed over all Germany.

Referring to these "wound-diseases," Professor Billroth observes that he had not a single case of erysipelas or hospital gangrene in his Hospital at Weissenburg. This fact is of great etiological import as regards these affections, speaking strongly for the specific nature of their cause—*i.e.*, that they are generated by a contagious miasm spreading from case to case. If hospital gangrene were due to defective care of the wounded, to improper applications of dressing and bandages, etc., in a war in which the wounded are transported in all kinds of most unfavourable positions, plenty of it would be met with. From his observation of this disease, which only now and then is met with in the Vienna General Hospital, Billroth is convinced that it is conveyed from case to case, although we are not always able, any more than in measles, scarlatina, or small-pox, to trace the route which the contagion has followed; and the question whether this last disease may not occasionally become developed afresh, is as little settled as it is with regard to hospital gangrene. At Mannheim and Darmstadt, two or three sporadic cases occurred; but by isolating the patients during treatment, all spread of the disease was prevented. These cases occurred in open, well-ventilated, not overcrowded sheds. It is thus evident that Hospitals, as such, are not the cause of the gangrene, although if unskilfully treated it may rapidly spread in them. As all kinds of wounds, in every stage of treatment, may be attacked by this gangrene, the condition of the wound bears no etiological relation to its occurrence—the disease being, in fact, communicated from without. In the two or three cases met with, the source of the infection could not be traced, although it was suspected that it might have been derived from charpie coming from a Hospital in which the gangrene existed.

Professor Billroth now holds similar views concerning *erysipelas*, although the poison of this is very different from that of hospital gangrene. Formerly (*Archiv für Klin. Chir.*, B. ix.), he was of opinion that this disease might be generated by the decomposition of the putrefying blood remaining in the wound, giving rise to a septic erysipelas as distinguished from the infective form. Since, however, he has put cleanliness and disinfection fully into force, he has ceased to see septic erysipelas, only meeting with the infective form supervening on granulating wounds—the retention of decomposed blood or secretions giving rise to simple phlegmon. True erysipelas may occur at any stage of any wound, having nothing whatever to do with the healing process, the erysipelas poison being always an accidental importation from without. The fact that no cases occurred among the wounded at Weissenburg, and very few in the other Hospitals, shows that it could not arise from the mere condition of the secretions; for where could these be more disordered than during the healing of gunshot wounds, especially those of the joints? The immediate isolation of these few cases, and the good ventilation of the sheds in which they occurred, prevented any spreading of this fatal wound disease. In crowded civil Hospitals, it can scarcely be extirpated during the entire year, as it is always slipping in again, either from without, through the numerous cases of erysipelas of the head and face, or from the unavoidable intercourse between the different wards of the Hospital. We can get, indeed, a better mastery over Hospital gangrene, its contagious *materies* being seemingly less volatile than that of erysipelas. In the latter, the contagion does not seem to be principally spread by the dressings employed, as in gangrene, but also by means of the attendants, and perhaps, also, from a distance by the air. In a note, Professor Billroth states that he has been informed that, after he left Mannheim, numerous cases of erysipelas appeared in the crowded hospital sheds, many of which were of bad character, and fatal. It is obvious that the sheds *per se* are no protection against the disease, and as soon as cases occur they should be isolated, or, better still, the infected shed should be abandoned. These sheds also should not be too large, as they are then more convenient for erection, and a greater number of them are at disposal, one or more remaining unoccupied for the reception of patients while their own sheds are undergoing cleansing.

During the present campaign, Professor Billroth has met with a wound-disease which he had not seen before, and which he terms "diphtheritic phlegmon," or "diphtheritic infiltration." He relates three cases in which the diphtheritic appearance occurred soon after operations, and was speedily followed by fatal collapse. The entire muscular structure of the part becomes hard and stiff, from an indurated infiltration, the surface of the wound being of a pale grey. The affection is especially distinguished from gangrene by an absence of any rapid increase of the ulcerative process and of inflammatory redness in the vicinity, the surface of the wound exhibiting a lardaceous whiteness, and not the greasy pulpousness of hospital gangrene. The broad, hard infiltration so soon following the operation, it might seem to be due to contagion by means of the dressings employed, but this is hardly probable. In its sporadic form it seems especially to affect the subjects of septic or pyæmic disease, and perhaps the existence of a certain condition of the secretions inclined to coagulation may favour its production.

In only one patient had Professor Billroth opportunity of observing trismus or tetanus, and even in this case, so profuse was the suppuration that it would have readily explained death, without the trismus. His assistant met with three cases, with like abundant discharge. From former close observation of the disease, he is of opinion that cases of trismus, or tetanus, do not, as has been supposed, arise from traumatic neuritis ascendens. The fact that the disease is not connected with any particular condition of the wound, but may occur in connexion with good or bad suppuration, deep or superficial, large or small, or even healed wounds, renders it probable that it originates from the importation of some external agent.

Dr. Gobrecht, Professor of Anatomy in the Medical College of Ohio, has a case in the *Transactions* of the Pennsylvania State Medical Society (an abstract of which is given in the *Boston Journal* for December 15), which, although defective in some of its details, is of considerable interest. He was called on December 5, 1867, to see a man of about 20 years of age, who was taken suddenly ill. He found him in a state of profound repose, with regular but rather laboured breathing, bordering on stertor; the pulse was full, and pretty regular, though not forcible. He was insensible, pinching and shouting making no impression on him, and he could not swallow. The first impression was that he was suffering from poisoning by opium, but on examination the pupils were found dilated. The nature of the poison probably taken being uncertain, it was determined to keep up respiration by aid of an electro-magnetic machine while this was eliminated from the lungs. Changing the position of the patient from his back, on which he had been lying for several hours, to his side, a corked bottle containing a small quantity of fluid with a few shining crystals was discovered. A hasty analysis disclosed that this fluid was a saturated solution of strychnine in chloroform, with crystals in excess; and the calculation was made that, if the bottle had been full when its contents were taken, it must have contained an ounce of chloroform, with at least fifteen grains of strychnine. An hour elapsed before the electrical machine could be brought into operation, the patient continuing "in the same quiet condition, without a single strychnine symptom, though somewhat depressed, and evidently anæsthetised, which state the analysis of the fluid seemed to throw some light upon." Electro-magnetic currents were passed regularly from the nape of the neck to the pit of the stomach, and continued for more than hour. During this time sensation and consciousness gradually returned, the patient recognising those about him, and sleeping, with brief intervals, tranquilly. From this time he gradually recovered, and on the 11th was removed to his distant home, the journey being reported to have been attended with insensibility which lasted thirty-six hours. When he took the poison he was in custody of the police on some charge, and after his recovery he admitted having swallowed a mixture of chloroform and strychnine, which he had obtained prior to incarceration.

"It would thus appear that the patient had taken before I saw him seven-eighths of an ounce of a saturated solution of strychnine, with crystals in excess, in chloroform, both by inhalation and ingestion, without any other result than complete and prolonged anæsthetisation, and some temporary subsequent numbness, with no known injurious consequences after two months had elapsed. The case is reported as a contribution to toxicology, somewhat peculiar, as the *strychnine effects seem to have been destroyed from the beginning.* It is therefore, perhaps, more marked, as far as the antidotal property of chloroform is concerned, than those quoted in the 'United States Dispensatory,' twelfth edition, 1855."

In corroboration of the antidotal effects of chloroform in strychnine poisoning, Dr. Atlee relates the following case:—He was called, August 1, 1857, to a man 60 years of age, of herculean frame and great muscular strength, who was labouring under violent spasms. Tried on a criminal charge, under an erroneous impression that he had been convicted he was observed to drink what was supposed to be poison. He obstinately refused to take remedies of any kind, and when seen afterwards by Dr. Atlee was labouring under violent tetanic spasms. With his closed jaws, full set of teeth, and great muscular strength and determination, the application of the stomach-pump was impossible, and chloroform was employed by means of a folded napkin applied to the mouth and nostrils. This he tore away, and it was not until he was held down by several persons that the chloroform could be administered. In a few minutes after this it produced its effect, the whole muscular system becoming relaxed, and the patient remaining for ten or fifteen minutes perfectly quiescent. As soon as he was restored to consciousness an entire change in his state, both moral and physical, had taken place. The spasms had left him, his countenance was calm, and he complied with every request. He took an emetic which completely evacuated the stomach. The fact of his stomach containing a portion of his dinner when he swallowed the strychnine (twenty grains of which he had purchased) probably prevented its rapid absorption. From the period of the inhalation he continued to do well, complaining of nothing but weakness, and the next day he was enabled to appear before the court.

THE EXPENSES OF CORONERS FOR THE COUNTY.

MIDDLESEX SESSIONS.

The report of the Committee of Accounts and General Purposes was presented, which recommended the following coroners' accounts for payment:—Mr. Humphreys, 257 inquisitions, £407 8s.: Dr. Lankester, 251 inquisitions, £644 14s. 6d.; Dr. Diplock, 80 inquisitions, £178 19s.; and Mr. Bedford, 28 inquisitions, £54 18s.

Captain Morley, in moving the adoption of the report, said he wished to call the attention of the court to the fact that, although Dr. Lankester had held six inquests less than Mr. Humphreys, he had claimed £174, as expenses, more than Mr. Humphreys, although, as far as he was able to discover, the circumstances under which the inquests were held were much the same, and it was only to be explained that Dr. Lankester put in motion the most expensive machinery he possibly could; for while the inquests held by Mr. Humphreys averaged, for expenses, £1 16s. 6d., those held by Dr. Lankester averaged £2 11s. 4d.

Mr. Northall Laurie remarked that the reason of this was that one was a Doctor and the other was a lawyer. He found that inquests were held in cases of persons dying of small-pox, which was the effect of electing a Medical coroner. Instead of confining them to criminal cases, there was an unlimited supply of post-mortem examinations, and one reason for this was that the beadle got half-a-guinea out of the two guineas allowed for making them.

The Chairman said that, comparing the present with the past year, there was an increase in the coroners' expenses of no less a sum than £840.

Mr. H. Pownall said that evil arose from the very objectionable way in which coroners were elected, for they would be sure to take some means for reimbursing themselves for the expenses they had incurred in their election.

The subject was referred to the Parliamentary Committee, to take such steps as they might suggest in reference to the Coroners Bill at present before Parliament.

⁂ Is it true that the beadle gets half-a-guinea out of the two guineas allowed for a post-mortem examination? The mode of election to coronerships is bad, and the coroner's court altogether an obsolete institution; but what it does should be done efficiently, and this cannot be without post-mortem examinations.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	Week ending Feb. 18.			
	Feb. 18. Cases.	Feb. 25. Cases.	March 2. Cases.	March 2. Sent to Hospital.
West—				
Chelsea	10	12	?	—
St. George's, Hanover-square	28	14	16	3
St. Margaret's and St. John's, Westminster . . .	100	47	30	12
St. James's, Westminster .	14	8	3	5
North—				
St. Pancras	?	64	62	?
Islington	36	31	62	28
Hackney	?	30	36	14
Central—				
City of London	?	20	22	5
St. Giles's-in-the-Fields .	?	10	?	—
Holborn	14	5	2	1
St. Luke's	?	?	20	11
East—				
Whitechapel	31	31	?	—
Poplar	?	?	9	5
South—				
St. Mary's, Newington . .	25	8	16	1
St. Olave's, Southwark . .	?	4	2	—
St. George-the-Martyr, Southwark	?	3	?	4
Bermondsey	?	20	15	2
Lambeth	18	28	12	7
Clapham	?	5	28	2
Battersea	?	14	?	—
Wandsworth	?	5	4	?
Putney	—	—	—	—
Streatham	?	?	1	1
Camberwell	?	5	26	3
Greenwich	?	—	2	2
Lewisham	?	2	1	?
Plumstead	?	4	1	—

Discovery of Roman Hot Springs. — A leakage having occurred in the hot springs of the King's-bath, at Bath, some excavations have been made in Abbey-place, with a view of discovering the cause. At a depth of twenty-two feet from the surface, two new springs have been discovered, yielding at least twenty gallons per minute, at a temperature of 110°.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XI.

By J. F. CLARKE, M.R.C.S.,
For nearly forty years on the Editorial Staff of the "Lancet."

Discursive Writing—Choice of a Profession—A Medical Philosopher—Medical Botany—Establishment of the Police Force—A Police Surgeon—Murder of "the Italian Boy"—The Anatomy Act—The Old Resurrectionists.

Mr. Tristram Shandy makes no apology for the discursive nature of his style in his "Life and Opinions," and is content to wander on in his narrative from "grave to gay." Following the example of that illustrious writer, I have in these papers formed no particular plan for my guidance. Though fully impressed with the force of the rebuke conveyed in the exclamation of Horace, "*O imitatores, servum pecus!*" I must continue to adhere to my no-system mode of writing. It has this advantage to the writer—that it enables him to write that which comes uppermost, and, as it were, on the spur of the moment; and the reader is not, or may not be, wearied by a too elaborate essay. At all events, as I wish to make every paper as complete as possible in itself, the reader can follow or not, at his will, the lucubrations here published. Like my uncle Toby, I have no desire to "puzzle my brain with abstruse thinking," or to annoy the reader by trying to unravel what I have so thought. Something instructive and interesting might be written on the circumstances which influence a boy or man in the choice of a profession. From some little experience in this subject, I am doubtful whether "accident" is not often more at work in the matter than any plan of action devised and steadily carried out. It seems questionable to me whether Cowper was entirely right in his observation—

> "God gives to every man
> The virtue, temper, understanding, taste,
> That lifts him into life, and lets him fall
> Just in the niche he was ordained to fill."

This seems scarcely compatible with the fact that, if we have reverend divines, we have irreverent ones also; and we have had judges good and great as Hale and Mansfield, and as wicked and as mean as Jeffreys. Still, accident, or "Providence," or some cause undefinable or undefined, does seem to place men often in the right place, in spite of all preconceived wishes or ideas. Had Fergusson been a town boy instead of a shepherd's son, it is doubtful whether he would have been one of the most profound and original of astronomers. Clive became a great general and statesman from "accident." Cases without number might be cited in illustration of the proposition enunciated above. Well, what has this to do with my paper or *my* career? I may answer, little or nothing, except that, "magnis componere parva," it may have a certain interest to all of us.

I entered the Profession of Medicine because our family Doctor took some fancy to me, and I a great fancy to him. He was one of the old school, in practice before the Act of 1815, and was contented to style himself "apothecary and man-midwife." He was a kind, genial, fatherly man, and I was imported into his house and surgery "on liking," for apprenticeship to him. Unfortunately, his large-heartedness was *too* large for his means, and he succumbed to misfortune, or rather to unselfishness, and he failed in practice, and I was obliged to seek some other "master." In this dilemma, my uncle, who was connected with the *Sun* newspaper, which, after a career of nearly a century, ceased to exist only last week, took me one morning to see a friend of his, with the view of placing me out. This friend was John Churchill, late the publisher of the very serial in which these papers are now being laid before the Profession. Churchill, then a young man, had established himself as a Medical publisher and bookseller in Leicester-square. He occupied at the time (1828) the east side of the shop now Ward's, the well-known invalid's chair and carriage manufactory, on the north side of the square. I shall not easily forget the awe with which I was inspired on entering his presence. He questioned me minutely as to my ability to "assist" in an open surgery. Could I make pills and plasters? could I translate prescriptions and dispense them? The answers being satisfactory, I was forthwith given a letter of introduction to Dr. John Stevenson, then in practice, or rather professing to practise, in High-street, St. Giles's, or, as it was more euphoniously styled, "Bloomsbury." Here, in a little open shop, retailing pennyworths and prescribing eighteenpenny mixtures, lived one of the most remarkable men of the time. He was the senior editor of "Stevenson and Churchill's Medical Botany," was a profound naturalist, an eminent scholar, and, like William, in "Black-eyed Susan," "played upon the fiddle like an angel." He was a man of very eccentric habits, and a bachelor. He spent most of his time at Coombe Wood, Hampstead Wood, or some of the woods within a few miles of London, collecting botanical or entymological specimens. He never rode anywhere, never spent a shilling in carriage-hire, and was most abstemious. His habit was to breakfast about eight, which he always did in his shirt-sleeves, to save his coat. Except in winter time, he was without his coat in the evening. He would leave home about eleven, returning at four or five with his specimens, and would spend some time in arranging them, placing the grubs in flower-pots, etc. He would devote part of the evening to reading, or writing his works, and usually ended the day with a long spell upon the violin. He took but two meals a day, and these consisting of the plainest dishes. Our conversations were not very lively. We seldom met but at meal-times, and at dinner one source of his astonishment, if not his annoyance, was that I required bread in addition to potatoes or other vegetables. He was a handsome, fair man, upwards of six feet in height, strongly built, and upright as a dart. He had no views or sympathies beyond the sciences he cultivated, and was quite indifferent to the outer world, whether political or social. He lived to a great age, and died only a few years since. My continuance with him was only for a few months. During that time I was intrusted with taking to the artist who illustrated the "Medical Botany" specimens of plants and flowers, and giving him instructions respecting them. My leisure time, which was far too great, was taken up with reading, writing, and studying the numerous specimens of my master. His co-editor in the work was a very different man. James Morss Churchill, then in the prime of life, was in a large and lucrative practice in Park-street, Grosvenor-square. He was of genial and affable manners, and "cut out," by appearance, manners, and acquirements, for a "Doctor." But he erred on the opposite side to his friend Stevenson. Churchill was generous, even extravagant, and made his botanical excursions pretexts for a day in the country—a drive behind "a dashing bay," and a dinner at some tavern or hotel, from which he returned late in the evening. The work to which allusion has been made, "Medical Botany," was published by John Churchill in monthly parts, price 3s. 6d., and was illustrated by copper-plate engravings coloured from nature. There had been no work of the kind up to that time which could bear comparison with this, either as regarded its typography, or the beauty and truth of its illustrations. It was the first work of any consequence that John Churchill published; but it afforded early evidence of the enterprise and spirit which have since characterised his career. On leaving Stevenson, with whom I found it impossible to agree, I was afterwards bound apprentice for five years to Mr. Charles Snitch, a Surgeon in general practice in Brydges-street, Covent-garden. His practice, when I joined him, was small but select. It is curious, however, that, even so late as that (1828), he had not a single patient on his books who did not pay for Medical advice and attendance by the quantity of physic sent in to him; and the Christmas bills contained every item as elaborately set forth as in a lawyer's or carpenter's bill. No more vicious system of payment could have been devised, either as regarded the welfare of the patient or the position and comfort of the Practitioner. Fortunately for all engaged, the "system" is now all but a "thing of the past," and never can exist again as it once existed. I had a good deal of time on my hands, was very much confined to the Surgery, sometimes not leaving the house for weeks together. I had, fortunately, the run of Cadell's books—the then representatives of the Blackwoods in London—and was seldom without some works of interest to read. Cadell's shop was in the Strand, facing Catherine-street, and was conducted by a kind-hearted old gentleman, named Buckman, a friend of my uncle, who never thought it a trouble to change my volumes as often as I pleased, as if I had been a subscriber to a library, instead of being merely a recipient of his unselfish kindness.

I was soon, however, destined to be more occupied. In 1829 the metropolitan police was established by Mr. Peel, and my master was appointed by Sir John (then Mr.) Fisher—Superintendent-Surgeon to the F division of the force. This division, which included most of the theatres and some of the worst and lowest neighbourhoods, had from time immemorial been the roughest and most "larking" part of London. It was the scene of most of the exploits of Tom and Jerry, and from one week's end to another, particularly after dark, was fruitful of riots, street-fights, pickpocketing, and the lowest debauches. At that time the public-houses were allowed to keep open all night, and even on Sundays were only closed during the hours of "divine service." It may readily be conceived what a frightful state of things prevailed, particularly as there was no regular police force, the "Bow-street runners" devoting themselves to the detection of crime, and the old watchmen—the "Charlies"—being all old men, and quite incapable of quelling a disturbance or taking an offender into custody. Of course, the new police in this neighbourhood were regarded in no friendly spirit, and many were the wounds and contusions which we had to attend to in consequence. The duties of the police Surgeon in this district were by no means pleasant; he had to deal mainly with two sets of men—one "fresh and green from the country" the other the old Bow-street "robin redbreasts," who had been incorporated into the force. The first were the fools, the other the knaves. The fools often shirked duty from fear, the knaves from gaiety or worse. It was necessary, if a police officer were taken ill and unfit for duty in the night, for him to present himself to the Surgeon, no matter what the hour, and get from him a certificate stating that he was "unfit for duty." During the first few months of the establishment of the police, these calls became so numerous as to become a perfect nuisance, and we were obliged to exert great diligence and severity to prevent the plea of sickness being abused; as it was, it was very difficult to prevent cheating and malingering.

During my apprenticeship, the murders of Burke and Hare in Edinburgh had been imitated in London by Bishop and Williams. These worthies had carried on the traffic in murdered bodies, it is believed, for a considerable time. Their career was brought to a close by the murder of an Italian boy, whose body they had taken to King's College to sell. The present Professor Partridge was then Demonstrator of Anatomy in the College. His suspicions as to the body and the men were aroused by some appearances he observed, and he accordingly told Bishop and his companion to call for payment the following day. In the meantime, investigations and examinations were made, and the men, on presenting themselves, were arrested; they were eventually tried for murder, convicted, and executed. I well remember seeing the body of Bishop on the dissecting-table at the Little Windmill-street School. As an inquest was ordered to be held on the boy, the body was removed to the Covent-garden watch-house—a miserable hole, long since taken away, but then situated at the south side of the portico of Covent-garden Church. The duty of examining the body fell on Mr. Wetherfield, then, and still, a Surgeon, residing at the corner of Southampton-street. The others present were—Mr. Mayo, then Lecturer on Anatomy at King's College; Mr. Partridge, his Demonstrator; Mr. Beaman, parish Surgeon; his assistant, the late D. Edwards; and myself, as the representative of the police Surgeon. The day selected for the post-mortem examination was Sunday. It was extremely hot, and the sun full upon the little room on the first floor, where we were assembled. I well recollect most of the incidents of the affair, which lasted a considerable time. The boy's teeth had been removed for sale to a dentist, and with this exception there were no external marks of violence on any part of the body. The internal organs were carefully examined; there was no trace of injury or poison. Mr. Mayo, who had a peculiar way of standing very upright with his hands in his breeches pockets, said, with a kind of lisp he had—"By Jove! the boy died a nat*h*ral death." Mr. Partridge and Mr. Beaman, however, suggested that the spine had not been examined, and after a short consultation, it was determined to examine the spinal column. Upon this being done, one or more of the upper cervical vertebræ were found fractured. "By Jove!" said Mr. Mayo, "this boy was murthered." To Mr. Partridge and Mr. Beaman is, I think, due the discovery of the murder. It appeared that it was the custom of the murderers to strike their victim on the upper part of the spine, and when insensible to place him head foremost in a waterbut. Forty years, nearly, have elapsed since that day, but I have so vivid a recollection of it that I almost feel, on reflecting upon it, the terrible weakness I experienced, the want of food, and the then horrible task which was imposed upon Edwards and myself of sewing up the body when the rest were gone! Of the six who were present on that day, four are still alive; two—Mayo and Edwards—are gone. Of the four remaining, if they have got somewhat older, they at least retain some of their youthful fire, some of their wonted energy. With the trial and execution of Bishop and Williams, the system of "Burking" came to an end; but there is too much reason to believe that it was carried on to a very great extent in London. Many persons had been missed, and were never afterwards heard of; it was naturally supposed they had been murdered and their bodies sold for dissection. And here it may not be out of place just to say a few words respecting the position of the anatomical schools, teachers, and students, previous to the passing of the Anatomy Act. Nothing could have been more unsatisfactory and disgraceful to us as a civilised nation. The outrages against decency, the misdemeanours, which the law was compelled to wink at, continued long after the necessity for a change had been demonstrated. The low ruffians who acted as "resurrectionists" were, to a certain extent, necessary evils, but they were the lowest of the low, and would stop at nothing to obtain their ends. He who recollects the passing of the Anatomy Act will remember how, for three or four years after, he was frequently in the evening waited upon by an ill-looking rascal, who solicited assistance. "I was one of them, sir," he would say, "whose lost their work by the Anatomy Act." One could scarcely refuse such an appeal, seeing how much we were indebted to the applicant. This kind of application died out in time, and it is now probable that not a single "resurrectionist" is in existence. But it is awful to contemplate the amount of crime of a worse kind which must have been committed. Wretches who held human life as a mere marketable commodity must, to have lived, committed many murders. Even now the Anatomy Act is imperfect. The inspector should have more power conferred upon him; so that the supply of bodies, under proper regulations, should be equal to the demand. No one could have carried out his duties with more energy and prudence than the present inspector; but he is hampered in his efforts, and thwarted in his endeavours to make the supply sufficient. Of late, however, we are glad to say there have been fewer complaints of a deficient supply than in former years.

SUCCESSFUL COMPETITORS FOR THE OFFICE OF ASSISTANT-SURGEON IN THE ARMY.

The Director-General of the Army Medical Department presents his compliments to the editor of the *Medical Times and Gazette*, and begs to enclose for insertion a list of candidates who have competed successfully for appointments in her Majesty's British Medical Service at the examination held at the London University on the 20th ult.

Army Medical Department, March 3.

List of Gentlemen who Competed Successfully for Appointments as Assistant-Surgeons in her Majesty's British Medical Service at the Competitive Examination held at the London University on February 20, 1871.

Order of merit.	Names.	Marks.
1.	Crombie, A.	2670
2.	Stuart, G. B.	2420
3.	M'Cracken, J. A.	2130
4.	Irving, L. A.	2120
5.	Beamish, J. M.	2105
6.	Clery, J. A.	2105
7.	Coats, J.	2035
8.	Cruickshank, R. B.	1960
9.	Molloy, O.	1930
10.	Fawcett, W. J.	1910
11.	Williamson, J. G.	1895
12.	Leckie, D.	1855
13.	Joynt, H. W.	1850
14.	Moylan, W. J.	1840
15.	Leake, G. D. N.	1835
16.	Tobin, W.	1825
17.	McNamara, J.	1815
18.	Bradford, H.	1795
19.	Robinson, R. H.	1795
20.	Charlton, W. J.	1755
21.	Martin, J. W.	1750
22.	Gabbett, P. R. D.	1740
23.	Joynt, E. H.	1735
24.	Saunders, W. E.	1725
25.	Palmer, C. De M.	1710
26.	Anthonisz, A. H.	1670
27.	Finlay, W.	1670
28.	White, W. L.	1655
29.	Exham, R.	1615
30.	O'Connell, M. D.	1605
31.	Sullivan, W. P.	1600
32.	Harman, R.	1590
33.	Ruxton, J.	1570
34.	Wilson, J. B.	1570
35.	Ward, E. C. R.	1485
36.	Dickson, J. R.	1465

REPORT OF THE ROYAL SANITARY COMMISSION.

SANITARY LAWS.

On April 20, 1869, was issued the Royal Commission to inquire into and report upon the Sanitary Laws in England and Wales, with the exception of the metropolis, so far as those laws relate to sewerage, drainage, water supply, removal of refuse, control of buildings, prevention of overcrowding, and other means of promoting the public health. The Commission was also to inquire into, and report upon, the operation of the laws for preventing the introduction and spreading of contagious and infectious diseases and epidemics; the administration of the sanitary laws; that part of the registration system which relates to certificates of the causes of death; and to suggest improvements and the means of carrying them out. The Commissioners appointed to conduct this important inquiry were Sir Charles Adderley, Lord Romney, Lord Ducie, Lord Robert Montagu, Mr. Russell Gurney, Mr. Stephen Cave, Sir Thomas Watson, Colonel Ewart, Mr. J. R. McClean, Mr. Samuel Whitbread, Mr. John T. Hibbert, Mr. E. M. Richards, Mr. George Clive, Mr. F. S. Powell, Mr. Benjamin Shaw, Mr. Paget, Dr. Acland, Dr. Christison, Dr. Stokes, Mr. John Lambert, and Mr. F. T. Bircham. During the period of nearly two years over which their labours have extended, the Commissioners have been almost unceasingly at work, and their Report, just issued, bears ample testimony to the zeal with which their inquiries have been prosecuted.

The report opens with an exhaustive history of the existing sanitary laws, which, by showing the confusion of authorities, schemes, and areas resulting from tentative legislation, forms in itself a complete justification for the issue of the Commission. The first sanitary law in the Statute-book was the 12th Richard II., cap. 13, which imposed a penalty upon persons casting *animal filth and refuse into rivers* and ditches. This Act was passed in 1388, and even now, after the lapse of nearly five hundred years, we have not as a people sufficient sanitary education to obviate the necessity for fresh legislation with a like object. This statute continued in force until 1856. The Commissioners deem it not unworthy of note "that the Court Rolls of Stratford-on-Avon show that, in 1552, Shakespeare's father was fined for depositing filth in the public street, in violation of the by-laws of the manor; and again, in 1558, for not keeping his gutter clean."

It appears that extraordinary outbreaks of pestilent and contagious diseases have been necessary from time to time to direct the attention of the Legislature to the need of sanitary law. More especially has this been the case with the cholera, three outbreaks of which led to investigations, and so drew attention to the fact that the seats of endemic disease are generally where the air and water are polluted. The ravages of Asiatic cholera in 1831 led to the first move in sanitary reform, and the results of inquiries which followed presented sanitary difficulties of such unprecedented magnitude as to be at once novelties and puzzles for legislative treatment. A mass of piecemeal legislation followed at irregular intervals, including the Lighting and Watching Act, 1833; the Municipal Corporations Act, 1835; the Registration Act, 1836; the first Vaccination Acts, 1840 and 1841; the Nuisances Removal and Diseases Prevention Act, 1846; the Towns Improvement Clauses, etc., Acts, 1847; and, in 1848, the Public Health Act, which the Commissioners style "the first great and comprehensive measure which may be called the groundwork of our sanitary legislation." This Act, however, was marked by the blemish which, as we shall hereafter see, the Commissioners deem one of the most fruitful causes of past failure—"*It did not come into force in any locality unless petitioned for by ratepayers*, or enforced by the Board of Health upon evidence of an exceptionally high rate of mortality."

At this time was established the General Board of Health, consisting of a president and two other persons appointed by the Crown, to continue for five years. In 1848 was also passed the Nuisances Removal and Diseases Prevention Act, and in 1849 the amending Act. It should be noted, as showing an increasing confidence in sanitary legislation, that these Acts were permanent, whereas the similar Act previously passed had been for a limited period only.

In 1849 came the second visitation of cholera, and the inquiries to which it gave rise clearly traced its most fatal ravages to overcrowding, impure air and water, and foul streams. It was followed by the Common Lodging-houses Acts of 1851 and 1853, and the Metropolitan Water Act, 1852. Drainage, too, began to be more actively applied, but with the anomalous result thus referred to in the Report:—

"Encouraged by the facilities which the Public Health Act, 1848, offered, the towns began to carry out large works for their own sewerage and drainage, taking the rivers, on which most of them had been situated [dependent ?] for water supply, as the means of discharging what they simply looked upon as refuse, regardless of the loss to themselves of pure water, of the waste of sewage, and of the injury to the inhabitants of the valleys through which these poisoned rivers were afterwards to flow. Thus men and cattle suffered by drinking from a polluted stream, which should have afforded a pure supply to both town and country, whilst the towns were throwing to waste that which should have been employed as a valuable manure by the country, and the only remedy was by costly and tedious actions at law and suits in Chancery."

A glance at England after an interval of twenty years shows numberless towns still diligently repeating the process above described.

In 1854 the third visitation of Asiatic cholera came, and its immediate effect in inspiring the Legislature with renewed activity was remarkable. A Consolidated Nuisance Removal Act, passed in 1855, was substituted for the Acts of 1848 and 1849, and also in 1855 was passed the Diseases Prevention Act. The separate treatment, in the same year, of "nuisance removal" and "diseases prevention," as subjects distinct from general sanitary administration and from each other, illustrates very aptly the casual and experimental course of legislation which has led, not only to confusion between provisions of like intent, but to the repetition of subjects in parallel enactments. This confusion has been further increased by the fact that the authorities instituted for special purposes have been frequently the same as the general authorities, under special designations.

In the year 1854 the Board of Health was reconstructed, and its Continuance Act of 1855 authorised the appointment of a paid Medical Council. This year was a remarkable one in sanitary history, for then was invented, by the 18th and 19th Vict., cap. 115, the *paid Medical Officer*, first of the Board of Health, and subsequently of the Privy Council.

Although the metropolis is out of the scope of the inquiry, the Commissioners mention, as strikingly indicating the turn which public opinion was at this time taking, the passing of the 18th and 19th Vict., cap. 120, under which provision was made for the appointment of a Medical Officer of Health and an Inspector of Nuisances by every vestry in the metropolis. "The former officer is a legally qualified Practitioner, and his duties are to inspect and report periodically on the sanitary condition of his district, to ascertain the existence of diseases, to point out the existence of any nuisance, and to give advice on the best sanitary expedients of all sorts. His practice is to consult always the books of the Registrars, and of the Hospitals, Dispensaries, workhouses, and all public institutions affording sanitary information. The latter officer sets the law in motion."

In 1858, the General Board of Health was allowed to expire, and the Local Government Act was passed. That Act, with the Public Health Act of 1848, constitute the principal sanitary legislation now on the Statute-book. What may be called the general laws are thus summarised in the Report:—The Public Health Act of 1848; the Local Government Act of 1858; its two Amendment Acts of 1861 and 1863; the Diseases Prevention Act of 1855; the Nuisance Removal Act of 1855; its three Amendment Acts of 1860, 1863, and 1866; the two Sewage Utilisation Acts of 1865 and 1867; the two Sanitary Acts of 1866 and 1868; the Sanitary Loans Act, 1869; and the Sanitary Act, 1870.

In addition to these, there is a host of subsidiary and special Acts, bearing most materially on sanitary interests, though not to be reckoned as part of the general legislation on the subject, at the provisions of all of which the Report glances. We cannot here even name them all. They are such, for instance, as the Burial Acts, Workshops Acts, and Acts relating to Lodging-houses, Vaccination, Contagious Diseases, Adulteration of Food, Pharmacy, Alkali Works, Smoke, Quarantine, and Registration.

Our review of this portion of the Report has so extended as to necessitate the postponement of a consideration of the remainder. But it has seemed well to go somewhat fully into the state of the present sanitary law, if only to enhance the satisfaction afforded by the recommendation of the Commissioners in regard to its *improvement*. Their resolution on this part of the subject is as follows:—"That it is desirable to make law concerning public health as simple and uniform as possible, and, with a view thereto, *to repeal*, as far as may be practicable, the *existing general Acts*, and to make amended and more extensive provision, in respect of their subject-matter, by one comprehensive statute."

(*To be continued.*)

ON THE INFLUENCE OF MOISTURE IN THE PROPAGATION OF ERYSIPELAS.

The fact that erysipelas has for some time been so prevalent in the Melbourne Hospital as to have become an endemic disease in that institution is fully recognised by its Medical staff; but, as yet, if an article in the *Argus* for December 29 is to be trusted, they have entered into no combined plan of action with the view of arresting its progress, and each Surgeon does what he thinks best to keep the dreaded enemy out of his own wards. The subject has been more than once brought before the notice of the Medical Society of Victoria, and, to quote the words of the *Argus*, "it has furnished the occasion for a scientific speculation by that industrious worker in pathological science, Dr. Day, of Geelong." In a paper which he read at the December meeting of the Society, he shows experimentally how—on the assumption that pus-cells, probably of a specific character, are always concerned in the causation and diffusion of erysipelas and other allied affections, as pyæmia, and Hospital gangrene—a moist atmosphere promotes, and how a dry atmosphere retards, their spread.

"In 1868," he observes, "I had the good fortune to discover a very delicate test for pus, and have since been in the almost daily habit of applying it, in conjunction with other tests, as aids to diagnosis. In this way I have learnt some very interesting facts regarding the properties of pus. For instance, I have found that healthy pus, when dried, becomes chemically inactive, although, when moistened with water, it again resumes its chemical activity. I have found that strumous pus possesses much less chemical activity than pus derived from healthy persons, and that the pus from persons suffering from diseases allied to erysipelas possesses unusual activity, which it is capable of retaining for years.

"On this paper are two spots of pus which had been allowed to dry by exposure to the air. To one has been added the pus-test alone, with, as you may see, a negative result, dry pus being devoid of chemical activity. To the other, a drop of water is added, and then a drop or two of the pus-test, with the result which always follows the application of this test to moist pus—namely, a bright-blue reaction.

"I mentioned just now that pus secreted by persons suffering from diseases allied to erysipelas is more active in its chemical properties than healthy pus. On this piece of glass is some pus taken from a large carbuncle on the neck of an elderly gentleman two years and three months ago. He was suffering from symptoms of blood-poisoning at the time. This pus, as you will see, although it has been freely exposed to the air during the whole time, and sometimes to great heat, still retains its power of acting chemically on the pus-test, and it does so even when dry, thus showing that it possesses greater chemical activity than ordinary pus.

"You will perceive that, in the explanation I have attempted regarding the influence of moist and dry air over the propagation of erysipelas and its allied diseases, I have assumed that when the chemical activity of pus is suspended, its power to act as a poison on the system is also suspended.

"I will trespass on your time by bringing one other experiment under your notice, as it may help to explain the *modus operandi* of Professor Lister's antiseptic treatment of wounds.

"I have found that carbolic acid possesses the property of entirely and permanently destroying the chemical activity of pus, whether derived from healthy or unhealthy persons. On this paper is some pus which had been moistened with water, to give it chemical activity. A few drops of watery solution of carbolic acid were then poured over it, and after a lapse of a quarter of an hour, the pus-test was applied, with, as you may see, a perfectly negative result."

Dr. Day's pus-test is so simple in the mode of appliance, and apparently so certain in its revelations, that we have little doubt that it will soon come into daily use as an aid to diagnosis. He prepares his test-fluid by exposing a saturated alcoholic solution of guaiacum to the air until it has absorbed a sufficient quantity of oxygen to give it the property of turning green when placed in contact with iodide of potassium. On moistening the most minute quantity of pus with water, and pouring a drop or two of the test-fluid over it, a clear blue colour is produced.

HABITUAL DRUNKENNESS A GROUND FOR DIVORCE.—THE AMERICAN LAW.

A correspondent of the *Law Times* suggests that a divorce should be granted on the ground of habitual drunkenness. And to bring the benefits of the Divorce Act home to the working classes he further suggests that "one or more judges of assize should be appointed, or else that the law should be administered by a cheap local tribunal—the County Court, for instance."

Without pronouncing any opinion upon the question of localising the divorce jurisdiction, the suggestion of making habitual drunkenness an additional ground for divorce leads one to look into the American law on the subject, as there is generally so much sound, simple good sense in American legislation that we need seldom fail to profit by the investigation.

It is stated in "Bishop on Marriage and Divorce," fourth edition, vol. i., chapter 39, p. 811-12, that "*Habitual drunkenness* will, in several of the States, justify a divorce. Yet the statutes of most, perhaps all, of the States which allow this course, require that, like desertion, it continue a specified number of years."

It seems that in Louisiana the husband's habitual intemperance entitles the wife to a divorce from bed and board, but not from the bond of matrimony until two years after the separation from bed and board.—Leake *v.* Linton, 6 La. An., 262. See as to the State of Maine, Curtis *v.* Hobart, 41 Maine, 230, 232; as to Illinois, Harman *v.* Harman, 16 Ill., 85; as to Arkansas, Rose *v.* Rose, 4 Eng., 507.

In Kentucky a divorce may be granted for a "*confirmed habit of drunkenness* on the part of the husband, of not less than one year's duration, accompanied with a *wasting of his estate*, and without any suitable provision for the maintenance of his wife and children." And it has been held that, to bring a case within this statute, there is no necessity for the husband to possess actual, real, or personal property, provided he possesses the physical and mental ability to support himself and family by his labour.

In McKay *v.* McKay, 18 B. Monr. 8, Mr. Justice Stiles said—"Wasting of his estate, where he has no property, should be deemed to apply to and embrace a man's health, time, and labour, all of which, for the purpose of supporting himself and family, are essentially his estate." And he observed of the contrary construction, that it "would operate sorely in cases similar to the present, where the application for divorce has been deferred by the wife with the fond but vain hope of reformation, until, after the entire estate has been squandered, she is constrained, for the protection of herself and children, to ask the protection of the laws."

With respect to what amounts to habitual drunkenness, it has been held in California as follows:—"If," said Mr. Justice Norton, "there is a fixed habit of drinking to excess to such a degree as to disqualify a person from attending to his business during the principal portion of the time usually devoted to business, it is habitual intemperance—although the person may at intervals be in a condition to attend to his business affairs."—Barber *v.* Barber, 14 Law Reporter, 375.

The *Official Journal* of Sunday last says that the mortality of Paris has greatly decreased, and that no alarming epidemic is now prevalent.

Catalepsy.—A case of catalepsy is at present engrossing the attention of the Doctors of Berwick. The person attacked is a girl, named McCade, who was at service with Mr. Cairns, bootmaker, in that town, and is about 17 years of age. She was suddenly seized with a fit on Saturday week last, and afterwards fell into a profound sleep, in which she has continued, with only brief intervals of wakefulness and consciousness, ever since. She is under the care of Dr. Jamieson and Dr. Maclagan, but their efforts are fruitless to effect a cure. During the temporary absence of an attendant, on Monday, the girl awoke and ate some biscuits. While the brief periods of consciousness last, the girl appears in her usual health, but suddenly the stupor comes on, and she continues in profound sleep for many hours, unconscious of all that is going on around her. The case is exciting a good deal of interest in the town.

LEGISLATIVE MEASURES FOR PREVENTING THE ADULTERATION OF FOOD, DRINK, AND DRUGS.(a)

By H. LETHEBY, M.B., M.A., etc.,
Professor of Chemistry in the College of the London Hospital, and Medical Officer of Health, and Food Analyst for the City of London.

Legislative enactments forbidding the sale of unsound and unwholesome food have been in operation from the earliest time. At first they were chiefly directed against the use of diseased and unsound meat. Among the Jews, for example, there has been a prohibition of this kind from the days of Moses, whose commandments concerning the slaughtering of animals for food, and the examination of their bodies for disease, are supposed to have been of Divine origin, and have, therefore, been regarded with pious consideration; in fact, according to the Hebrew law, no flesh is fit for food, or shall be eaten, except it be of animals that have been killed and searched, or examined by the officer (*bodek*) appointed for that purpose; and the most precise rules are laid down for his guidance in these matters—he being bound by very solemn obligations to declare of every animal that he kills, whether the flesh is proper to be eaten (*caser*), or is unfit for food, by reason of its being diseased or torn (*trefa*). The rules are traditional, for they are not found in the written law, and are said to have been communicated orally by Moses to the people of Israel directly after his descent from Mount Sinai; for his words are, "Thou shalt kill of thy herd and of thy flock, which the Lord hath given thee, *as I have commanded thee.*" (Deut. xii. 21.) They are, however, so severe, as to cause the rejection of a very large proportion of the slaughtered animals; and hence it is customary for the *bodek* to make a bargain with the unorthodox butcher to take only those animals which he considers lawful, leaving the rest for the food of the less particular Christian. I dare say this has been the practice at all times, for there is frequent reference to it in our legal and domestic records; in *Liber Albus*, for example, there is a memorandum to the effect that, on June 24, 1274, certain discreet men of the city were summoned before the King's council to answer the question as to what was done with the unclean flesh of the Jews, and whether it was lawful for Christians to buy and eat the same? The answer was, "That if any citizen bought such flesh of a Jew, he would be expelled, and, if convicted by the sheriff, he would forfeit the meat, which would be given to lepers or dogs, and he, in addition, would be heavily fined." To which the council replied, that they commanded them, in the King's name, to have the custom strictly observed. I fear, however, from the legal records of *Liber Albus*, that less attention was paid in those days to the sale of diseased meat than to that of putrid meat; for, on examining the accounts of the citizens made and rendered in divers courts of the King, I find that, while "judgment of the pillory or the thew" is recorded in twenty-three cases for selling putrid meat, poultry, or fish, there is not a single instance of a like punishment for selling the unclean meat of the Jews. There is one account of a butcher who was paraded on horseback through the streets of the city, with his face to the horse's tail, for selling measly bacon at market, and the next day he was put in the pillory, with two great pieces of his measly bacon over his head, and a writing which set forth his crimes.

In ancient Rome there were overseers appointed to examine the meat in the public markets before it was sold, and butchers were often fined for neglecting the law in this respect. Mr. Charles Reed has given us an instance of this from the *Acta diurna*, or Roman Gazette, of 585 years after the building of Rome, which, when translated, runs thus:—A.U.C. DLXXXV. Fourth of the Kalends of April. The fasces, with Licinius, the consul, and Lertinus, ædile, fined the butchers for selling meat which had not been inspected by the overseers of the market. The fine is to be employed towards building a chapel in the Temple of the goddess Telluss.

In modern times, also, severe regulations have been made in all the states of Europe for the government of this matter, and in many cases particular instructions are given as to the kind of disease, etc., which renders meat unfit for human food—it being the practice to examine the animal while alive, and its carcass when dead.

But ordinances prohibiting the sale of other kinds of unsound food, and especially concerning the sophistication of food and drink, are not nearly so common or so precise in their character. The *assisa panis* is, perhaps, an exception; for as set forth in *Liber Albus*, it is not only an ancient institution, but it also governs in the strictest manner the business of the baker; "if any default," it says, "shall be found in the bread of a baker in the city, the first time, let him be drawn upon a hurdle from the Guildhall to his own house through the great street where there be most people assembled, and through the great streets which are most dirty, with the faulty loaf hanging from his neck; if a second time he shall be found committing the same offence, let him be drawn from the Guildhall through the great street of Cheepe, in the manner aforesaid, to the pillory, and let him be put upon the pillory, and remain there at least one hour in the day; and the third time that such default shall be found, he shall be drawn, and the oven shall be pulled down, and the baker made to foreswear the trade of the city for ever." It further tells us that William de Stratford suffered this punishment for selling bread of short weight, and John de Strode for making bread of filth and cobwebs, and of eleven other bakers who were sentenced to the pillory or the thew for their unlawful dealings. Vintners, spicers, grocers, and regrators were also subject to wholesome restrictions in their commercial dealings, and were liable, in case of default, to amercement, or to the more rough-and-ready punishment of the pillory.

These were the legislative practices of our forefathers, and although effective in checking the frauds of dishonest dealers, they have given way before the irresistible advance of free trade, which puts no such restrictions upon the action of commerce, unless it affects the revenue of the country. In point of fact, until recently the only legislative hindrance to any kind of sophistication has been from the Excise, and that has rarely been exercised for the public weal. As might be expected, therefore, the practice of adulteration is not only extremely common, but it has grown to such perfection as to have become an art of no mean scientific pretention. Fifty years ago it attracted the notice of one of the most expert chemists of the day—I mean Mr. Frederick Accum—who declared of it, even at that time, that it was managed with all the order and method of a regular trade, and that it might claim to be distinguished as an "*art and mystery.*" His well-known "Treatise on Adulterations of Food, and Culinary Poisons," which was published in 1820, with the startling motto from the Book of Kings—"There is death in the pot"—commanded so much attention, that within a month of its appearance, 1000 copies of it were sold, and a second edition required. The success of Accum has been a sufficient inducement to try the like experiment upon the public, and not a few sensational works of the same style have issued from the press. In illustration of this I may refer to the reports of the so-called "Analytical Sanitary Commission of the *Lancet*," which appeared in that journal during the years 1851 to 1854, inclusive; and which were republished in 1855 by Dr. Hassall, who described himself as the chief analyst of the Commission. The effect of these articles was to create a sort of alarm, amounting almost to panic, which was followed by the usual prostration of over-excitement; but, during the fever of the public mind, a select Parliamentary committee, under the chairmanship of the late Mr. Scholefield, was appointed to inquire into the subject of the Adulteration of Food, Drinks, and Drugs, and their first report appeared within a month of their appointment. This was followed by the Adulteration of Food Act of 1860, which I need not describe, for it is a dead letter; in fact, the public mind had collapsed, and had passed from the frenzy of fever into the apathy of despair. Attempts have been made to revive the feeling and to improve the law, which is manifestly imperfect, but with no practical effect. In 1869, for example, there was the Bill of Mr. Dixon, Mr. Kinnaird, and Mr. Goldney, to amend "the Adulteration of Articles of Food and Drink Act, 1860," and to extend its provisions to drugs, but it made no progress in the House of Commons; and now there is before Parliament the like Bill of Mr. Muntz, Mr. Whitwell, and Mr. Dixon, to amend the law for the Prevention of the Adulteration of Food and Drink, and of Drugs, but I do not anticipate that it will become law in its present form, for, like its predecessors, it entirely fails to comprehend the right principles of the subject, or to meet the real difficulties of the question. Experience, in fact, has shown that a measure of this kind, to be effective, must not only contain a clear definition of the subject, stating what is meant by adulteration, but it must also be practical as well as decisive in the working of its machinery, and it must be compulsory instead of permissive.

(a) Read before the National Association for the Promotion of Social Science, Monday, March 6, 1871.

As regards the definition of the subject, it is manifestly of prime importance that there should be a clear understanding of what is meant by adulteration; for although there are many practices which are regarded in some quarters as adulterations, yet, as they are either called for by the public or are concerned in an actual improvement of the article, they cannot, in my opinion, be regarded as adulterations. As examples of this, I would refer to the harmless mixture of flour with mustard, of chicory with coffee, of inferior starches with arrowroot, of isinglass with gelatine, of glucose with sugar-cane, of dripping or other fat with butter, of water with milk, vinegar, or spirituous liquors, for in all these cases the mixture is harmless, and is generally expressed by the price at which the article is sold—besides which it is the simple and almost natural result of that kind of competition in trade which the public encourage, and from which in the end the public obtain advantage. What good reason, in fact, is there, why we should prevent the dealer from increasing the bulk of an article, or improving its appearance, or adding to its flavour, providing he does it without injury to the nutritive quality, the dietical uses, or the wholesome nature of the substance? All that is required to guard against fraud in such cases, is that the dealer should sell the article for what it really is, and should specify by means of a distinct label what the mixture is composed of, and the properties of the several constituents. If he failed to do this, and sold a mixture of things for a genuine article, he should be liable to a penalty for fraudulent dealing; and with these safeguards, I would let the manufacturer employ whatever materials he likes to cheapen or improve his wares, provided always that the materials are harmless.

It must be otherwise, however, with the use of mineral, poisonous, or unwholesome compounds. The addition of alum to bread, of mineral pigments to confectionery, or, indeed, of any mineral substance to food, as well as the use of unsound or decayed articles of diet, should be regarded as adulterations of a serious nature, and should be strictly prohibited.

In defining the term, therefore, I would limit its application to the use of unwholesome substances, permitting wholesome mixtures to be sold provided they are clearly designated at the time of the sale by means of a proper label, the absence of which should be evidence of fraud.

With respect to the machinery which is necessary for the Act, my experience in the City has led me to the conclusion that it should be as follows:—

1. There should be an officer appointed by the local authority to purchase samples of food in his district. In most towns there are inspectors of nuisances, or inspectors of meat and markets, and these officers may easily perform the duty of inspecting the shops of the district, and of purchasing articles of food or drink when they suspect them to be adulterated, or to be sold in fraud of her Majesty's subjects.

Under the present and the proposed law, the duty of beginning an inquiry of this nature rests with the public, and experience has shown that, although the public are the parties interested in the matter, yet they will not incur the trouble and responsibility of commencing legal proceedings against a dealer. To take the case of the City as an illustration, although at the time of the passing of the Adulteration of Food Act the public were invited by the Sanitary Board to take measures for the due observance of the law, and the poor were invited to bring articles of food, suspected to be adulterated, to the public analyst, and he was empowered to make the analysis without charge, yet no case of prosecution has occurred—but many analyses have been made at the instigation of the dealers themselves, for the purpose of obtaining a trade certificate.

2. There should be a public analyst appointed by the local authority, in exactly the same manner as the gas examiners are appointed under the recent Metropolitan Gas Act, and he should make the analysis of articles brought to him by the inspector, or by any other purchaser who had taken the necessary precautions to preserve the identity of the article, and this should be secured by proper regulations. In all cases of adulteration, or of mixtures in fraud of the public, his certificate should be forwarded to the local authority, who should immediately send a copy of it to the dealer, and it it should be regarded as *primâ facie* evidence of adulteration or of fraud; but the dealer should, in case he thinks himself aggrieved by the certificate, have the power of appealing to a central authority, as the Board of Trade, or the Excise, who should refer the matter to a chief analyst, whose decision should be final and conclusive, and the expense of this should be defrayed by the parties in default. This provision is of the utmost importance to guard against the possible errors of local analysts, as well as the prejudices which they may entertain on the subject of adulteration. The process to which I refer is not at all difficult, for it is already in operation in the case of many of the gas companies of London.

3. In case of a certificate of adulteration from the local analyst, or from the chief analyst on appeal, the local authority should be required to prosecute the matter before a justice in the way provided for in the Act.

And with respect to penalties on conviction, the justice should be empowered to fine the defaulter, or to imprison him, or make him advertise his default, in a manner to be described by the justice, either in the public newspaper of the place, or upon his own shop window; and the penalties should be accumulative, so as to increase with each conviction of the same offender. And the execution of the Act should be confided to the local authorities in a compulsory manner.

As regards the question of the adulteration of drugs, it appears to be beyond the scope of a local authority, and should be committed to some Medical body whose knowledge of this difficult subject is sufficiently large to enable them to deal with it; for the question of the adulteration of a drug is not merely too difficult for an ordinary analyst to settle, but it is altogether a specialty which belongs to a competent tribunal. In many cases it would be impossible to declare whether an article was adulterated or not, seeing that its strength and peculiar action on the human body are often dependent on the age of the preparation, and on the climate where it is grown; this is so with almost every vegetable preparation, and notably with senna, rhubarb, opium, and sarsaparilla. It does not appear to me, therefore, that drugs have any place whatever in a Bill for Preventing the Adulteration of Food or Drink, but should be made the subject of independent legislation.

REVIEWS.

The Descent of Man, and Selection in relation to Sex. By Charles Darwin, M.A., F.R.S. In 2 vols. London: J. Murray. Pp. 423 and 475.

[Second Notice.]

In the fourth chapter, Darwin enters upon the consideration of the development of man from some lower form, and in it deals exclusively with transformation of bodily structure. First he insists on the variability of man as now seen, and the frequent occurrence of what anatomists call abnormalities, as tending to show relationship with the lower animals. But if the bodily variations are numerous, still more so are those of the mind, and, as the author has already pointed out, all these tend to descend to offspring. Then, again, supposing man to constitute a single species, the extent, speaking geographically, of this species is unprecedented, and, in accordance with the general rule, as applied to the lower animals, we may expect to encounter a corresponding multiplicity of variations. The laws of variation have been already discussed by the author in his work on "Domestic Animals," but some of them are again considered in this connexion. Among these are the influence of changed conditions of life, the increased use and disuse of parts (we would note the long sight of savages, the tendency to short sight in civilised races), arrests of development, reversion to original type, the rate of increase, and even natural selection. Under the last heading, Darwin enters into a consideration of the mode in which he believes man to have been developed from an arboreal monkey. He, however, admits that in former editions of the "Origin of Species" he attributed too much to the influence of natural selection, which would have but little influence on organs which were neither directly beneficial nor directly injurious to the possessor.

It has been objected to Darwin's theory that man is at best the most helpless of all animals, and that this could never have been the result of selection; but this is a fallacy. His very helplessness at birth may have been an important means of securing pity, and of increasing the tendency to sociability in man, which, according to his theory, has been so great an agent in moulding man's moral nature.

In Chapter V. the development of the intellectual and moral faculties during primeval and civilised times is discussed. Mr. Wallace has pointed out that when man had acquired a certain mental development he would be likely to maintain his bodily structure more unchanged than would the lower animals, no longer being subject to the influences which the seasons and other conditions would impose. The intellectual faculties, too, would be improved, less cultivated nations dying out before those more skilled in the arts of war and peace. The chief instrument in developing the social virtues in man would most probably be the love of praise, as soon as such a feeling could be instilled in the savage breast; but this subject has already been discussed. The principle of natural selection, as applied to civilised races, is not easily canvassed in all its bearings. At first sight it would seem that everything was done in opposition to it; but, on the other hand, by improved food, protection, and such-like, it tends to foster the general bodily welfare. Intellect is undoubtedly a powerful engine in civilised society, and, could it be rendered hereditary, we should have a good instance of artificial selection to fall back on. But in man the sexual instinct is too powerful; it is not intellectual but bodily gifts which are mostly sought after. Was man born perfect, and have the savage races since became degraded, or was he born primarily most imperfect and has since progressed? this is an interesting question. There is evidence in many forms of languages and customs that the civilised nations of to-day were formerly barbarous. No argument is needed to prove this; but to prove retrogression is impossible.

Chapter VI. treats of the Affinities and Genealogy of Man. Mr. Darwin holds that he has proved that man has, let us say, affinities to the lower animals in many respects. We cannot maintain that his anatomical structure is sufficient to separate him from them; and mental and moral qualities cannot be compared or classed. But even allowing that these are expressed by the complicated structure of his brain, all modern naturalists admit that classification, to be approximately correct, must depend on the sum of the animal's characters, not the perfection of any one taken singly. Man's frame has been adapted to his mode of life, and differs less from the lowest of the quadrumana than does the seal from any other carnivora. A good many points of resemblance are here noted wherein man approximates the apes and the apes man. Of monkeys there are two great divisions—the catarhine, or old-world, and the platyrhine, or new-world, group. Of these, the former have four, the latter six premolars; and in this respect the former the more nearly approximate to man. If man, therefore, is descended from the monkey tribe, it is plain his progenitor belonged to the old world; and as the chimpanzee and gorilla are the forms which most resemble the human stock—further, these being natives of central Africa—Darwin concludes that our earliest progenitors lived there also.

The genealogy of man is a knotty point, especially if, as is here done, an attempt be also made to trace the descent of other members of the vertebrate series. Nevertheless, something has been attained through the researches of Ernst Hackel. Of man, Darwin says—"The early progenitors of man were no doubt once covered with hair, both sexes having beards; their ears were pointed and capable of movement, and their bodies were provided with a tail having the proper muscles. Their limbs and bodies were also acted on by many muscles which now only occasionally reappear, but are normally present in the quadrumana. The great artery and nerve of the forearm ran through a supra-condyloid foramen. At this or some earlier period, the intestine gave forth a much larger diverticulum or cæcum than that now existing. The foot, judging from the condition of the great toe in the fœtus, was then prehensile, and our progenitors, no doubt, were arboreal in their habits, frequenting some warm, forest-clad land. The males were provided with great canine teeth, which served them as formidable weapons."

The final chapter of this portion of the work refers to the races of man. The first question is, Are these races or species? The great test nowadays of a species is its persistence without blending with others within a given area, this implying a sterility of its offspring when the breed is mixed with others. Nowhere does this rule prevail with regard to the human race. But that a very considerable diversity exists between different varieties of the human race is almost a truism, and it is curious that their distribution corresponds in great measure with the distribution of certain great groups of animals. But, if mankind consists of several species, how many? is the next question; and to it the replies are both numerous and diversified—in fact, any number from two to sixty, or more; in short, the solution is hopeless.

A curious subject for reflection is the gradual extinction of races of man. Their languages are left with none to speak them. And this distinction seems to depend on competition of race with race, rather than on the surrounding conditions; above all, civilisation is fatal to them. Another curious point is the origin of the dark races of mankind. Darwin would seem to think that such a colour implies immunity from certain malarious influences. But it would seem to us that he ought rather, if our ancestors were apes, to seek some mode of accounting for the white rather than the dark races. But, as differences of colour are not likely to be of great use to the individual possessor, they are not likely to be propagated by natural selection, and, consequently, Darwin has to call in another agency to supplement the former. This engine is sexual selection, which we shall consider hereafter.

NEW BOOKS, WITH SHORT CRITIQUES.

On some Advantages of Animal Vaccination for the Prevention of Small-pox. By A. Vintras, M.D., Physician to the French Hospital. London: J. & A. Churchill. 1871. Pp. 21.

⁎⁎⁎ This pamphlet may be regarded as an announcement of the fact that animal vaccination has been resumed in London, and that the writer is prepared to vaccinate from the calf. There is nothing novel in the pamphlet itself, which consists of an abstract of the experiences on the Continent.

Precautions to be taken by Local Authorities towards Preventing the Spread of Small-pox. By James B. Hutchins, of the Medical Department of the Privy Council, etc. London: Knight and Co., 90, Fleet-street, E.C.

⁎⁎⁎ This little tract contains, as clearly as possible, and in the shortest compass, the information promised by its title-page. No "Board" nor "Local Authority" can go wrong which follows this guide. We observe, at page 16, the following passage in a Privy Council Memorandum, which, we suspect, has been the cause of much confusion to public vaccinators during the present epidemic. We refer to the prohibition, or implied prohibition, to revaccinate children under 12.

"The vaccination officer should make it well known in infected localities that the public vaccinator is at liberty to revaccinate grown-up and young persons (*not under* 12 *years of age*) who have not before been successfully revaccinated, and who apply to him for that purpose; and that persons not vaccinated since childhood, who are likely to be exposed to contagion, ought to be revaccinated without delay. Above all, this is necessary for persons whose original marks of vaccination are imperfect."

The Change of Life in Health and Disease. A Practical Treatise on the Nervous and other Affections Incidental to Women at the Decline of Life. By Edward John Tilt, M.D., Senior Physician to the Farringdon General Dispensary and Lying-in Charity, etc. Third Edition. London: J. & A. Churchill. Pp. 296.

⁎⁎⁎ Dr. Tilt's book has reached a third edition. It is quite plain, therefore, it has secured a certain amount of popularity. To say that women are more liable to fatal complaints at the *ménopause*, as Dr. Tilt calls it, when he has put an acute accent over the first *e*, is to give birth to a truism; to originate a certain means of treatment whereby this difficult period may be with safety surmounted, is something else. But Dr. Tilt has done more—he has given us a pathology of the ganglionic system of nerves. Had he given us an accurate account of its physiology first of all, physiologists, as far as we can learn, would have been much pleased; but then, perhaps, a pathology evolved from one's inner consciousness may be less easily attacked than a physiology about which, at least, men know something.

General Outline of the Organisation of the Animal Kingdom, and Manual of Comparative Anatomy. By T. Rymer Jones, F.R.S., Professor of Comparative Anatomy in King's College, London, etc. Fourth Edition. London: Van Voorst. Pp. 886.

⁎⁎⁎ We think it is hardly necessary for us to do more than to mention the appearance of a new edition of this well-tried and popular text-book. The manual is one which, having the fortune to appear just when such studies were not greatly sought after, is able, now that they have become so common as to constitute one of the humbugs of the day, to maintain its old place with true students. Like most of Van Voorst's books, the volume is beautifully illustrated, and a considerable number of new engravings have been added to this edition; otherwise, there seems to be nothing specially new about it.

The City of London Directory for 1871. London: Collingridge, *City Press* Office, Aldersgate-street.

⁎⁎⁎ This useful volume contains, among other things, a full list of London newspapers and journals, with their characters, prices, and places of publication; a conveyance and carriers guide; a streets and trades guide; a livery companies guide; a public companies directory; and a corporation directory; comprising a vast amount of information, some of a very curious character, including the position of pillar letter-boxes, the names of the residents in each house, etc.

The Deformities of the Human Body: A System of Orthopædic Surgery. Being a Course of Lectures Delivered at St. George's Hospital, by Bernard E. Brodhurst, F.R.C.S., Surgeon to the Orthopædic Department, and Lecturer on Orthopædic Surgery, at St. George's Hospital, etc. London: J. and A. Churchill. Pp. 259.

⁂ The author of this elegant work is too well known as an authority on the subject of which he treats to require commendation from us. We need only say that the work, in the shape of separate lectures, appeared in the columns of a contemporary, that they were well received by the Medical public, and that they have been published in fitting garb by the Messrs. Churchill. Divided as they are into three parts, dealing with deformities of the limbs, affections of the joints, and deformities of the trunk and neck, their arrangement renders them easy of reference to the hurried Practitioner. They are illustrated by a large number of excellent engravings.

The Causes and Treatment of Lateral Curvature of the Spine. By Richard Barwell, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the Charing-cross Hospital. Second Edition. London: Macmillan. Pp. 211.

⁂ As in a former edition we pointed out that Mr. Barwell's views were logical, and that they only needed reduction to practice on a sufficiently large scale to make them generally accepted; since, moreover, in this edition he appeals to a largely increased experience, still advocating these views, we suppose they are to be accepted with confidence. At all events, we can say that the book is worth reading, which is more than can be said for many.

The Forces of the Universe. By George Berwick, M.D. London: Longmans and Co. Pp. 127.

⁂ Dr. Berwick's little work aims at making more clear what every day becomes clearer—the universality and convertability of force. He goes, however, a step beyond most natural philosophers, though certainly not of all biologists, in assigning to life a position similar in all respects to that of electricity.

The Student's Guide to Medical Diagnosis. By Samuel Fenwick, M.D., F.R.C.P., Assistant-Physician to the London Hospital, etc. London: J. and A. Churchill. Pp. 236.

⁂ We do not know that we can do better than repeat the commendation we gave this little book in its former edition, and to say that the present is an improvement on the former.

GENERAL CORRESPONDENCE.

VACCINATION AND REVACCINATION IN GLASGOW.

Letter from Dr. James Dunlop.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am instructed by the Medical officer, Dr. Gairdner, to forward to you some account of the arrangements made for free vaccination and revaccination in the city of Glasgow. Arrangements have also been made for a daily house-to-house visitation in the infected localities, and the offering of revaccination to all within a wide area of the infection.

Our experience here corroborates that of London in regard to the success which is attending revaccinations. It is observed, too, that vaccinations in infants are more successful than usual, the vesicles being more numerous, plumper, more pearly, and accompanied by a greater amount of local and constitutional disturbance. Small-pox does not seem to be gaining rapidly upon us, nor is it found spreading from house to house in crowded tenements. Adults principally are affected, and not children born since the Vaccination Act came into operation. The Vaccination (Scotland) Act seems to be, unlike the English Act, almost a complete success. It is so from the fact that all births are registered, and the registrars have a pecuniary interest in every successful case of vaccination which is registered. Besides, the people of Scotland, with the exception of the lowest strata of population found in the larger towns, have always given great attention to the vaccination of infants, and they have not required any Act of Parliament to compel them to seek protection against small-pox.

The small-pox wave, in its passage over our city, appears to have first influenced unvaccinated adults from the remoter portions of the West Highlands, and from them it has extended in some instances to individuals only partially protected by vaccination. To-day there are 130 cases in Hospital, and fifteen are known to us to be under private Medical treatment at home. We do not experience much difficulty in removing infected persons to Hospital. The compulsory removal powers, however, conferred on the local authority by the Public Health Act, have been carried out in several instances by our Sanitary Inspector, but some of the cases treated at home are so mild, and the persons infected are in such circumstances, that removal to Hospital is not recommended.

Small-pox has appeared in some milk-shops in town, and under the same Act steps have been taken for shutting up the shop, or otherwise to protect the public.

Revaccination is being carried out on a large scale in the city by private Medical Practitioners, and, owing to fresh lymph not being quite so abundant as to enable very large numbers to be at once overtaken, some Medical men are increasing their lymph supply by diluting it with glycerine, and they are finding the results quite satisfactory. Many years ago I tried the dilution of lymph with glycerine, and failed in many instances. At present—due, apparently, to the special susceptibility of the population, young and old—a small quantity of lymph seems to be as potent as a much larger quantity employed at ordinary periods. Lymph, however, to be diluted with glycerine should itself be good—taken from a healthy child, from well-formed and not exhausted vesicles.

The special value of revaccination to arrest the spread of small-pox is being well tested, not only in the homes of the poor, but in institutions as well. On the 23rd ult., in consequence of small-pox having appeared in a female industrial school, I was instructed by the Health Committee to visit, and adopt such measures as seemed necessary. The school contained 150 girls, and seven of them were found to have the eruption of small-pox out on their faces. These were at once removed to Hospital, and on the following day seven more girls. At my visit, I revaccinated 110 girls and five ladies, and since then there has not been a single new case.

The relapsing fever, which attained its height with us in this city on December 13, when there were 1199 cases known to be under treatment, is rapidly declining, and to-day there are only 688 cases reported, and of these nearly one-half are under treatment at the new Fever Hospital erected by the magistrates at Belvidere, London-road. The Fever Hospital at Parliamentary-road, which had accommodation for 350 cases of relapsing fever, is now set apart principally for small-pox and a few cases of typhus fever. As the relapsing fever declines, we shall have ample accommodation for small-pox, should the epidemic become more wide-spread than it is at present.

I am, &c.,
James Dunlop, M.D.,
Assistant Medical Officer.
March 7.

THE NEROS IN PHYSIOLOGY.

Letter from Dr. F. A. Hartsen.

[To the Editor of the Medical Times and Gazette.]

Sir,—At page 275 (No. 1079) of the *Medical Times and Gazette*, mention is made of Professor Mantegazza's researches on pain.

I am most happy to see that this subject has elicited from the editor the following remark:—

"These, as may be supposed, involved much suffering, and we wish that we could state that the importance of the data supposed to be ascertained by them are of sufficient importance to justify its infliction."

These are golden lines. It would have been well if Professor Gavarret(a) had made the same remark when he mentioned the researches of a certain German physiologist, whom I will not do the honour to name. This individual, we read, has had the "wanton barbarity" to cause the death of a number of animals through pain, wishing, by this means, to ascertain the influence of pain upon the chemical processes in the brain; and the only result was, the sublime discovery that the brain of a tortured animal contained a little more cerebrine, or lecythine, or some other mysterious substance of the kind, than that of a non-tortured animal!

That the scientific results of such barbarity should not be more important may have been easily anticipated; for of what real service can it be to mankind to know the exact physiological effect of pain?

Surely, the field of exploration is wide enough, and the physiological problems still to be resolved are rather too numerous than not numerous enough, and the ways of making oneself known by scientific discovery affords *l'embarras du choix.* It is therefore a sad phenomenon that some minds are drawn by preference towards such investigations of which the instrument is torture. Should not the augurs of science make up their minds to banish from their republic the unnatural beings who convert their laboratories into torture-rooms, and in such a manner pursue the advance of science, or—the gratification of their own vanity? I am, &c.,

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(a) *Les Phenomènes Physiques de la Vie.*

F. A. Hartsen.

QUININE AND MALARIA.

Letter from Dr. R. H. Bakewell.

[To the Editor of the Medical Times and Gazette.]

Sir,—I was glad to see in your number of March 4 an article by Baboo Gopaul Chunder Roy, on the subject of malarious fever, in which views are expressed nearly coincident with my own as to the action of malaria primarily on the ganglionic or sympathetic system of nerves. In a paper of mine which was read before the Royal Medical and Chirurgical Society on February 14, these views were explained more fully than in the article of Baboo Gopaul Chunder Roy. A very short abstract of the paper appeared in your journal of the 25th ult.

On two points I regret to say that I differ from my distinguished *confrère*. I look upon quinine as a direct chemical antidote to the poison, which I think is an irritant, and not a narcotic poison. It is true that an excessive dose of the malarious poison will paralyse the whole sympathetic system, and produce, secondarily, the same effect on the cerebro-spinal system; but so will many irritant poisons in very large doses. Heat, again, acts as an irritant when applied to the skin to a small extent; but as a sedative, when applied as in extensive burns, or so severely as to destroy a considerable portion of the skin. The cases of malarious poison where the first symptom is collapse, followed by coma and death, seem to me analogous. I have seen a man die from malarious poisoning in thirty hours, without ever rallying from the collapse stage, and with a spleen found, eight hours after death, of the consistence of cream. I am, &c., R. H. Bakewell, M.D.,

Medical Officer of Health for the Colony of Trinidad.

Waverley-villas, Hendon, N.W., March 5.

SMALL-POX AT STAINES.

Letter from Mr. John Prince.

[To the Editor of the Medical Times and Gazette.]

Sir,—Perceiving that you have had no intimation of the epidemic of small-pox at Staines, I beg to give you a few lines.

Within the last two months we have had nearly fifty cases and eight deaths. Of the casualties, four had not been vaccinated, two imperfectly, and two doubtful. Committees were formed, with the view of aiding the poor and taking steps to stamp out the disease.

We recommended isolation and other measures with apparently good results, as no fresh cases have come to notice for more than a week.

During the outbreak of variola, one case of malignant typhus occurred, which ran its course with great rapidity, and ended in death. There were also a few cases of scarlet fever.

I shall at another time give you a more detailed report of our doings in this quiet little town.

I am, &c., John Prince, M.R.C.S., L.S.A.

Staines, Middlesex, March 9.

ON THE USE OF LYMPH FROM REVACCINATED PATIENTS.

[To the Editor of the Medical Times and Gazette.]

Sir,—It is commonly taught that lymph must not be used for vaccination which is derived from the vesicles of revaccinated subjects. Now, so far as the propriety of so doing is concerned, I have not a word to say, and believe that in general it is best to use the lymph of a primarily vaccinated infant; but if our teachers mean to say that the lymph of revaccinated persons will not *take*, I can only say from my experience that it will take. Years ago I made the experiment of vaccinating an infant in five places: four with primary, and one with revaccination lymph. There was positively no difference in the vesicles produced; and at a pinch I should not hesitate to use the lymph in question. Nay, it seems to me absurd to suppose that it is anything but good vaccine lymph; for the contagion of mild, modified small-pox will not fail to produce the worst kind of confluent upon a susceptible person, and an imperfect and hasty revaccination vesicle will reproduce the normal cow-pox in a patient who is capable of this pathological change.

I am, &c., F.R.C.S.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The annual meeting of this Society was held on the evening of Wednesday last, March 1; George Burrows, M.D., F.R.S., President, in the Chair.

The abstract of income and expenditure for the year was presented. It showed that the income was 1421*l.* 18s., and the ordinary expenditure 951*l.* 19s. 8d.

The report was adopted, on the motion of Dr. John Webster, who congratulated the Society on the highly satisfactory state of its finances. The Report of the Council stated that the Society consisted of 665 Fellows, of whom sixteen had been elected during the year. There had been fifteen deaths. The library had been increased by the addition of 456 books. The library committee had made their triennial inspection, and had reported the state of the library to be satisfactory. In consequence of the increasing want of room for the books, it was in contemplation to build a new reading-room in the rear of the Society's house. It was reported that an index to the *Transactions* of the Society was in progress. The report contained also recommendations for changing the time of meetings of the Society from November to October, ceasing a month earlier, and for the discontinuance of the publication of the *Proceedings*. The report was received.

Dr. Barclay moved, and Mr. R. B. Carter seconded, the adoption of the following recommendation of the Council:—"That, in future, the meetings of the Society be held on the second and fourth Tuesdays in the month (the fourth Tuesday in December excepted), from the second Tuesday in October to the fourth Tuesday in May, instead of from November to June, as at present." This was adopted; and at a subsequent stage of the meeting the necessary alterations were made in the by-laws.

Dr. Barclay next moved, and Mr. Carter seconded the adoption of the recommendation of the Council, "That, for the future, the publication of the Society's proceedings be confined to the volume of *Transactions*, and that the separated publication of the *Proceedings* be discontinued." A long discussion ensued, in the course of which the withdrawal of the *Proceedings* was opposed by Drs. R. Lee, J. Webster, Pavy, and other members, and supported by Mr. Curling, Mr. Spencer Wells, and others. It was urged, on the one hand, that the *Proceedings* at present contained little more than the abstracts of papers and discussions which appeared in the Medical periodicals, and that they had failed in their object of becoming the depositories of short papers; while the opponents of the proposal brought forward the example of the Royal Society, and urged that the intention of the *Proceedings* was not generally known, and that they were capable of improvement.

Dr. John Webster moved, and Dr. Pavy seconded, an amendment remitting the subject to the Council, with the view of considering whether the *Proceedings* could be continued in an amended form. This was carried by a majority of one; sixteen voting for and fifteen against it. It was then carried as a substantive motion by a majority of four.

The following officers and Council were declared to be elected for the ensuing year:—*President:* T. B. Curling, F.R.S. *Vice-Presidents:* H. A. Pitman, M.D.; A. P. Stewart, M.D.; G. D. Pollock; J. A. Bostock. *Treasurers:* W. R. Basham, M.D.; J. Birkett. *Secretaries:* E. Symes Thompson, M.D.; Thomas Smith. *Librarians:* T. K. Chambers, M.D.; C. Brooke, F.R.S. *Other Members of the Council:* G. T. Fincham, M.D.; R. Greenhalgh, M.D.; G. Harley, M.D., F.R.S.; W. Marcet, M.D., F.R.S.; C. Murchison, M.D., F.R.S.; G. G. Gascoyen; J. W. Hulke, F.R.S.; A. Noverre; S. J. A. Salter, F.R.S.; W. S. Savory, F.R.S.

The President then addressed the meeting. He commenced by alluding to the internal commotion which had been going forward in the Society during the last few years with regard to the proposed changes in its name and organisation, and adverted to the fluctuating character of a Society in which the individual elements, as president, officers, and council are constantly giving way to successors to whom it is useless for the retiring Council to leave any legacy of particular measures, but who must be left to act according to their own judgment for the benefit of the Society. After a casual allusion to the illustrious roll of names of former presidents, and the important services the Society had rendered to the Profession, both by its *Transactions* and its library, the President commenced the annual obituary notices of Fellows who had been lost to the Society during the past year, which included the names of Dr. James Copland, Dr. Thomas Mayo, Professor Syme, Dr. W. D. Chowne, Dr. Maclachlan, Mr. Charles Hewitt Moore, Dr. Samuel John Jeaffreson (Leamington), Mr. Thomas Nunneley (Leeds), Mr. Arnold Rogers (consulting Dental Surgeon to St. Bartholomew's Hospital), Mr. John Soden (Bath), Mr. John Badley (Dudley, Worcestershire), Dr. John Christopher Franz, Dr. T. Bacon Phillips (Brighton), and Dr. James Abercrombie (Cape of Good Hope). The President entered into details of the principal events of their lives, introducing many of his own personal recollections of them, and referring to their contributions to the *Transactions* to the Society, and their other published works. Among the points on which he more particularly dwelt were the *magnum opus* of Dr. Copland, his "Dictionary of Practical Medicine," occupying twenty-eight years of the life of its untiring and indefatigable author, an example of indomitable energy impelling natural ability and solid acquirements to a lofty position among contemporaries. The classical learning of Dr. Mayo, and his retentive memory, which enabled him to recite long passages from the ancient poets of Greece and Rome, and which placed him in a class of Physicians gradually becoming extinct, which did much to sustain the prestige of Physicians, and to entitle Medicine to be regarded as one of the learned professions. Professor Syme's early Surgical skill, his position in the foremost rank of Surgeons in Scotland, his removal to London in 1848 and speedy return to his northern home, his long retention of the Professorship of Clinical Surgery there, and his position as one of the highest authorities in Surgery in the United Kingdom; his plainness of speech and irritable temperament, which did not interfere with his generosity and hospitality and the cultivation of the warmest friendships. The quiet, thoughtful, and painstaking manner of the late Mr. Moore, and his conscientious discharge of duties entrusted to him; his career as Lecturer on Anatomy and Surgery and Surgeon to the Middlesex Hospital; the time and energy he devoted to the service of the Society in the different offices he held, from those of Librarian and Secretary, in 1858-62, to his resignation of the Treasurership in 1870, only a few months previous to his death, during which period, not content with the devotion of his time to the management of the affairs of the Society, he had contributed numerous valuable papers to our *Transactions.* In the notice of Mr. John Soden, reference was made to the valuable gift of Medical portraits collected by his father, which on the death of the latter he had presented to the Society, and which became the nucleus of the extensive collection now possessed by the Society. After concluding the biographical notices of deceased Fellows, the President alluded more particularly to the failure of the renewed attempt to accomplish an amalgamation of the Medical societies, and to establish a conjoint society on a broad basis, under the title of a "Royal Society of Medicine;" a similar attempt, about eight years ago, during the presidency of the late Dr. B. Babington, having been made, with the same want of success. The combination of the *disjecta membra* of scientific Medicine into one body, contemplated by its promoters, would undoubtedly have conferred many advantages on all who hereafter entered the Society; but it was necessary to conciliate the separate interests, the feelings, and, he might say, the prejudices of the existing members of the different societies, which seemed insuperable; but when, after oft-repeated meetings of councils and societies, and protracted and acrimonious discussions, they appeared almost overcome, the scheme was superseded by a resolution of our own Society to the effect "That the Council be requested to consider whether, while maintaining the charter and the constitution of the Royal Medical and Chirurgical Society, it may be possible to obtain a more complete co-operation with the Pathological, Clinical, Obstetrical, and Epidemiological or other societies for the promotion of Medical science." No action had been taken by the out-going Council on this resolution, but it had been left for the new Council, should it think fit, to take up its consideration. The President regretted that it had fallen to his lot to preside at so many meetings on this topic, and to have seen so much energy and painstaking ending in an abortive issue; but however favourably he may have looked upon the scheme, he could not, when he witnessed the strenuous and decided opposition it met from many of our own Fellows, and the opposition or lukewarm support of the other societies, desire that it should succeed. The agitation of the last two years had, he believed, been attended with unfavourable effects on the scientific work and material prosperity of the Society, but he earnestly hoped it would now be allowed a period of repose from the disturbing influences of projected changes. He added that his experience on the Council had convinced him that some new regulations for sending papers to referees for reports on their merits would be desirable, and might tend to ensure a more steady supply of papers for discussion at the meetings. In closing his address, the President rendered his acknowledgments and thanks to those who had contributed papers during his term of office; to the Council and officers of the Society for the support, assistance, and advice he had received from them in carrying on the affairs of the Society; to the sub-librarian for the admirable manner in which he performed his duties; and, apologising for anything by which, in the performance of the invidious duties of President at the various extraordinary meetings at which so much discordance of opinion had existed, he had by word or manner hurt the feelings of any Fellow, he concluded his address in these words:—"In the midst of the good fortune which has attended me in my Professional career, I shall never forget the honour you paid me by electing me to preside over this distinguished Society. *Floreat semper.*"

Votes of thanks to Dr. Burrows and to the other retiring officers and Members of Council concluded the proceedings.

THE PATHOLOGICAL SOCIETY.

TUESDAY, FEBRUARY 21, 1871.

Mr. HILTON, F.R.C.S., President, in the Chair.

Dr. **MORELL-MACKENZIE** exhibited a specimen of Constricted Trachea and Syphilitic Deposits in the Liver, which had occurred in a man, aged 39, who was admitted into the Hospital for Diseases of the Throat, November 10, and died on December 28. He had, however, been ill for some weeks previously. The symptoms were those of bronchitis, and there was dulness at the lower part of the right side of the chest, in front. The prominent symptom, however, was dyspnœa of a very severe and paroxysmal character. Several times the patient was for many hours quite unconscious, pulseless, and with scarcely perceptible respiration. Between the attacks the patient was well, and even gained flesh. He died suddenly in an attack of dyspnœa. The trachea, on post-mortem examination, was found, about an inch above the bifurcation, to be contracted to the size of a goose-quill by a puckered cicatrix; there was no thickening external to the trachea. There were numerous deposits of yellow matter in the liver, and a similar deposit in one kidney. The lungs were much congested and emphysematous.

Dr. **FAGGE** thought when he saw the case the trachea and not the larynx was affected, because, though much dyspnœa, there was no interference with voice. He thought the disease might be due to syphilis or to pressure; but there was an unmistakable history of the former.

In reply to Mr. Hulke, Dr. **MACKENZIE** thought contraction was due to previous ulceration, not to fibroid deposit. The vocal cords were healthy.

Dr. **MORELL-MACKENZIE** also exhibited a specimen of Growths in the Larynx of a Dog. The subject from which it had been taken had suffered from feebleness of voice, dyspnœa, and stridor for nine months. The animal became emaciated, and a veterinary surgeon who was called in considered the lungs were extensively diseased, and advised a dose of prussic acid. On post-mortem examination, the lungs were found to be quite healthy, but in the larynx several neoplasms were found. One of these, the size of a small bean, was situated at the posterior part of the left vocal cord, and a smaller one on the same part of the right vocal cord. There was also a fringe of very minute growths along the ventricular bands. Dr. Mackenzie remarked that he believed this specimen to be unique, though there were examples of laryngeal growth in the horse and cow in the museums of Dresden and Fribourg, and there was one specimen of a growth in the larynx of a horse in the Museum of the Royal Veterinary College of London. He had little doubt that if these growths were searched for in the larynx of dogs they would be found to be not at all uncommon.

Dr. Moxon exhibited a specimen of General Colloid Cancer of the Skeleton. He said: This case I bring because I never saw one before, and don't find such a thing on the register of the Society. The characters are very certainly those of areolar gelatinous cancer. There were numerous growths in the skull, vertebræ, sternum, and ribs. The only other parts affected were the corresponding lymphatic glands. Most parts of the tumours show gelatinous areolar cancer of the usual type. But there are parts that run into the characters of sarcoma. My belief is that these elements represent transitional forms from cartilage. Very similar appearances are often found in the tumours from the parotid region in the neck, which vary from mucous tissue and cartilage. The colloid matter is, however, more plentiful in these specimens than usually in the cervical tumours. The extensive diffusion of the tumours in the skeleton and in no other part is interesting, and several such cases have been recorded.

Mr. Hulke asked why he considered the disease primary in the bones, and not in the other organs mentioned.

Dr. Moxon said he could find the disease nowhere else except in glands so placed as to lead to the belief that they were secondarily affected. The bones were also most generally affected.

Mr. West, of Birmingham, exhibited a specimen of Rapidly Growing Cancer of the Upper Jaw. It occurred in a man, aged 24, who had been healthy, except that he had a tumour in either parotid region. In November last pain began in the right upper jaw, and an abscess in the antrum was suspected. He saw the patient in January, and found a swelling protruding the eye and pushing down the soft palate. The submaxillary glands were large and hard. He removed the jaw, but the patient died.

In reply to Mr. Arnott, Mr. West said the hard glands supposed to be strumous were not examined.

MEDICAL SOCIETY OF LONDON.

Monday, February 27.

John Gay, Esq., F.R.C.S., President, in the Chair.

Dr. Crisp read a paper on

SMALL-POX AND ITS PREVENTION, WITH A RECORD OF EXPERIMENTS UPON THE LOWER ANIMALS.

The subjoined are some of the conclusions arrived at by the author:—That no deleterious effect is produced upon the human constitution by the introduction of cow-pox matter—an inference greatly strengthened by the fact that, since the introduction of vaccination, the population of the United Kingdom has nearly doubled. That Government Hospitals should be established in the metropolis, in suitable localities, and provided with proper vehicles for the conveyance of patients, and with proper heat-chambers for disinfection. That, looking to the important fact that in ten years—1851 to 1860—42,071 deaths occurred in England and Wales from small-pox, and that 37,007 of these deaths were in young persons under 13 years of age, the recommendation given by the Privy Council and by the London College of Physicians should not be followed, but that where there is danger of infection, children of all ages should be revaccinated. That there is no sufficient reason why lymph, during the time of an epidemic, when it is often difficult to procure, should not be taken from adult persons, provided they are free from disease and the vesicle presents a normal appearance. That more extended observations are needed before we can come to the conclusion that the amount of exemption from small-pox depends upon the number of marks upon the arms from previous vaccination. That, before this and other contagious diseases are likely to be greatly arrested, a central board of health should be established, to regulate all matters relating to the health of the people; and that, irrespective of Medical officers of health, who should exist in all large cities and towns, an inspector for each county should be appointed, whose duty it should be to collect and arrange all important information from the Medical Officers of Health and from the Poor-law Medical Officers, and report weekly to the central authority respecting the prevailing diseases and other sanitary matters.

NEW INVENTIONS.

◆

HERRING'S ALCOHOLIC SOLUTION OF SULPHUROUS ACID.

The Messrs. Herring, of 40, Aldersgate-street, have forwarded to us a sample of their alcoholic solution of sulphurous acid, a description of which we may quote from their letter—

"The solution is produced by passing sulphurous anhydride in a purified state into alcohol (90 per cent.), until one volume contains 100 volumes of the gas, or 27·2 per cent. by weight. Such solution is at least ten times as powerful as the ordinary sulphurous acid of commerce, and upwards of five times the strength of the recognised officinal solution now used in medicine. The rapid evaporation of this alcoholic solution upon exposure to air, and consequent disengagement of 100 times its volume of the powerful reducing agent with which it is saturated, must, we think, claim for it a trial in those cases in which the use of powerful disinfectants is found to be necessary."

The preparation is a colourless liquid, of intensely pungent sulphurous smell, and instantly bleaching litmus. We should recommend it for all the cases in which sulphurous acid is used by our energetic friend Dr. Dewar, and others—as a disinfectant and deodoriser of the air; as a gargle, or in form of spray to the throat (properly diluted); as a disinfectant of larders, kitchens, etc.; and means of extinguishing contagion.

CHALYBEATE LEMONADE, AND CHALYBEATE SALINE LEMONADE, ETC.

(*May-Davis and Co., Esher-street, Page-street, Westminster.*)

We are of those who think that the distinction often drawn between food and physic is arbitrary and untrue. The food ought to contain everything essential for the due discharge of every animal function necessary for health, comfort, and work; for the action of the bowels, the due secretion of water, the proper growth and building-up and repair of the tissues, and the performance of cerebral functions. If either of these are in default, instinct and experience should teach us to accommodate our food to our wants—to add some acid fruit to our diet, or more water, or more salt, or fat, or some sugar, or alcohol, or coffee, as the case may be. These failing, experience has taught civilised man to use drugs or extraordinary adjuncts to do what ordinary food cannot do. Most drugs are nauseous, but there is no reason why they should not be rendered as palatable by art as ordinary food is by nature. We wish there were—and we throw in the hint that there ought to be—devised certain subtle combinations of tonics, nutrients, salines, palatable enough to be used at meals. Messrs. May-Davis have set an example: they have introduced steel as a refreshing beverage, in which no steel is tasted except as an *arrière pensée*. One form is dosed with saline matter, for the benefit of those whose kidneys require a fillip. Both are useful and palatable conversions of the "nauseous draught" into the sparkling beverage.

TAPIOCA BEEF, BOUILLON COMPANY'S SOUP (GEYELIN'S), LIEBIG'S EXTRACT OF MEAT, AND BRAZIL TAPIOCA COMBINED.

This preparation answers to its description; it makes a nutritious and agreeable soup at small cost and little trouble.

AGNEW'S COD-LIVER OIL JELLY.

(*James Agnew, 278, Great Homer-street, Liverpool.*)

We have received a sample of this jelly, which we should think well suited for some patients who cannot take the oil in its natural state.

The ten Naval Medical Officers just appointed to H.M.S. *Duke of Wellington* will be on full pay of 11s. per diem from the first inst. The position of these gentlemen will bear a favourable comparison with that occupied by their brethren of thirty years ago, who served on 6s. 6d. a day, and fared badly in the cockpit.

A formal verdict of not guilty has been taken, Lady Sandys having consented to withdraw from the charge of libel, in the case of the Hon. Cecil Sandys, sister of Lord Sandys, against Mrs. Waters, wife of a Physician at Worcester.

MEDICAL NEWS.

◆

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 2, 1871:—

Edmundson, Thomas Robert, Guy's Hospital.
Evans, Edward Beynon, Swansea.

The following gentlemen also on the same day passed their First Professional Examination:—

Dove, Harry, St. Bartholomew's Hospital.
Stone, Charles Henry Augustus, Guy's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Coles, Geo. Chas., M.R.C.S.—Assistant-Surgeon to the Royal South London Ophthalmic Hospital.

Pottle, Edgar George, L.R.C.P., M.R.C.S., etc.—Medical Officer to the St. Luke's Temporary Small-pox Hospital.

MILITARY APPOINTMENTS.

Brevet.—Staff Surgeon-Major David Stuart Erskine Bain, M.D., who retires upon half-pay, to have the honorary rank of Deputy Inspector-General of Hospitals.

Medical Department.—Surgeon Francis Holton, M.B., from 77th Foot, to be Staff Surgeon, *vice* Samuel Pratt Woodfull, who exchanges; Assistant-Surgeon William O'Halloran, from Royal Artillery, to be Staff Surgeon, *vice* Staff Surgeon-Major David Stuart Erskine Bain, M.D., who retires upon half-pay; Assistant-Surgeon David Arno Smet Thorburn, M.D., from the 36th Foot, to be Staff Assistant-Surgeon, *vice* Richard Gerald Fitz Gerald, appointed to the 36th Foot; Staff Assistant-Surgeon R. A. Hyde has been permitted to retire upon temporary half-pay.

Royal Artillery.—Staff Assistant-Surgeon James Edward Clark, to be Assistant-Surgeon, *vice* William O'Halloran, promoted on the Staff.

36th Foot.—Staff Assistant-Surgeon Richard Gerald Fitz Gerald, to be Assistant-Surgeon, *vice* David Arno Smet Thorburn, M.D., appointed to the Staff.

77th Foot.—Staff Surgeon Samuel Pratt Woodfull, to be Surgeon, *vice* Francis Holton, M.B., who exchanges.

BIRTHS.

Bond.—On February 28, at Havant, Hants, the wife of St. Quentin Bond, M.R.C.S., of a son.

Brunjes.—On March 7, at 42, Brook-street, Grosvenor-square, Marian, the wife of Martin Brunjes, M.R.C.S., of a daughter.

Deacon.—On March 1, at the residence of J. R. Freeman, Esq., Upper Hamilton-terrace, St. John's-wood, the wife of Henry Pelham Deacon, M.R.C.S. Eng., of Ottery St. Mary, Devon, prematurely of a son.

Hunter.—On March 2, at 18, Abercrombie-place, Edinburgh, the wife of James A. Hunter, M.D., of a son.

Lewis.—On February 4, at Meerut, East Indies, the wife of Alfred Lewis, M.D., 4th (Q. O.) Hussars, of a son.

Miller.—On March 3, the wife of J. N. Miller, M.D., Blackheath, of a daughter.

Robbs.—On March 3, at Stamford, the wife of W. E. Robbs, M.B., of a daughter.

Ridge.—On March 4, at 30, Grafton-square, Clapham, the wife of J. James Ridge, M.D. Lond., of a son.

Shaw.—On February 28, at Thornhill, Dumfriesshire, the wife of Robert Shaw, M.B. and C.M., of a son.

Thomson.—On March 4, at Dunedin, Bournemouth, the wife of J. Roberts Thomson, M.D., of a son.

MARRIAGES.

Browne—Dall.—On March 8, at North Berwick, by the Rev. Ebenezer Dall, uncle to the bride and bridegroom, assisted by the Rev. Mr. Calvert, Dr. Thos. Browne, R.N., H.M.S. *Excellent*, to Agnes Robertson, second daughter of the late James Dall, Esq., J.P., North Berwick, East Lothian.

Campbell—Alleyne.—On March 1, at St. Stephen's Church, Paddington, Major Robert Campbell, late 46th Regiment, of Albert Villas, Clifton, second son of the late James Campbell, Esq., of Craignish, to Anna Maria, eldest daughter of the late James Holder Alleyne, M.D., formerly Colonial Surgeon of British Guiana, and of Gloucester-place, Hyde-park.

Mathews—Wilkinson.—On March 2, at All Saints' Church, St. John's-wood, Francis Claughton Mathews, son of J. Mathews, Esq., of Edgbaston, to Mary, youngest daughter of James John Garth Wilkinson, M.D., of No. 4, Finchley-road, St. John's-wood.

DEATHS.

Canhan, Joseph, M.D., J.P. for the county of Kent and the Cinque Ports, on February 28, in London, aged 75.

Carne, Charles, M.R.C.S., son of the late John Carne, of Tresillian, near Truro, on February 25, aged 53.

Growse, Eliza, relict of the late John Growse, Surgeon, at Hadleigh, Suffolk, on February 27.

Hubert, T. K., M.D., late of Billinghurst, Sussex, at Nelson, New Zealand, on December 22, 1870, aged 29, deeply lamented by all who knew him.

Mackinnon, Dr. Campbell, C.B., Inspector-General of Hospitals, and Honorary Physician to the Queen, at Campbeltown, on March 2.

Paul, Reginald, youngest child of Dr. Paul, at 26, Burton-crescent, on March 3, aged 2 years and 7 months.

Sankey, Francis Fremoult, M.D., R.N., late of Malta, at Carlsruhe House, Malvern Wells, on March 2, in his 81st year.

Waterfield, Thomas, M.D. Cantab., F.R.C.P., at 19, South-street, Thurloe-square, on March 5, aged 81.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham (Parish of).—Medical Officers wanted for five districts of this parish. Candidates must be duly qualified and registered. Applications and testimonials to be addressed "To the Guardians of the Poor of Birmingham," on or before March 15. Election on the 22nd inst.

Dundee Royal Infirmary.—House-Surgeon. Further particulars of the Secretary, on or before March 22.

Dursley Union.—Medical Officer for District No. 3. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to G. Wenden, Clerk to the Guardians, on or before March 15.

Hartlepool Hospital.—House-Surgeon and Secretary; must have both Medical and Surgical qualifications, and be registered. Applications testimonials to the Secretary, at the Hospital.

Hospital for Women, Soho-square, W.—Assistant-Physician; must be a graduate in Medicine of some recognised University, and be M.R.C.S. Applications and testimonials to H. B. Ingram, Secretary, on or before March 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Knighton Union, Radnorshire.—Medical Officer for the Brampton Brian District. Applications and testimonials to E. H. Deacon, Clerk to the Guardians, on or before March 15.

Liverpool Dispensaries.—Two Assistant Resident House-Surgeons are wanted. Candidates must be duly qualified and registered. Applications and testimonials to the Secretary, at the Dispensaries Office, Leith Offices, Liverpool, on or before March 28.

Metropolitan Free Hospital.—House-Surgeon. Applications and testimonials to the Secretary, on or before March 14.

Middlesex Hospital Medical College.—Lectureship on Physiology. Applications and testimonials to the Dean, on or before March 30.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

Thornbury Union.—Medical Officer for the Almondsbury District. Candidates must be duly qualified and registered. Applications and testimonials to the Clerk's Office, Thornbury, on or before March 16. Election on the 17th.

Tullamore Union.—Kilbeggan Dispensary District.—Medical Officer; candidates must be duly qualified and registered. Applications and testimonials to M. M'Manus, Hon. Sec., Kilbeggan, on or before March 13. Personal attendance of candidates will be required.

West London Hospital.—Junior Surgeon; must be a Fellow of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Secretary, on or before April 12.

Westminster Hospital.—Resident Obstetric Assistant; must be duly qualified and registered. Applications to the Secretary, on or before March 14.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

APPOINTMENTS.

Banbury Union.—James Dewar, L.F.P. and S. Glasg., to the Middleton Cheney District.

Farnham Union.—Robert O. Clark, M.R.C.S. Eng., L.S.A., to the North District.

St. Asaph Union.—John R. Hughes, M.D. Edin., M.R.C.S. Eng., L.S.A., to the Denbigh District.

Thame Union.—Timothy W. Lee, M.R.C.S. Eng., L.S.A., to the Great and Little Milton Districts.

Wrexham Union.—Thomas L. Browne, M.R.C.S. Eng., L.R.C.P. Edin., to the Hope and Tryddyn District.

Professor Corfield desires us to say that his name was mentioned as a candidate for the vacant Assistant-Physiciancy at the Brompton Hospital by mistake.

Dr. Heywood Smith, of Portugal-street, Grosvenor-square, has been appointed a Physician to the Hospital for Women, Soho-square.

By the death of Dr. Campbell Mackinnon, C.B., the post of Inspector-General of Hospitals in Scotland has become vacant.

The President and Committee of the Quekett Microscopical Club have issued cards for a *conversazione* at University College, Gower-street, on Friday evening, March 17, at 8 o'clock.

The gentlemen who have passed their examination at Chelsea Hospital, for admission to the Army Medical Department, will, we believe, be gazetted as Assistant-Surgeons early in April.

At the Countess Granville's brilliant "at home," given on Saturday last, at the Foreign Office, the following members of the Medical Profession were present:—Dr. Burrows, Dr. Gerrard, Dr. Reynolds, Dr. Storrar, Dr. Gull, Dr. Braxton Hicks, Dr. Playfair, Dr. Brewer, M.P., Dr. Greenhow, Dr. Carpenter, Professor Huxley, Dr. Sibson, Dr. Quin, Dr. Priestley, etc.

We regret to learn that the Asylum for Idiots is suffering from straitness of funds.

The *Overland China Mail* says that small-pox was prevalent at Hong-Kong.

In the Bankruptcy Court, on Monday, in two cases, the sittings for examination were adjourned in consequence of the bankrupts having the small-pox.

The *Oswestry Advertiser* says, "The small-pox has gradually approached us until it is in our midst. We hear of it at Llanfyllin, where there are said to be thirty cases, at St. Martin's, and at Oswestry."

Mr. Spooner, the stipendiary magistrate at Wolverhampton, has ruled that in a prosecution for neglect of vaccination, it is necessary to produce the child, and prove that vaccination has not been performed. He has granted a case on the point for argument in the superior courts.

At a recent meeting of the Trustees of the Chard, Crewkerne, Ilminster, and South Petherton Friendly Society, it was resolved that, in consequence of the impracticability of reinstating it, the funds, amounting to about £600, should be divided between the Crewkerne Hospital and the Taunton Hospital—one-third to the former, two-thirds to the latter.

The *Gaulois* says that "two celebrated English Surgeons, Drs. Wyatt and Gordon, who, after having brought gifts from their country for the French sick and wounded, remained in Paris, where they shared the privations and dangers of the siege, have been named Officers of the Legion of Honour. Dr. Wyatt has prepared a valuable account of the treatment of wounds and sickness in the Hospitals."

Mr. Warde, an *attaché* of the English Embassy at St. Petersburgh, has died from the effects of a malignant abscess, caused by a bite on the lip by a parrot.

The Dublin Poor-law Union Guardians are adopting the practice of sending the drugs and medicines supplied for the use of the in-door paupers to a chemist for analysation. It has been discovered that certain samples, forwarded for this purpose, were of an adulterated or very inferior quality.

Dr. W. H. Stone, M.A., has been lecturing at the London Institution, on the Acoustics of the Orchestra. In his exordium he enforced the importance of cultivating the sense of hearing, showing the great value in the case of the Physician, who, in these days, depended so much on auscultation.

Glasgow Ophthalmic Institution.—This Institution seems, from the report just presented to the Annual General Meeting, to be in a prosperous condition. The number of individuals under treatment prior to November 1, 1869, was 450; new cases admitted, 139; out-door patients, 1465; total, 2054. The cash statement showed that £1881 19s. 7d. had been received, and that the balance in hand, after paying £1287 19s. towards the "building fund," was £303 9s. 3d.

Mortality in Paris.—In 1869-70, from September 18 to February 24, the number of deaths in Paris was 21,978; in the corresponding period just concluded, the number was 64,154.

Benevolence.—The Great Northern Hospital has received from "S. W. G." a third sum of £1000; the National Society for the protection of young girls, Wanstead, a third gift of £1000 from "D. H."; and the Infant Orphan Asylum a second sum of £1000 from "G. W."

The Blair Infirmary, Bolton.—Mr. Jas. Knowles, of Eagley, has offered five acres of land at Turton as a site, if the trustees should deem it suitable. The proposed Infirmary is to be erected at a cost of £30,000, and Mr. Blair bequeathed a further sum of £10,000 as an endowment.

Washable Paper.—We (*Builder*) have been looking at some specimens of washable paperhangings, which seem to possess important economic and sanitary advantages; the surface is non-absorbent, whilst it has the same dead, unpolished appearance as the ordinary paper, and is quite as cheap. Its capabilities of being cleaned by simple washing with soap and water render it peculiarly suitable for nurseries, bed-rooms, Hospital and asylum wards, as, after infectious diseases, it would be only necessary to scour the walls like paint, instead of entirely renovating. Whilst destructive to insect life, it is in nowise injurious to human beings.

Hydrophobia is so prevalent in the neighbourhood of Wigan, that the Mayor of that borough has issued an order directing all dogs to be confined for a month.

Death from Hydrophobia.—On Saturday an inquest was held at Bolton as to the death of a girl named Ann Bradbury, aged 4 years. On Tuesday, the 14th ult., the child was bitten, along with several other children, by a rabid dog, which had been roaming about the country for two or three days. The mother took the child to Dr. Cawthorne, who cauterised the wound, but on Friday a change took place in the child, and she was removed to the Infirmary, where she died on Saturday. A verdict in accordance with these facts was returned, and a representation to the Mayor to order all dogs to be confined for some time to come was agreed upon.

Sewage Defæcation.—Mr. Bayley Denton's system for purifying sewage, by filtration through several feet of soil, the liquid being collected in subterranean drains and conveyed into the river, is working admirably at Merthyr. The whole of the sewage of the town is discharged upon twenty acres of land, and the water, as it issues from the drains of the filtration, on analytic test, contains nothing but a little sand and iron—a capital tonic.

Spongy Iron as a Deodoriser.—Dr. Voelcker declares spongy iron to be a deodorising material of greater power than animal charcoal. Sewage water passed through a filter of this substance is said to be completely purified; and this filtered water, after having been kept six months protected from the air, has been found to be perfectly sweet and free from any fungoid growth. The spongy iron is obtained by calcining a finely divided iron-ore with charcoal.

Kilmainham Hospital, Dublin.—The Committee appointed to report on the Royal Hospital of Kilmainham, have recommended that extra inducements be offered to nurses to take service in the Hospital, and have pronounced, decidedly, against the monastic character of the institution and the excessive quantity of the rations issued to the inmates. The Committee also state that if certain officers of out-pensioners were quartered elsewhere, and certain reductions made in the staff of the Hospital, there would be accommodation and funds for the admission of forty more pensioners. The vacancy amongst the captains of invalids, caused by the death, in November last, of Captain H. Nicholson, is not to be filled.

Royal Institution of Great Britain.—At the general monthly meeting, held on Monday, March 6, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, William Blenkin, Esq., John Browning, Esq., Edward Maynard Denny, Esq., Frederick A. Eck, Esq., Sir Frederick Elliot, K.C.M.G., Colonel Augustus Lane Fox, Paul Graham, Esq., Colonel James Augustus Grant, C.B., Edward Walter Grubbe, Esq., George Harcourt, M.D., Captain F. Helbert, George William Henderson, Esq., George Middleton Keill, Esq., John Kennedy, M.D., James Macauley, Esq., Kenneth Robert Murchison, Esq., Mrs. Sheffield Neave, George W. Royston Pigott, M.A., Eustratios Ralli, Esq., Francis Savage Reilly, Esq., Wm. Chandler Roberts, Esq., W. Dehague Routh, Esq., Mrs. W. Castle Smith, and Thomas Sowerby, Esq., were elected members of the Royal Institution.

An interesting account of a case of self-imposed starvation, nearly ending in death, is related by the Medical Officer of the Military Prison in Cork. A soldier, a man of extremely bad antecedents, aged 25 years, was admitted into the prison on June 10, 1869. He frequently reported himself sick, but on no occasion was there the slightest symptom of any ailment detected. On September 7, and for three subsequent days, he was on the sick list, and on each occasion was most carefully examined, and found to be in excellent health. On the 11th he refused to do any prison duty, and lay down in the prison yard. From this date he refused all food. He was carefully examined day after day, but no trace of any disease could be detected while he remained in prison. He became weaker daily, and on the 19th his pulse fell to 56, and was soft, equable, and obliterated by the slightest pressure. His respirations were ten in the minute, his tongue dry, but clean; his eyes became dull and glassy, and his voice whispering. As his condition was now alarming, and he still refused food, preparation was made to feed him with the stomach-pump, but, on seeing this course would be adopted, he took several spoonfuls of sago, and wine, broth and milk. These were frequently repeated until the following day, the 20th, when he was sufficiently recovered to be removed to the Garrison Hospital. His intellect continued clear, and he answered coherently every question put to him. During these nine days' abstinence from food, he drank water freely. He weighed 138 pounds while in prison, and on transfer to Hospital 112 pounds, thus losing twenty-six pounds, owing to his determined abstinence from food. The Medical officer had no doubt that the man was quite free from all disease, mental and physical, and starved himself to escape prison duties, in effecting which object, however, he very nearly sacrificed his life.

THE ROYAL SANITARY COMMISSION has concluded its protracted labours, and completed its very voluminous report. It is said the Commissioners have done their work so thoroughly that they have brought together the materials for the new statute in a compendious form. Their proposals are really of gigantic dimensions. There is even a suggestion of a great central authority to swallow up the Poor-law and Public Health Departments, the Local Government Act Office, the Registrar-General's Office, and certain sanitary powers now exercised under the Home Office, the Board of Trade, and the Privy Council. Every local health-authority would be required to appoint a Medical Officer of Health, while, "in order to keep all the local authorities well up to their work," an adequate staff of central inspectors would be necessary, and it is proposed to combine the inspectors now attached to the Privy Council, the Home Office, the Local Government Office, and the Poor-law Board, into one inspectorate. The final recommendation is that the registration of births should be made compulsory in England, as in other parts of the United Kingdom, and it is also proposed that a registration of disease should be instituted such registration to be confined, at the outset, to cases occurring throughout the public Medical practice of the country, and to embrace only such details as can be satisfactorily obtained, and as may be most useful for the purposes of sanitary inquiry.

THE MEDICAL POOR-LAW INSPECTORSHIP.—We understand that the Poor-law Medical Inspectorship, vacant by the death of the late lamented Dr. Hill, has been conferred on Dr. Burke, of Westport. We are gratified to find that the Poor-law Commissioners, in appointing this gentleman, have recognised the principle of promotion in the service. Dr. Burke belongs to that most valuable and hard-worked body, the Dispensary Physicians of Ireland. It is only right that when any office for which such gentlemen are peculiarly adapted becomes vacant it should be filled from their ranks. Underpaid and overworked, it is the least that this most deserving body, numbering one-half the Medical men of Ireland, should be able to look forward to such advancement as has been given on the present occasion to one of their most efficient members. The Poor-law Medical Officers' Association of Ireland may congratulate itself on the establishment of this precedent, which it strongly urged on the Commissioners in a resolution adopted a few weeks ago.

MORTALITY OF PARIS.—The following is a complete statement of the mortality of Paris for the period of the siege as compared with the parallel period in the previous year:—

For the Week ending		1869-70.	1870-71.
September	24	820	1272
October	1	718	1134
,,	8	747	1483
,,	15	752	1610
,,	22	825	1746
,,	29	880	1878
November	5	921	1762
,,	12	877	1885
,,	19	900	2064
,,	26	933	1927
December	3	846	2023
,,	10	882	2435
,,	17	955	2728
,,	24	980	2728
,,	31	921	3380
January	6	1106	3680
,,	13	998	3983
,,	20	980	4465
,,	27	1044	4376
February	3	1105	4671
,,	10	1139	4451
,,	17	1292	4103
,,	24	1362	3941
Total		21,978	64,154

[illegible] it has only to be added that in the last week the [illegible]ty has fallen to 3500. The deaths from small-pox have been reduced to 134.—*Daily News.*

ROYAL COLLEGE OF SURGEONS.—The proceedings of the ordinary meeting of the Council, on the 2nd inst., were, as usual, suspended in the hall on Thursday for the inspection of members. After the transaction of some uninteresting proceedings, the Council proceeded to the consideration of the draft scheme for an examining board in England, prepared by the Committees of the Royal College of Physicians of London, of the Royal College of Surgeons of England, and of the Society of Apothecaries of London. It was moved and seconded:—"That Section 1 of such scheme be adopted, viz.—1. That one board of examiners in this division of the United Kingdom be appointed by the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London, for the examination of candidates who desire to practise Medicine, Surgery, and Midwifery." Moved, as an amendment, by Mr. Simon, and seconded by Dr. Humphry—"That the Council of the Royal College of Surgeons disapproves of the present draft scheme for a Conjoint Examining Board for England, and remits it to the Committee for reconsideration, with particular reference to the following two points, viz.:—First, that the Council, when it agreed to negotiate for the formation of a Conjoint Board, intended and understood, as the basis of the negotiations, that from and after the formation of a conjoint board, each of the co-operating Medical authorities would, as far as possible, refrain from exercising its previous separate privilege of giving admission to the Medical Register, and that the Council cannot consent to take part with other Medical authorities in constituting a Conjoint Board, unless such authorities consider themselves bound by that principal. Secondly, that the Council hoped to see the English Universities associated with the English Medical Corporations as contributories of examiners or assessors to the constitution of the Conjoint Board, and cannot willingly concur in any proposal which excludes the Universities from so acting." The votes of the Council were thereupon taken on the amendment, and on the demand of Messrs. Simon and Hewett, the names of those voting for and against the same were directed to be entered on the minutes, viz:—Majority for the amendment, seven: Mr. Lane, Mr. Curling, Mr. Hewett, Mr. Birkett, Mr. Simon, Dr. Humphry, Mr. Lee. Minority, against the amendment, six: Mr. South, Mr. Hilton, Mr. Busk, Mr. Hancock, Mr. Holden, Mr. Wilson. The amendment was consequently carried. A letter was read from Mr. Oliver Pemberton, of Birmingham, requesting election as an Honorary Fellow under the charter relating to members of twenty years' standing. Whereupon it was resolved that Mr. Pemberton be referred to clauses 7, 8, 9, section xxii. of the by-laws, and that, without bringing their communications before the Council, any future applicants for admission to the Fellowship on similar terms be referred to the above clauses. A letter was read from Dr. C. E. Saunders, of Hayward's-heath, a member of the College, advocating the enactment by the Council of a by-law enabling graduates in Medicine of British Universities to be admitted to a modified examination for the Fellowship. Dr. Saunders was informed that his letter had been duly submitted to the Council. It will be in the recollection of the readers of the *Medical Times and Gazette* that formerly graduates in Medicine were examined in Surgery only; this regulation, however, was soon after rescinded. Mr. Solly's resignation as an examiner was received, and a special meeting of the Council appointed for Wednesday next to fill up such vacancy. The thanks of the Council were voted to Sir William Fergusson, Bart., for his oration, with a request that he would publish the same. Dr. William McCormac was admitted a Fellow of the College, and Messrs. Edward Bradford, of Harrow, and Henry Weekes, of Barnstaple, were elected Fellows, their diplomas of Membership bearing date respectively, June 16, 1826, and July 1, 1836.

IN a paper read before the Surgical Society of Ireland, "On the Connexion between Certain Defective Sanitary Conditions and Disease," Dr. Charles Frederick Moore speaks of the difficulties attending investigations into the causes of a given case of disease, whilst he regards it as well established that certain conditions favour the development of zymotic and other disorders. Less frequent respiration, followed by permanent amendment, occurred on improving the ventilation of the bedroom of a child sick with a gastric febrile attack, Dr. Leyden's recent experiments showing that the increased excretion of carbonic acid aids the solution of the case just mentioned, and justifies long experience on scientific grounds. Dr. Moore alluded to the injurious effects of contamination of the air of dwelling-houses, factories, etc., by imperfect arrangements in the use of firing and gas, and gave cases where scamping in the construction of sewers produced serious illness, mentioning many forms of imperfect drainage to which grave results owed their origin. Typhus in a fatal form occurred in a house saturated with sewage matters; in another instance gastric fever, scrofulous and bronchial affections haunted a house similarly circumstanced. Overcrowding, deficient ventilation, want of cleanliness, and close proximity to a rag-store are the leading features of a house in Dublin (with nearly one hundred inhabitants) that acts as a focus of disease, in which seven children have died within less than the same number of months. An important case, similar, in some features, to one related before the Chemical Section of the Philosophical Society of Glasgow, and to another mentioned by Mr. S. J. Barber, is recorded from Dr. Moore's practice, in which corrosion of the lead trap of a water-closet was due to the action of carbonic acid, generated by decomposing organic matter, according to Mr. Charles R. C. Tichborne's opinion, who corroborated Dr. Moore's analysis of the injured lead. Inhalation of sewer gases, as generally experienced, produces disease in different forms, according to the condition of the sufferer, as to age, sex, and strength, and also varies with the climate, locality, season of the year, etc.

THE quality of the food served out to the prisoners is, generally speaking, good and abundant. This, however, does not always prevent complaints being made in regard to it; for, when people have nothing to do but grumble, the cooking always affords a ready theme for discontent. I have seen, at the extravagantly covered tables of the hotels in America, noses turned up at dishes which would have constituted the glory of a Paris restaurant in the piping times of peace. To show the sufficiency of the rations allowed, I will quote the dietary list for a single day, which I was allowed to take down from the wall of the steam-cooking establishment of the camp at Mayence, against which so many hard things were justly said at the commencement of the war. Dietary of the Privates: Per man, 9 ozs. of beef, 7 ozs. of pork, or 5 ozs. of salt pork; 20 ozs. of haricot beans, peas, or lentils; 12 ozs. of rice or barley; 1 oz. of flour is added to the haricots or peas; 1 oz. of coffee, 1 oz. of sugar, 1½ lbs. of bread.—*Report made to the Executive Committee of the Society for Clothing the French Prisoners in Germany, by Thomas W. Evans, M.D.*

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

H. P.—Try Curtis's preparation.

North Subscriber.—Dr. Macleod, Ben-Rhydding, Yorkshire.

Barker-street, Birmingham.—A wrapper bearing this post-mark has come to hand without contents.

Buckle's "Cinchona Fluida."—We are informed that Mr. Buckle, the well-known chemical operator, has given the distinctive name "*Cinchona Fluida*" to his liquid extract of bark.

B.—Dr. Dewar's antiseptic fuel may be obtained from himself at Kirkcaldy. It is a very convenient and effectual means of fumigating with sulphurous and carbolic acids. It is in the form of cakes, which may be considered as huge pastilles, and which smoulder on when once set on fire.

Tyro.—Wafer-papers to enwrap nauseous medicines may be had of most chemists. They are sold by Maw, of Aldersgate-street, under the name of "*Pains Azymes.*" They are moistened to make them flexible, and the powder or the substance wrapped in them in the form of a bolus is easily swallowed. By-the-bye, the *bolus*, which may be as large as a dozen pills, is a neglected form of medicine. They are no larger than "capsules."

"A MINISTER OF HEALTH AND THE POOR."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Now that the powers which have been divided between the Poor-law Board and the Home-office are likely to be consolidated under one central authority—viz., a "Minister of Health and the Poor," it is to be hoped that beneficial results will soon show themselves, by the poor having a better practical acquaintance with the conditions of health than they have had under the old *régime*.

The next step I would suggest is, for health to be brought to the rich man's door by means of some fresh organisation; but that, I suppose, would necessitate a new department, or a rearrangement of an old one. It is not for me to say how it is to be done: my duty is performed when I have pointed out the need that exists for enforcing sanitary observances in households of every degree; for with reference to ash-pits, pig-tubs, drains, sinks, and other nuisances which produce noxious effluvia, houses in so-called "first-class localities" are most objectionable, and the authorities would do well to take a warning before the hot weather sets in, and devise some plan by which the inhabitants of every locality—whether rich or poor—may be under the same compulsion to purify their dwellings, in order that they may not be a centre of fever and infection, and a source of annoyance to their neighbours. I am, &c., M. A. B.

March 6.

We are really very sorry, but we fear we cannot help it, and therefore cannot promise never to do so any more; but we begin to think we cannot touch on homœopathy without offending its votaries. On two separate occasions last month have we committed ourselves so far as to fall under the unsparing lash of our contemporary, the monthly *Homœopathic Review*, once with regard to the honour due to Hahnemann, and again with regard to that homœopathic diagnosis. Do we desire to detract from the honour and glory of their high priest? Far be it from us. Did he not discover the secret of all chronic disease—es liegt innere psora zu Grunde-hiddenitch is at the root of the matter, and the 30th dilution of sulphur (itself being insoluble) is the cure for all things. And did he not, by the help of the cunning Cajetan Nenning, invent a whole Materia Medica pura, which is capable of exciting a feeling of disgust in the minds of some of his more truth-speaking followers. Peace be to his ashes! He was a gigantic humbug! And then about that diagnosis. We really beg the pardon of the honourable fraternity for supposing them guilty of such a coarse allopathic procedure; doubtless, the skilled Practitioner carefully compiled the symptoms, turned to his repertory, and, after a few trials, succeeded in finding the exact homœopathic remedy. Many a one, now, would like to know the exact homœopathic remedy for an impregnated uterus. Pathology the brotherhood ignore; diagnosis is to them as nothing; but therapeutics they are great in!

BICHLORIDE OF METHYLENE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Mr. C. Gaine, whilst comparing bichloride of methylene with the protoxide of nitrogen, forgets to state that bichloride is unpleasant whilst the nitrous oxide has a pleasant taste; he might also have added that the bichloride has not proved itself safe—the gas has; and last, and certainly not least, the methylene produces nausea, and often vomiting—the nitrous oxide does not. I am, &c. MORDAUNT STEVENS,
House-Surgeon, Dental Hospital, Soho-square.

R. B.—There can be no doubt that the statement is accurate.

N. B.—The quotation is from *Celsus.*

A Partner.—Recourse to law should be avoided. The matter should be settled by arbitration and by Medical friends.

REMARKS ON ANNUAL RETURNS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—This annual sanitary report may amuse your readers. The author is a very good specimen of his class; and his Professional skill is, I am glad to say, very much better than his English. Your's faithfully,

Camp, ——, January 17. ——.

"During this year very heavy rains falls & Fever attacked to the persons over and over in which many persons were died, Fever not yet removed from this City.

"Kerrowlee is a Small City & hills around of it, a Muddee river called Bhudrawatee drawn near the City in which the people burns death bodies & Camel, Horses, Elephants & all the Cattles bathing in it, also the men bath there & washing their dirty Clothes inconsequence of which they got Itch & for their doing hard labor in the hit of the sun Opthalmia attacked to them.

"The people kept themselves very dirty state & also the City kept unclean in which several disease attacked to the men of this City.

"Kerrowlee, January 13. ———, M.D., In Charge Dispensary."

This is a sample of the kind of French or German many of ourselves would write.

Poet's Corner.—The lines on John Hunter to which you allude were written by the eldest son of Sir William Fergusson.

An Old Subscriber, Plymouth.—The first number of the *Medical Times* was published on September 28, 1839.

Cuvier.—Mr. Frank Buckland, M.A., is a Member of the London College of Surgeons. He was formerly a Surgeon in the army—we believe the Horse Guards Blue. His father was the Dean of Westminster.

VACCINATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I think it is now time that the public vaccinators should make known their experience of the system of having one instead of many vaccinators.

During the last twelve months of my office as public vaccinator to a third part of the city of Worcester, I vaccinated 156 subjects. During the last twelve months of my office as public vaccinator to the whole of the city, I vaccinated 789 subjects—five times the former number.

At the time when I was appointed sole vaccinator, the Act was almost ignored, and scarcely any children were brought to the station. Being in some measure wholly responsible (practically) for the carrying out of the Act, I made very frequent appeals to the Board of Guardians, the consequence of which has been "the issue of public notices on several occasions," "distribution of handbills," "appointment of a vaccination officer," "the successful prosecution of defaulters before the magistrates," etc., etc.

There has lately been a good attendance of applicants for vaccination at the station (which was appointed, at my suggestion, in the centre of the city), and I believe that in a short time almost every child will be accounted for.

The advantage of using fresh lymph (which I have done in every case since I have been sole vaccinator) and having a large number of subjects to select from, is beyond all doubt very great. It is no small advantage, either, for local and surrounding Practitioners to know where they can always obtain lymph without fail. I have scarcely refused one applicant as yet. Last week I supplied one country Practitioner with [illegible] dozen points for revaccination, and to-morrow I shall send four o[illegible]ered two more. This in itself is no slight aid to the extension of t[illegible]nine vaccination. I am, &c., WM. WOODWARD, M.[illegible]

Worcester, March 3. Public Vaccinator to the Worcester Union.

C.—The penalty is £20. It is doubtful whether the Act of 1815 was repealed by the Medical Act.

A Master in Surgery.—You cannot be admitted *ad eundem*, inasmuch as this title was conferred on you simply on the payment of the fees without any examination in Surgery, after passing that in Medicine *only*. Write to the Secretary for the regulations on the subject.

Lex, Bermondsey.—The case you mention is not *novel*. You will find similar recorded in Morgagni, and a few days ago we read in the "Letters of the First Earl of Malmesbury," published by Bentley, 1870, page 199, that "General Armiger, aged 65, was married at eight o'clock last Saturday evening (March 20, 1770) to a lady between 30 and 40, went to bed, and was dead by one in the morning!"

THE WEEKLY MEDICAL INSPECTION OF SOLDIERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—At a time when changes in the organisation of our army are shortly expected, you will, perhaps, allow me to ask, through the medium of your journal, whether the weekly Medical inspection of soldiers might not with advantage be abolished. Remember, I do not allude to exceptional Medical inspection of troops during the prevalence of an epidemic, but to the ordinary inspection of men every week for the purpose of detecting itch, ophthalmia, etc. Now, why a soldier afflicted with one or other of these complaints can't be trusted to come to Hospital of his own accord as he can with other diseases is more than I can understand. Why should an entire regiment be paraded in a state of semi-nudity in case some one or two men with one or other of the above-mentioned diseases should not come to Hospital as soon as could be desired. To my mind, there is something degrading to the men in thus openly informing them that they are suspected as likely to conceal infectious diseases, and it is only in degree less objectionable than the old loathsome inspection of hundreds of healthy men in order that two or three might be caught with venereal disease. What class of civilian men would submit to such an outrageous indignity as the latter-mentioned inspection? and yet it is not so long ago that we actually had it proposed that it should be reinstituted in the army. Does wearing the Queen's uniform indeed degrade a man so far below his fellows? If this inspection is ever to be reintroduced among men, I hope they will begin with the advocates of the measure. Open and professed prostitutes who trade in indecency seem to me to occupy a different position from respectable men who may have some feelings of pride and dignity. I actually believe that some men who have been reduced to the extremity of taking the shilling and becoming soldiers are possessed of some slight feeling of shame and decency, of pride and dignity. So, whether or not it may be advisable to examine women who, by their very trade, confess their liability to disease, I do hope that an examination for venereal disease will never be reintroduced among men. But perhaps I am trying to kill a dead dog. What I began with was a living one, in the shape of the present weekly Medical examination of soldiers for pretty nearly everything except venereal—for that is what it comes to, or is supposed to do. I cannot help thinking that the less you show a man he is to be trusted, the less he is to be trusted, and the more you degrade him to the level of the beast, the more like to one he becomes. And why, unless under exceptional circumstances, should men be drawn up in a line and inspected like animals, which can't be expected to know there is such a place as an Hospital? If the army of the future is to be a thinking army, we must treat the men as reasonable beings, and not subject them to a vexatious surveillance as useless as it is objectionable.

I am, &c.,

ONE WHO DOES NOT REGARD SOLDIERS IN THE LIGHT OF CATTLE.

A Student of Guy's Hospital.—The new regulation to which you allude applies only to candidates for the *Fellowship* of the College, who in future will only have *four* questions, all of which must be answered. For the *Membership* there will be, as heretofore, *six* questions, *four* of which must be answered. The examination papers are now lithographed in the College by a confidential officer.

Growth of the Nails.—"T. T." writes to us thus—

"I had a severe illness last year. Some weeks after recovery I noticed that the growing part of the nail was very thin in every finger and thumb, and as time went on a considerable notch or depression was manifest. This gradually advanced, till seven months after recovery it reached the free edge. Then the nail-edge was very troublesome, splitting and cracking. After awhile this feebly-developed portion was shed, and the nail resumed its original appearance and strength. But now my attention is directed to the toe nails, for I find that now, ten months after the illness, the thin, half-atrophied part has just reached the edge; it is as thin as paper, and splits very much. *Corollary:* The growth of the toe-nails takes half as much time again as that of the finger-nails."

INACCURATE ANALYSES OF CHLORAL HYDRATE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Whenever a new chemical agent is introduced by the Medical Profession, the manufacturer of the preparation must be grateful to the scientific chemist for pointing out any defect or inferiority in the quality of the article. Never, perhaps, was this more clearly the case than with the introduction of chloral hydrate, because of its decided action upon the human system demanding an almost absolute purity, and because of the astonishing rapidity with which it has found favour. This compound, discovered nearly forty years ago by Professor Liebig, remained a chemical curiosity until within the last two years its medicinal value was first ascertained by Dr. Liebreich, and to-day it is manufactured and sold by the hundredweight, as an ordinary article of commerce.

Nearly the whole, if not the whole, quantity used in this country is imported from Germany. We happen to represent one of the largest manufacturers in Germany, Messrs. E. De Haen and Co., of Hanover, and we were much pleased on first seeing a paper on Chloral Hydrate, reprinted in the *Pharmaceutical Journal* of the 7th ult., giving analyses of samples representing seven or eight different firms, including Messrs. De Haen and Co., but on reading the paper we were much disappointed in finding that the writer, a Mr. M., of Liverpool, had penned the article in ignorance of the matter he was treating. He stated as the result of his analyses that the samples of only one house were good chloral hydrate, yielding, on decomposition by ammonia, very nearly the theoretical proportion of chloroform (72·2 per cent.), whereas all the other samples were said to have yielded so little chloroform (varying from 53·6 to 56·6 per cent.) that the reader was led to draw the inference that they were not chloral hydrate but chloral alcoholate. Two of these samples were marked as De Haen and Co.'s manufacture, and as we had no doubt about the inaccuracy of the above statement, we placed our stock at Dr. Versmann's disposal, who, from samples taken by himself, found them to be good marketable chloral hydrate, perfectly free from alcoholate. His report and analysis is published in full in the *Pharmaceutical Journal* of the 4th inst.

On applying to Mr. M. for an apology for the injury done, he confessed that one sample named as Messrs. De Haen and Co.'s was from another house, and as he had part of the original samples left, he suggested to send them to a chemist to act as referee, proposing at the same time Dr. Benjamin Paul, an offer we cheerfully accepted.

Dr. Paul's analysis as below proved Mr. M.'s figures to be totally wrong. As, no doubt, a great many of the readers of your journal have seen the paper, and may possibly have believed Mr. M.'s assertions, we feel it our duty, in justice both to the house we represent and to ourselves, to publicly contradict the same not only, but to prove them utterly groundless, and for that reason we request the favour of your inserting this letter in your journal. In conclusion we may say—

1st. That chloral hydrate is extremely hygroscopic, which satisfactorily accounts for the somewhat smaller numbers found by Dr. Paul. The samples received by him were several months old, and were, no doubt, repeatedly exposed to the air, thereby taking up moisture. If kept in well-stoppered bottles they certainly would have given the proper percentage of chloroform.

2ndly. That the much greater yield of the sample stated to be E. De Haen and Co.'s, when analysed by Dr. Paul, and the smaller yield of the manufacture stated to be Liebreich's, in comparison to Mr. M.'s analysis, show that the analyses of manufactures of all good makers give about the same results. But the ammonia test for chloral hydrate, simple as it is, and, in fact, any analysis laying claim to correctness, ought only to be published after several trials of one and the same sample carefully and scientifically made show the same result.

3rdly. That before publicly comparing the products of respectable houses, particularly when a new article is in question, application for information ought to be made to them; the same will always most readily be given by them.

Results of Analysis of Chloral Hydrate.

Dr. Benjamin Paul.			Mr. M., Liverpool.	
No. 1	stated to be Liebreich's	66·62	No. 1	71·5
„ 3		67·36	„ 3	70·3
„ 8	stated to be De Haen's	64·37	„ 8	55·6

We are, &c.
DOMEIEAD AND CO.

47, Basinghall-street, London, E.C., Feb. 22.

REMINISCENCES OF THE PROFESSION.—KERR, OF NORTHAMPTON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In common with all your readers, I have been much interested in following Mr. J. F. Clarke's "Reminiscences of the Profession." With your permission, I should like to add one correction and a few remarks to his paper of February 4. "Parson Bull," the friend of Cowper, was not a leading Baptist, but an Independent, minister; his son, a man of no mean attainments in the same sect, was attended by me during his final illness. From him I learned that the true pronunciation of Cowper was *Cooper*. This my patient had from the poet's own lips. The late Dean Alford, to whom I named this, has inserted my remarks at length in the second edition of his "Queen's English."

Kerr, of Northampton, made himself a great name both in Physic and Surgery. His amputation at the hip-joint in 1778 was the first operation of the kind performed in England, Perrault, of Saint Maure, having performed the same operation successfully in 1774. Reference is made to Kerr's important case in the latest and large edition of Sir A. Cooper's Surgical Lectures, in the seventh edition of Cooper's Surgical Dictionary; and in the sixth volume of Duncan's "Medical Commentaries," published in 1779, is "an account of the operation of amputating the thigh at the upper articulation, by Mr. W. Kerr, Surgeon to the Royal Regiment of Horseguards Blue, and to the Hospital at Northampton." Touching Kerr's views on fever, the following letter of my great-grandfather, giving the account of a consultation seventy-one years ago with the Doctor, will amuse men trained in a very different school, whilst the concluding allusions to the patient on whom so much depletion was inflicted may well cause us to feel thankful that, at least, urban populations are now exempt from such heroic treatment. The pushing of the madeira too far in the case of fever looks as though some obscure Practitioners had even then sound views of the value of wine as a great adjuvant in the sustaining treatment of fever. Nor are the remarks on the elimination of fever-poison by the alimentary canal altogether without their value. I have heard my grandfather and the late Mr. Collison, of Newport Pagnell, talk of Kerr as riding to consultations with a hunting-crop in his hand and haybands round his legs during cold weather. In long journeys he used, as he phrased it, to "eat brandy." Strips of toast were soaked in the spirit, and so eaten. The letter thus runs:—

"I had, yesterday morning, a long conversation with Dr. Kerr on C.'s case. He had called during my absence. I wrote when I returned. He answered, but, in addition, called yesterday; very anxious to know more. He thinks, with all deference, we have been too free with the madeira; allows its usefulness and necessity, but, like other good medicines, it may be overdosed. He wishes it to be gradually diminished, and good broth, milk, buttermilk, asses' milk to be tried. Another expedient he lays great stress on—that is, to be got out. Says he is aware of his extreme weakness, but thinks, well flannelled and tenderly treated, it is practicable. He conceives it necessary; I have my doubts about its practicability. However, this may be done—viz., he may be put into a chair in a blanket, carried into Mrs. H.'s room; shut the door, open the window, and sit him facing of it at a considerable distance. While this is about, let others throw open the sashes of his room, set the door wide open, make the bed well, and leave it open till he returns into it. Thus a great quantity of elastic and salubrious air will be admitted, his sick-room greatly amended, his bed and bed-clothes wonderfully sweetened, and will be refreshing to him on his return. This, I am persuaded, may be done with safety, and if he is out of the room but a few minutes, great advantage will be gained. He will bare (*sic*) more next day, and, by these means, will be much sooner able to get out. Dr. Kerr has no doubt that his long-protracted illness has been, in great measure, owing to peccant matter being suffered to lodge about the biliary ducts, etc., and roundly asserts that many fevers are made bad through the neglect of depletion at the commencement. For want of this, the morbid matter is absorbed, and cuts out work for nature and art for many days. He asserts that all fevers, call them by what name you will, take their rise from this source; and in all fevers, even putrid, during the five or six first days, he always, in addition to emetics, gives two or three grains of calomel; and so far (even in putrid cases) from its increasing debility, the pulse is raised by the evacuations produced. He does not insist on this being tried too long—there is a time to leave off—and if, notwithstanding this, the fever proves obstinate, then cortex and cordials must come in aid; but even then he would keep the alimentary canal clear with rhœum. I think his plan judicious.

"Poor G. continues very ill with *dolor capitis*, attended with much fever. He has not wanted for depletion. Mr. H. purged and bled him with leeches before I came home, since which I have repeated the leeches and purge on Saturday, and another, with blister, to-day. His pulse is full and cheeks florid. Nose bled this morning; wish it would bleed more. On his account, and from hurry in business, I cannot leave home just now.

"Yours, J. R."

With this truthful extract from one of the old school, I beg leave to subscribe myself, &c.

Grosvenor-street, W., February, 1871. G. Godoaro Rogers, M.D.

COMMUNICATIONS have been received from—

Mr. Mordaunt Stevens; Dr. A. O. Speedy; Mr. Black; One who does not regard Soldiers in the light of Cattle; Prof. Laycock; Messrs. Geyelin and Co.; Dr. Haviland; Mr. H. C. Lawrence; Dr. R. Harvey; Mr. Gilchrist; Dr. W. Woodward; Mr. J. Bruce; A Student; Dr. J. Lancashire; Dr. J. R. Wolfe; Mr. J. P. Cæsar; Dr. James Dunlop; Dr. Archea Farr; Mr. R. Shaw; Dr. G. Goddard Rogers; Dr. Handfield Jones; Dr. D. W. Moore; Mr. J. Chatto; Mr. Spencer Wells; Mr. C. F. Maunder; Dr. J. R. Hardie; Mr. H. Arnott; Mr. J. Lancashire; Mr. G. C. Coles; Mr. Metcalfe Johnson; Dr. W. H. Corfield; Mr. John Prince.

BOOKS RECEIVED—

The Electro-Chemical Bath, being a Letter to J. Althaus, M.D., M.R.C.P., refuting his Pseudo-Critique upon it, by J. F. J. Caplin, M.D.—Report of the Metropolitan Police Orphanage—The Physiological Laws of Human Increase, by Nathan Allen, M.D.—Population: its Laws of Increase, by Nathan Allen, M.D.—Physical Degeneracy, by Nathan Allen, M.D.

PERIODICALS AND NEWSPAPERS RECEIVED—

Monthly Homœopathic Review, March—The Clifton Chronicle—The Milk Journal, March—Pharmaceutical Journal—Edinburgh Medical Journal, March—The Practitioner, March—Transactions of the Odontological Society, February—The Philadelphia Medical Times—The Stationers' and Booksellers' Circular—The Food Journal, March—Royal London Ophthalmic Hospital Reports, vol. vii., part 1—Medical Press and Circular—Windsor and Eton Express.

APPOINTMENTS FOR THE WEEK.

March 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.: King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Mr. O'Neill, "Spirit of the Age."

13. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Meeting.

14. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Jonathan Hutchinson, "Clinical Report on Xanthelasma Palpebrarum, and its Significance as a Symptom." Dr. James Wynne, "On Central America as a Residence for Consumptive Patients."

15. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal College of Physicians, 5 p.m. Croonian Lectures—Dr. Parkes, "On some Points connected with the Elimination of Nitrogen from the Human Body."

Society of Arts, 8 p.m. Meeting.

16. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society, 8 p.m. Mr. F. J. Gant, "On the Inhalation of Calomel-vapour in Secondary Syphilis."

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

17. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal College of Physicians, 5 p.m. Croonian Lectures—Dr. Parkes, "On some Points connected with the Elimination of Nitrogen from the Human Body."

Royal Institution, 9 p.m. Mr. J. Norman Lockyer, F.R.S., M.R.I., "On the Eclipse."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 4, 1870.

BIRTHS.

Births of Boys, 1220; Girls, 1190; Total, 2410.
Average of 10 corresponding weeks, 1860-69, 2174·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	819	772	1591
Average of the ten years 1860-69	737·9	713·5	1451·4
Average corrected to increased population	...	...	1596
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	33	3	7	...	7	2	4	2	3
North ...	618210	65	...	16	...	15	5	1	...	3
Central ...	383321	11	...	5	...	4	1	...	...	2
East	571158	52	5	7	3	17	3	6	...	...
South	773175	52	7	18	8	10	3	6	3	5
Total	2803989	213	15	53	11	53	14	17	5	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·959 in.
Mean temperature	45·7°
Highest point of thermometer	64·8°
Lowest point of thermometer	30·1°
Mean dew-point temperature	39·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·11 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 4, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Mar. 4.	Deaths Registered during the week ending Mar. 4.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2410	1591	64·8	30·1	45·7	7·61	0·11	0·28
Portsmouth ...	125464	13·2	86	35	59·2	32·2	45·5	7·50	0·06	0·15
Norwich	81787	10·9	56	32	59·5	29·0	42·7	5·95	0·10	0·25
Bristol	173364	37·0	126	83	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	71	31	62·4	31·8	44·4	6·89	0·21	0·53
Birmingham ...	378574	48·3	309	153	64·2	29·6	45·1	7·28	0·28	0·71
Leicester	101367	31·7	68	39	63·7	27·5	44·1	6·73	0·19	0·48
Nottingham ...	90480	45·3	64	39	63·7	29·1	44·0	6·67	0·22	0·56
Liverpool	526225	103·0	420	363	62·0	34·3	45·1	7·28	0·33	0·84
Manchester ...	379140	84·5	309	183	65·2	32·5	45·2	7·33	0·38	0·97
Salford	123851	23·9	115	60	65·3	33·4	45·0	7·22	0·35	0·89
Bradford	148030	22·5	107	58	63·0	30·6	43·0	6·11	0·23	0·58
Leeds	266108	12·3	183	110	63·0	30·0	42·9	6·06	0·32	0·81
Sheffield	255247	11·2	189	119	63·0	31·0	44·0	6·67	0·29	0·74
Hull	135195	38·0	106	49	...	...	...	...	...	...
Sunderland ...	103037	31·2	118	62	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	125	82	58·0	34·0	43·2	6·22	0·00	0·00
Edinburgh	179944	40·6	130	105	59·7	35·0	46·9	8·28	0·30	0·76
Glasgow	477627	94·3	408	344	60·6	35·0	44·8	7·11	0·49	1·24
Dublin (City, etc.†)	322321	33·1	154	209	62·7	37·0	48·5	9·16	0·55	1·40
Total of 20 Towns in United Kingd'm	7336941	34·4	5554	3747	65 3	27·5	44·7	7·06	0·26	0·66
Paris—Week ending Mar. 4	1889842	98	...	...	...	...	...	...	...	...
Vienna—Week ending Feb. 18 ...	622087	68	...	...	...	...	...	...	...	...
Berlin—Week ending Mar. 4 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·96 in. The highest was 30·35 in. on Wednesday at noon, and the lowest was 29·59 in. on Monday morning.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF ORGANS AND TISSUES, AS INFLUENCED BY THE NERVOUS SYSTEM.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

LECTURE I.

(*Concluded from page* 242.)

THE law of degeneration, as a retrocession to a lower kind of tissue-change, may be applied to the pathological anatomy and chemistry of organs and tissues, and enable us the better to understand the neurotic causes of morbid changes. Thus, nervous debility, considered as a deficiency of trophic energy, will coincide with anatomical and chemical tissue-changes of a lower type. The production of uric acid, the *materies morbi* of gout, is an illustration: it is a normal chemical product of transformation of tissues in reptiles and birds; in man it is abnormal, being a retrocession from urea. So lactic acid appears to be the result of a retrocession in muscular transformation from a higher compound. Carbons and hydrocarbons as pigments and fats follow the same law as to place of production; amyloid degenerations are chitinous.

In diathetic anatomy, diagnosis, and therapeutics, the evolutional law of tissue-anatomy upon which I found my clinical view of diatheses is an important guide to pathological inquiries. Nothing can be more vague than the current doctrines. Eminent French Physicians speak of a "herpetic" diathesis, or of an "asthmatic" diathesis—phrases that have really no definite application to tissue-changes, and are, I think, worse than useless. I must remind you that the word diathesis means a special putting together of the fundamental elements of the body, and has no regard to particular organs or viscera, except in so far as a particular tissue predominates therein. The general law to which I refer is that with which you have been made acquainted already, and is the order of evolution of tissues in the embryo.(a) This order indicates the general or common pathological relations of fundamental tissues. Firstly, the germinal membrane appears as the common basis of all; then follows its division into the "mucous" and "serous" layers. Out of the serous layer is evolved the whole voluntary motor apparatus of bones, muscles, aponeuroses, ligaments, and serous tissues; so that, as they are all related to each other by common origin, they are related to each other nutritionally and diathetically, and have probably a common relation to a trophical system. The heart and vascular system have a like common evolutional origin out of the vascular layer of the embryo, which, however, is a conjoint product, and has the conjoint qualities of the mucous and serous layers. In diathetic anatomy the difference is shown by the distinction between gouty degenerations affecting the structure of the heart and arteries and of the synovial membranes of joints, and the rheumatic which involve the fibrous structures and fibrous pericardium, and aortic and mitral valves.

The hereditary tendencies to diathetic diseases and degenerations as thus defined and fixed on an anatomical basis are more easily comprehended when we remember that tissue-changes in plants are hereditary, and that consequently it is the regulative principle, as vis nervosa, which, in animals endowed with a nervous system, must be operative on the sperm- and germ-cells. Now, a regulative energy, manifested as the "nisus formativus," is the special property of these minute portions of matter, and consequently it must be by a concentration of that energy, as vis nervosa on the genetic glands, that the peculiar property is supplied. If, therefore, the innervation be defective in regard to these glands, the regulative or evolutional power will be defective. It is thus I explain how congenital degenerations of structure and defects of function and form take place, from deficient vis nervosa in the parents, for in these sperm-cells and germ-cells, as in other tissues, the law of degeneration is retrocession to a lower type. The nature and results of that defect in brain-nutrition upon which hereditary insanity depends is a striking illustration of this law of hereditary disease and defect; it is the lower or animal appetites and instincts which crop out in hereditary insanity.

Before we consider special tissue-changes as trophesies, let us clearly understand what we mean when we speak of loss of tone, of nervous debility, and of defective innervation. It is clear, from what I have said, the phrases may refer either to defective vital energy in general, or to defective regulative energy especially, in which case it would be to the sensory portion of the nervous system we should look. Now, when we are made conscious of this class of changes, pain, languor, unease, and other like feelings are experienced. Hence, it seems useful to inquire with reference to two kinds of vis nervosa, the one as being a molecular energy, necessary, like heat, to all healthy tissue-work, the other regulative of its production and application. This latter is therefore needed, not to the end that the tissue changes shall take place—for we have seen that they can and do go on independently of nerve—but that they shall take place in their proper or normal order. For example, if a defect in a nerve or nerve-centre (nervous debility) is followed by the production of heat or of uric acid in the tissue it innervates, these changes occur because the tissue is set free from the regulative restraint exercised by the nerve or nerve-centre. Now, I think clinical facts enable us thus to distinguish two kinds of trophic vis nervosa with corresponding anatomical seats, for we can differentiate a regulative from an executive kind just as we distinguish a sensory and a motor. Here, again, the law of evolution helps us to a clearer understanding. Just as the trophic vis nervosa is an evolution and differentiation of vital energy, so that by which we are conscious and act volitionally is an evolution and differentiation of the regulative element of trophic vis nervosa. It is that regulative principle which, as manifested in nutrition and development, was, and indeed still is, termed the *anima, psuche*, soul; and as manifested in mental life, as the *animus*, mind. This unity and continuity of vital phenomena is the great truth of Medicine, as it ought to be of philosophy. I do not know in the whole range of the practice of Medicine questions of greater importance than those comprised in the relations of nervous debility, in the scientific meaning of the term, to states of consciousness. It implies not only a true knowledge of the relations of pain to disorder and disease, whether in the merely corporeal forms, as tenderness on pressure, hyperæsthesia, neuralgia, and of diminished and abolished sensibility, as anæsthesia—for pain and anæsthesia means practically changes in the vis nervosa—but of all mental suffering. Pain and suffering are so commonly associated with disorder that the word disease is its synonym, and the ancient word pathology means primarily the science of suffering. Hence it is that the psychology of pain and suffering is so important a division of the practice of Medicine; for how can we understand otherwise the commonest experience—*e.g.*, the use of opium and other sedatives in inflammations and painful diseases?

What, then, does pain mean in general?

When all the nutrient and mechanical work of the body goes on according to the rule or *norma* of vital activity, the functions are said to be normal and regular, and the body healthy. Corresponding to this normal bodily condition is a mental condition, the feeling of health and of being strong and well, which, if contrasted with the mental state that corresponds to what is abnormal, is pleasurable. It has been named variously, but perhaps the best term is cœnæsthesis, or common sensibility; morbid states of it are to be classed with the *æsthesiæ*. The feeling of ill-health generally, or malaise, or whatever name be given to that which accompanies what is abnormal, if there be a feeling at all, must have its seat in a like portion of the nerve-centres as the feeling of health, and this, in accordance with the principle formerly laid down as to the seat of all conscious changes, must be in the brain. Both states of consciousness correspond in regard to the body to that unity in regard to mind which the metaphysicians name the "ego"; hence these facts prove, in conjunction with many others, that there is a trophic corporeal centre, or series of centres, just as there is a mental centre or series of centres. This we shall be able to fix in a well-defined basilar region of the encephalon, which includes the medulla oblongata, cerebellum, and cerebral ganglia. Whatever may be said of local pain or uneasiness may be said of these general feelings. Hence we must remember as an important fact in clinical observation that all pain, whether it be local or general, and however named, may be illusive as to both seat and cause. It is so with the feelings as to health and unhealth; for, just as in a neuralgia, a person may feel as if he had disease of an organ when it is healthy, and *vice versâ*; or when strong and well may feel ill and weak, and have delusions as to the nature and cause of his illusive illness and weakness. The term "well" means, as thus used, that there is no disease of organs, or tissues, or blood, as causes of the feeling of illness, but that there is central disorder or disease as a neurosis, termed hypochondriasis and hypochondriacal melancholia. When it is not purely sensorial, the painful state is best named dysphoria. These centric suffering states (phrenalgiæ) are often as painful as neuralgiæ. I have known hypochondriacs with the feeling of muscular debility, yet strong in muscular development, as incapacitated for labour as if really weak and ill in their muscular system. On the other hand, a patient seriously diseased may feel quite well—may have, indeed, a pleasurable feeling of health. This I term euphoria; it is this, when manifested in cases of phthisis, which has been termed the *spes phthisica*. A wider euphoria is seen in certain cases of insanity with paresis, in which, from a particular kind of morbid-brain nutrition, the patient thinks himself endowed with strength beyond estimate. A third class of cases are those with no sense or feeling; they have apathy or aphoria. Such persons, when very seriously ill—ready, in fact, to die—make no sign of feeling ill. This state occurs in dangerous cases of epidemic cholera and in fevers of a bad kind: the patient will go about wholly unconscious of serious illness or of his impending death.

(a) See "Principles and Methods," 2nd edition, p. 188.

What is said of these general bodily feelings, as commonly altered in disease, applies equally to special bodily feelings and conditions. Exaltation, perversion, abolition of sensibility have their respective trophic conditions. The results of anæsthesia of the pulmonary system, with evolution of motor vis nervosa, are seen in another form than the *spes phthisica*, when tubercular meningitis comes on in the course of a phthisical case. Even with large vomicæ the cough and expectoration will cease, the voice, as the patient raves deliriously, becomes loud and strong, and the corporeal strength marvellously developed—conditions all due to changes in that basilar trophic region I have hinted at. On the other hand, there are cases of insanity in which the central trophic region is defective in both sensory and executive or motor vis nervosa, and the results are wholly different, manifested as low forms of pneumonia, sometimes ending in gangrene of the lung; precisely for the same reason that sloughing occurs in certain kinds of palsy, as in typhus and paraplegia.

The clinical rule deducible from these considerations is, that when we desire to ascertain the causes and consequences of trophic nervous debility, we inquire whether it is the regulative—*i.e.*, sensory vis nervosa that is deficient—or the executive—*i.e.*, motor. Excessive use (functional activity) often determines this. Pleasurable sensory excitement, if excessive, is a using-up of the sensory or regulative vis nervosa. This is one cause of the debility induced by sexual excesses, and of locomotor ataxy as a special consequence of that debility. Pain, too, when excessive, is exhausting. Excessive thought, without anxiety, uses up the materials subservient to sensory excitation; and in this way the regulative energy as regards organs and tissues may be defective, and neurotic disorders of all kinds follow. But excessive thought, with mental anxiety, care, and pain, as grief, is much more exhausting, and therefore more commonly followed by trophesies. In the exhaustion caused by sexual excesses of males a third element is added—viz., the waste of a highly evolved tissue analogous in chemical composition and in vital endowments to brain—viz., the sperm-cell proper. In the sexual excesses of the female, this cause is not so operative, but chiefly the sensorial exhaustion of excessive pleasurable excitement. In like manner, the loss of blood, as in hæmorrhages, or of albuminous nutrition, as in albuminuria, or the want of proper food, enfeebles both the regulative and the executive portions of the trophic system.

Induced in those and other ways, nervous debility causes a variety of both local and general diseases of organs and tissues, which necessarily differ almost infinitely, according to the kind of tissue and the portion of the nervous system involved, and the causes thereof. It will help greatly to understand and classify and treat these if we know what is general as to nerve and tissue, and what is purely local. For example, there is a whole class of gouty tissue diseases which are essentially neurotic, and to be separated from those in which there are local changes as causes. Before inquiring, however, into these, we must first consider tissues in their relations to the nervous system, and then mark out a clinical trophic anatomy as a guide to etiology, diagnosis, and therapeutics.

ORIGINAL COMMUNICATIONS.

FOOD SOLVENTS.

By Dr. ARCHER FARR.

While pepsine and pancreatine are being so much vaunted as agents concerned in the process of digestion, I would fain point out that there are certain food solvents having an equal claim upon the attention of the Physician, and to which, I think, too slight importance has hitherto attached.

The gastric juice, as poured out from the lining membrane of the stomach, besides certain saline matters, contains a free acid and an organic substance termed pepsine, both of which are always secreted by the healthy stomach during a meal, the presence of both being essentially necessary for the purposes of digestion; and while pepsine always constitutes the fermentive principle, the acid of the gastric fluid is known to vary—hydrochloric, phosphoric, lactic, and acetic acids, all having been discovered therein. The gastric juice also in itself is antiseptic, possessing the property of keeping many days without becoming putrid; and such antiseptic virtue would seem to depend greatly upon the acid portion, as shown by the following experiment:—If a few grains of pepsine be moistened with water, and submitted to a temperature of 100°, in a very short time it will ferment, emitting, at the same time, a strong, almost urinous odour. But now, if a second quantity be similarly treated, to which has been previously added a few drops of hydrochloric, phosphoric, or acetic acid, no such smell will be perceived. And as to the solvent effect of certain acids upon the albuminoids: If two portions of meat be taken, A and B—each, for example, half an ounce in weight—and, after being coarsely bruised, to A is added sufficient water to cover it, acidulated with either of the acids—hydrochloric especially—enumerated above, and to B a few grains of pepsine porci, with the same quantity of water, and both be digested at the temperature of the stomach for three or four hours, it will be found that upon A, although not reduced to such a homogeneous mass as B, nevertheless the solvent action of the acid will be manifest.

Eberle, in order to test the comparative digestive powers of hydrochloric acid and pepsine, suspended a solid piece of meat in a solution of each of these, and while he found that, in the course of a few hours, the piece of meat in the pepsine solution had wholly disappeared, that in the acid solution still remained. But although this experiment proved unmistakably that pepsine constitutes the digestive principle of the gastric juice, it did not prove that the acid is not a meat solvent. Pepsine, if it deserve the name of food solvent, is more than a solvent, dissolving by virtue of its fermentive action. There is evidently an attracting affinity existing between the ferment and the albuminoid, somewhat resembling chemical affinity, inasmuch as a new compound is the result. The acid, then, as a simple solvent, possessing no such affinity, acting on such a complex texture as that presented by a piece of meat, and that in a state of rest, could not be expected more than partially to exert its solvent power under conditions so unfavourable to its action. But if we consider the changes our food undergoes previous to and on entering the stomach—viz., the state of division to which all alimentary substances are reduced by mastication—the powerful muscular action of the stomach to which the food is subjected, that organ closing upon its contents and promoting the absorption of some and the removal of other digested portions, it can readily be conceived that it is here the acid of the gastric juice, if it have any special mission as a food solvent, would be found to exercise its prerogative. This probably explains the *modus operandi* of lime-juice and other acids in curing or preventing scurvy; and be it observed that all those acids that have been discovered in the gastric juice are, without one single exception, antiscorbutic.

If, then, there be any truth in this—viz., that such acids do cure or prevent scurvy by virtue of their direct action as food solvents—they deserve to be classed among the most valuable therapeutic agents at the command of the Physician; for it at once becomes obvious in how many forms of stomach disorder they may become effectual remedies. It is more than probable, too, that indigestion may arise almost or quite as frequently from a want of acid as from a deficiency of pepsine in the gastric juice; and in support of this, I have many times observed that where pepsine alone has failed to relieve dyspepsia, the desired result has attended the exhibition of one of the non-astringent acids. Dr. Headland, too, believes that in case of falling off of the natural acid secretion of the stomach the acids of the food may become supplemented.

About five years ago I was the first, I believe, to promulgate the view that the prophylactic virtue of lime-juice and other acids in curing scurvy depended upon their direct action as food solvents, and since that time it occurred to me that an excellent artificial gastric juice might be made by allowing the lime-juice to represent the acid portion. Accordingly, I had prepared for me a mixture of lime-juice and pepsine, which I, and many of my Medical friends, have since used with the best results in cases of dyspepsia. Lime-juice with either pepsine or pancreatine forms a very elegant preparation; is most convenient for prescribing, and may be made to keep almost any length of time without deteriorating.

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CASE OF OBSTRUCTION OF THE BOWELS.

By J. LANCASHIRE, L.R.C.P., M.R.C.S., and L.S.A.

A. P. W., aged 18, was visited by me on July 24, 1867, when he was found suffering from extreme flatulence, great distension of the whole abdominal regions, attended with considerable pain, much increased by the slightest pressure. There was no vomiting, but slight nausea. The feverish symptoms were severe; the pulse ranging from 120 to 130. I gave him very mild aperients, with the tinct. camph. co., and ordered hot fomentations, etc., to the bowels. On the next day the bowels were not relieved. The symptoms were much the same as on the previous day, except more feverishness, thirst, and increased restlessness. Still no vomiting; all the liquids taken were retained. The mixture was continued, and an active purgative, consisting of ten grains of hydrar. chlor. and six grains of powdered jalap, was given, which neither on this day nor the next had the desired effect. The same symptoms continued on the 26th and 27th. On the 27th a pill containing two grains of aloine and five grains of calomel was administered, but without any result. Enemata were administered, and on the 28th three aperient powders of aloine were given, still without the desired action of the bowels. During the 28th and 29th the symptoms remained much the same. There was no vomiting; the distension of the bowels continued, however, and the tympanitis was very great, attended with great tenderness, especially in the right iliac region, and over which region there was dulness on percussion. The case now assumed such a serious aspect, that Dr. Wilkinson, of Manchester, saw it on the 30th; but before his arrival the bowels had been acted upon, and the symptoms were in consequence slightly mitigated. A large quantity of fæculent matter, tinged with blood, was passed without relieving the tympanitis and excessive tenderness of the abdomen. From this period the serious symptoms began very gradually and slowly to subside; the bowels were regularly acted upon; the most troublesome symptoms during recovery being the distension of the abdomen, with tenderness, especially in the right iliac region. Complete recovery took place, and there remained no evidence of disease on September 27.

During the interval between recovery and Monday, January 30, 1871, a period of three years and a half, I occasionally saw this patient, on account of slight attacks of colic, which passed away without entailing much trouble. On the above-named day I was called to visit him, when I found that the bowels had been freely evacuated. The thirst was great, and attended with occasional vomiting. There had been no rigors or shivering; the pulse was at 55; no tympanitis, and not the slightest tenderness of the bowels. There was, however, one peculiar and well-marked sign on percussion—viz., tympanitic sound above the umbilicus, and general dulness below. On careful examination, there were no signs of strangulated hernia (although he suffered from rupture), nor could the existence of any tumour be discovered. What appeared to be the colon could, however, be distinctly traced.

Effervescing medicines were given along with hydrocyanic acid and morphia, and counter-irritation used to the abdomen without any mitigation of the symptoms. The patient continued much in the same state on the 31st, and also on February 1 and 2, except that the vomiting was more frequent, the fluids vomited being of a brownish-yellow colour, and in the afternoon of the 2nd having a decidedly fæcal odour. On February 3 there was very little change in the state of the patient. There was a slight increase in the frequency of the pulse; the thirst was excessive; the nausea almost constant, and the vomiting of fluid fæcal matter very frequent. Prostration was quite evident. During this time small doses of opium were given; also brandy, beef-tea, ice, and cold water frequently, and in small quantities. The patient remained the same on the 4th and 5th, except that the symptoms were more aggravated. The pulse had risen to 120 on the morning of the 5th, and in the evening to 134. There was still no abdominal tenderness, no pain on pressure, and no tympanitis. The patient became gradually worse, and died about 3 o'clock on the morning of the 6th, or on the eighth day of the attack. Dr. Roberts, of Manchester, gave an unfavourable opinion of the case.

Post-mortem Appearances.—On section of the abdominal walls I found, about two inches below the umbilicus, large and very firm adhesions of the ileum to the internal walls. This attachment had a circumference of four or five inches. On very careful examination of this attachment, I ascertained that a portion of the ileum, which must have united itself to the portion of ileum next in opposition during the former illness in 1867, had given way, and a small quantity of fæcal matter had escaped into the peritoneal cavity. This adhesion was about five feet from the duodenum, and the ileum throughout the whole of this extent was distended to more than twice its natural size, and was very much congested and inflamed, as was also the mesentery. The colon was hid from view by the ileum. On detaching the adhesions from the abdominal walls, and examining the ruptured bowel, a small opening about the size of a goose-quill was found in the lower or cæcal end of the ileum, and also another opening about the size of a sixpenny-piece in another portion of the ileum, and nearer to the cæcum. This opening was irregular and jagged, and a small thread-like band was floating loose, one end being attached to the bowel.

The best illustration I can give of this state of the bowels is, to imagine a main road (*alias* the ileum) dividing into two branches, one to the left and the other to the right; that to the left ultimately running again into the right branch, as the ileum did in this case. The whole of the ileum below this point was quite healthy, as were also the colon and the rectum. No fæces were found in the ileum below the seat of the disease, neither were any contained in the colon. The intestines were, however, contracted, and smaller than natural, especially the colon, its sigmoid flexure, and the rectum. The ileum above the seat of the obstruction contained a tolerable quantity of liquid, similar to that vomited during life, but no solid fæces were found in any part of the bowels.

The post-mortem examination of this case chiefly illustrates or proves what took place during the attack of illness in 1867. The triangular attachment of the duodenal ileum to two portions of the cæcal ileum must have occurred at that time, and one or both artificial openings have been then formed. The adhesions were so firm, that it was quite impossible for them to have been formed during the last illness, for dissection into the abdominal walls was necessary in order to expose the parts.

Again, the enormous distension of the ileum above the seat of obstruction must have commenced immediately after the attack in 1867, and this distension must have gradually progressed until the final one in 1871. This distended state of the bowels was, no doubt, the *vis medicatrix naturæ*, which enabled the system to derive a very fair share of nutriment from the food taken into the system after the nutritive action of the lower ileum had been deprived partly of its due functions by the diseased part. There was no wasting of the system between 1867 and 1871, for during this time the young man was in very good health; was more robust than he had previously been, and a short time before his last attack, indeed up to the day before, was looking remarkably well.

The tympanitic and the dull sounds on percussion are easily explained by the post-mortem examination; the only point worthy of notice being that the distended or dilated ileum, and not the colon, produced the former sound.

The question next arises, What was the cause of death? The immediate cause was, no doubt, rupture of the bowel, and I believe that the primary cause was inflammation of the ileum above the seat of obstruction.

This case very forcibly illustrates the power which nature possesses of preserving, as far as is possible, the life of individuals. No doubt death must have ensued at some early period, but the marvel is that, for three years and a half, this young man retained very fair health and vigour, with such an amount of serious obstruction to the nutritive functions of the body.

NOTES ON THE YELLOW FEVER, AS OBSERVED AT HAVANA IN 1870.

By JOHN SULLIVAN, M.R.C.P. Lond, etc., etc.

YELLOW FEVER has within the last few months been conveyed from the ports of Cuba to Europe, and has invaded certain ports on the coast of Spain which never before suffered from its ravages. It is not impossible but that the shores of Great Britain may some day be visited by yellow fever—a disease hitherto unknown to us; and if it should, some clear and practical knowledge of its nature cannot prove otherwise than useful and highly important. From my connexion with one of the principal Hospitals of Havana, I have had extensive opportunities of observing the disease in its many forms and degrees of intensity. Influenced solely from a sense of duty, I have endeavoured to sum up the results of my own experience and that of other Physicians of still greater experience, and hope they may prove useful in order to form clear and practical views of the nature and treatment of so terrible a scourge to humanity.

Yellow fever usually takes one of the following forms:—1. Mild and incomplete; 2. Complete, dangerous, and of long duration; 3. Very dangerous, and of short duration; 4. Yellow fever, with vomiting as the predominant symptom; 5. With hæmorrhages; 6. Where cerebral symptoms predominate.

Example of First Form.—A man is seized suddenly with intense headache; eyes slightly injected; skin hot; pulse 92; intense pain over orbits and down the loins; tendency to stupor; tongue white in middle, red at tip and edges; thirst; nausea; slight pain over epigastrium. During the second, third, fourth, fifth, and sixth days the agitation, insomnia, and severity of other symptoms increased and diminished until, on the seventh, all the symptoms improved, and convalescence took place. This is the congestive form. The fever did not pass through its two stages, so that the system did not suffer from the stupefying action of an altered state of blood; in a word, the yellow fever was not complete.

Example of Second Form.—A man walked during four hours, exposed to the sun and rain; he was seized with cold sweats and flushes, pains in the head and loins.

Second day.—Frontal headache, eyes injected, pain in loins, countenance animated, skin hot, tongue characteristic, no nausea.

Third day.—No improvement; nausea.

Fourth day.—Insomnia, jactation; no pain; pulse small, quick; nausea.

Fifth day.—No vomiting; conjunctivæ jaundiced; singultus.

Seventh day.—Tongue all red; buccal hæmorrhage.

Eighth day.—Jaundice general; insomnia, jactation, nausea, hiccough.

Ninth day.—Black vomit, no sleep, pulse feeble, subsultus tendinum, tongue red, coma, cold sweats, death.

Autopsia.—Central vessels gorged with blood; ventricles contain a little bloody serum; heart pale and softened, with a little black blood; lungs gorged with black blood; stomach distended with a coffee-coloured liquid; intestines likewise, also with green bile; liver larger than natural, of a deep yellow.

Here the fever, after exposure to heat, rain, and fatigue, was ushered in by all the characteristics of the first stage. The gastric symptoms are limited to the thirst, nausea, and redness of tongue until the fifth day, when icterus and singultus take place. On the sixth day, tongue redder, attempts at vomiting; on the seventh, extreme agitation, eyes bloodshot, nausea, and hiccough. On the eighth day, black vomit, coma, convulsive movements, pulse small, cold sweats, death. This is the yellow fever complete and slow.

Example of Third Form.—Patient feels at night pains in head and loins, chills, and intense heat. Next day, eyes injected and shining; great thirst; tongue white; great jactitation; respiration anxious; voice and movements tremulous (a very dangerous symptom).

Second day.—Pain left, but insomnia; great agitation; icterus; pulse small, quick; tongue white.

Third day.—Restless; skin cool; great prostration; tongue dry, dark; black vomit; suppression of urine; petechiæ on different parts; death. Here the second stage quickly made its appearance: black vomit on second day.

Example of Fourth Form.—From the beginning, he complains of severe pain in epigastrium; excessive thirst; nausea, followed by bilious vomiting. Icterus appears on the fourth day; fifth, great prostration; sixth, death.

Here gastric symptoms appeared from the first, increasing daily. The lesions in stomach found in post-mortem were not sufficient to account for the alarming symptoms. It is remarkable that the patient never during life vomited black matter, but, after the vomiting had ceased for twenty-four hours, hæmorrhage took place, and black vomit was found in the stomach.

Example of Fifth Form.—An athletic young man, subject to severe epistaxis, is attacked with cold shivering, followed by heats and sweating. He had been exposed, the day before, to severe sun-heats. Severe headache; no lumbar pains, but pain in the lower extremities; nausea and vomiting, and extreme thirst.

First day.—Eyes injected; speech tremulous, movements slight; skin hot; and tongue white at centre, red at edges.

Second day.—Insomnia; pulse not so full or quick; vomiting of green bile; pain less severe.

Third day.—Pains abated, but insomnia and jactitation continue; nervous tremblings persistent.

Fourth day.—Icterus; cessation of vomiting.

Fifth day.—Fever slightly increased; severe epistaxis, which cannot be controlled; followed on sixth day by intestinal hæmorrhage; death at 9 p.m.

Here the congestive symptoms were very prominent at the beginning. There was no black vomit, but the abundant hæmorrhage from nose and intestines prevented that from the stomach.

Example of Sixth Form.—A man was seized with headache; pains over the loins and legs; nausea.

First day.—The usual characteristic symptoms; nervous agitation.

Second day.—Stupor; icterus; severe pains continue; tongue as usual; thirst and nausea.

Third day.—Jactitation; insomnia; delirium; skin hot; icterus; pulse weak; vomiting of yellow bile; pain over epigastrium: then all pains disappear.

Fourth day.—Symptoms continue.

Fifth day.—Delirium becomes furious; great prostration; black vomit; death.

Here cerebral symptoms were evident from the beginning, also nervous trembling. On second day, coma set in; on third, icterus and vomiting of bile; on fourth, delirium, which soon becomes furious; great prostration; black vomit; death on fifth day. The lesion found in the brain fully accounts for the symptoms during life.

Let us consider yellow fever in three points of view:—

1. As to its degree of severity in the attack.
2. In relation to its different phases, which present themselves during its long epidemic periods.
3. According as one or more particular symptoms predominate.

First Degree.—In its milder form, it presents itself in cold shivers occasionally, with or without vomiting; partial and suborbital cephalgia, or pain in the eyeballs; intense lumbar pains, and in the lower extremities feeling of lassitude; countenance excited, red; and eyes shining, moist, slightly injected; skin hot and dry; pulse hard, up to 100; agitation slight, but visible; insomnia not complete; rather a tendency to stupor; tongue white, red at tip and edges; gums—upper part whitish, often leaden-bluish below; rarely vomiting; usually costiveness; symptoms improve, usually on the sixth day, by a slight epistaxis or sweating.

Second Degree.—In a severe form yellow fever presents in its second stage complete and confirmed icterus. Symptoms as above, but more intense; cold chills and sweating are often so pronounced as to lead to the suspicion of paludal fever. When there is a doubt, the injected state of the eyes, anxiety in respiration, will enable us to diagnose. After two or three days, the first period, or that of febrile activity, is followed by a few hours of repose; then comes the second stage, when the pulse falls; skin cools, and is slightly jaundiced, also conjunctivæ; nausea, vomiting, jactitation, insomnia. At the end of three or four days, symptoms may improve, and convalescence appear; but should death threaten, then the agitation and prostration go on increasing. Respiration slow, with singultus; pulse quicker and weak; tongue becomes red and dry; thirst extreme; black vomit (black stools), with pain and burning along œsophagus. If hæmorrhage predominate, it will hasten the end; if cerebral symptoms predominate, coma and delirium will supervene; suspension of urine often before death. Two or three days afterwards, pulmonary asphyxia takes place, and death, with or without convulsions. The disease may last from five, seven, or nine days; or,

Third Degree.—It may be ushered in with extreme severity, terribly rapid from the onset; chills and heat succeed; tongue red and pointed; vomiting from the beginning; pulse hard, wiry, and trembling, up to 120; anxious and frightened look; eyes injected; speech trembling; great agitation; respiration anxious and frequent; insomnia complete; costiveness; urine scarce; soon, from one to two days, icterus appears; black vomit; hæmorrhage from the various outlets; delirium, coma, and death, usually about third day, often preceded by hæmorrhage from nose or rectum. Should life be spared for two or three days, the sight is hideous and repulsive.

Thus, there are three degrees of severity: in the one case it consists of a febrile activity of an infectious character, deriving its persistence and malignity from the nature of its cause; in the third they are the result of a profound disturbance, and the efforts of a feeble and powerless reaction, attacked by all the disorders which can be produced by the victorious action of a violent poison.

Particular Symptoms.

The attack is usually quick and decisive, the patient having been in perfect health, although in rare cases he may have complained three or four days previously; generally comes on at night.

Fever.—In slight cases the shivering is sometimes absent, sometimes severe, accompanied with vomiting; should the shivering concentrate itself, and reappear during the febrile stage, the sign is a bad one.

Skin.—Hotter, more dry, and rough in severe cases; it cools down generally in the second stage.

Sweating is not critical, as in intermittent, and may be distinguished from that of intermittent by its not being followed by any diminution of heat, a most important fact in making a diagnosis. Sweats in yellow fever are always treacherous; in the second period they are a fatal sign.

Pulse generally proportioned to the severity of the fever; if it exceed 106, if it be tremulous and irregular from the first, especially if the patient be greatly agitated, with voice trembling, the sign is fatal. Still, the pulse is not always to be depended on; its normal state, which sometimes occurs between the first and second stages, may sometimes deceive an inexperienced Practitioner.

When hæmorrhagic symptoms appear from the first, the febrile stage may pass unperceived. The fever opens the morbid scene in yellow fever—one continued paroxysm, never to reappear, unlike the fever in any other disease.

Countenance: Very characteristic, reddish, bloated; eyes injected. The sallow countenance becomes pale, yet animated; but, in the second stage, in all cases icterus succeeds. If the eye becomes yellow from the beginning, the sign is a bad one.

Pains: Cephalalgia, lumbar pains, and those of the lower extremities. Those in the frontal and orbicular regions usually appear and disappear with the fever. When, from the extreme pain in the legs, the patient is obliged to toss them about in all directions, kick away the bedclothes, and clap the soles of his feet against the cold wall or bedstead, the sign is a bad one. I have never known such a case recover.

Agitation, Insomnia: Always present in severe cases, proportioned to the severity of the case, and usually coincident with tremors and anxious breathing. In fatal cases, the patient tosses about in his bed, and uncovers himself constantly until death; yet there are cases where stupor and absence of all agitation are formidable symptoms.

Respiration: Greatly disturbed in severe cases. At first, anxious and frequent, and when, in the second stage, it becomes slow and sighing, is almost always a sign of death—an index of the profound effect produced by the poison on the circulation and nervous system.

Tongue: Sometimes slightly altered; but more frequently white in the middle, red at tip and edges, at first, and becomes redder and more pointed as the disease advances. It is a bad sign should the tongue be red, dry, and trembling from the first. The upper gums are swollen, whitish in the upper, and rose-coloured in the lower part. The swelling of the gums is often a sign of hæmorrhage in the second stage.

Thirst: Mostly excessive in severe cases; in fatal cases, often continues, even in the second stage.

Vomiting.—A very frequent and characteristic symptom. If it declares itself at first it may not be of great import, but where it begins on the second or third day it is of great import. Often till the end of the first period there is nausea only, but at the beginning of second stage vomiting sets in. The first consists of ingesta, and sometimes of green or yellow bile. When blackish spots appear in the midst of a clear liquid it most frequently happens that black vomit follows. A brown or grey fluid at first, with streaks of blood, soon becomes a homogeneous fluid like coffee-grounds or black ink; or it is composed of a liquid like an infusion of green tea, with a black powder or flakes deposited. As it is the result of hæmorrhage, death may be caused by its excess alone; but, should it contain some black striæ, death may be safely expected. This black matter, when not vomited, may sometimes pass off by the stools—a symptom equally fatal. Sometimes vomiting ceases twenty-four hours before death, when the black matter is found post-mortem in the ventricles. Vomiting may take place without pain spontaneously, or cause great anxiety, painful spasm, or a burning heat along the œsophagus. We must be careful not to mistake deep-coloured bile for black vomit. How detect the difference? Linen steeped in black vomit gives a *bistre très-tranchée;* in bile, a green or deep yellow. Without this precaution, we may mistake the deep green matter of bilious and hæmorrhagic fevers for black vomit. This is acid. Its liquid part does not contain albumen; its solid part, some signs of fibrin. The microscope recognises globules like those of the blood, but misshapen. Black vomit is, therefore, altered blood; probably by hydrochloric acid.

Stools, when bilious, are not so serious as when they turn black or bloody. The matter by stools is, inversely, as that by vomiting.

Hæmorrhages.—Hæmorrhage is often considered as the essential character of yellow fever, as a symptom of the decomposition of the blood, and yet no hæmorrhage may appear either during life or after death. Yet the alteration which destroys the cohesion of the blood globules and augments the liquidity of the liquor sanguinis is always a predisposing cause of hæmorrhage, which depends probably upon the degree of change in the blood, or the intensity of the congestion in the first stage. The earlier the appearance of hæmorrhage, the more formidable the case; hence, if it appears on the first day, the danger is great; it usually appears on the fifth or sixth day; may be present in a very mild case, and absent in a very grave one; its quantity may determine death; may appear by any of the natural outlets; frequently by the bites of leeches; most dangerous in the form of epistaxis; it may direct itself even into the cellular tissue (or muscular). In a word, hæmorrhage means dyscrasia of the blood. It is not absolutely fatal unless in the form of black matter; yet it may prove fatal by an excess, whether from the nose, stomach, or by stools.

Alteration of the Blood in Yellow Fever.—In first period the blood is consistent and red; in second, the hæmorrhages indicate the changes in the blood; livid patches are evident on the skin; leech-bites become livid and ecchymosed. The blood is black, and does not form a clot; urea has been found in the blood where suppression of urine exists; bile also is found in such blood.

Icterus generally appears on the decline of the fever. When it makes its appearance sooner, coinciding with fever and vomiting, about the second day, the sign is a mortal one. It may be mild in fatal, and intense in mild cases. Jaundice is the result of the principle of the bile in the blood; in cool seasons, it is frequently absent. It is, in many cases of yellow fever, replaced by a straw-coloured state of the skin—the effect, probably, of a defibrination of the blood, as in chlorosis and anæmia; but the general opinion is that the different variations of yellow depend upon the variable intensity of the biliary suffusion.

In fatal cases, jaundice is as certain after death as albuminuria is certain during life.

Violet-coloured marks or stains appear in certain parts, instead of yellow stains, owing to extravasation of blood contained in the cutaneous capillaries.

Cerebral Symptoms.—When the vital powers appear seriously affected, the nerve-centres exhibit their sympathy by a kind of tremor, or general trembling, as evidenced by the pulse, the speech, and subsultus tendinum, coincident with agitation and anxious respiration. They do not appear as the effect of febrile excitement, as they appear at the close of the first or at the end of the second stage. They may first declare themselves by a little stupor and disturbance of ideas, and may appear in form of delirium, coma, or convulsions, continued or intermittent cries, great sensibility of the skin, etc., etc.

Urine: Its suppression observed a little before death; if earlier, the case is nearly always fatal. In the second period, the urine becomes brown or acid. Nitric acid produces a greenish blue when icterus appears, and gives a precipitate, grey-whitish, of albumen. In the urine of marsh fever, typhus, etc., there is found no albumen. There is in yellow fever a true suppression of urinary secretion.

Hiccough frequently in the second period; often a symptom of approaching death.

Yellow fever is an *essentially continued* and non-marshy fever. It has two periods only, and sometimes only one. Between the first and second periods, there is often a transitory modification of symptoms, which produces a deceitful sense of security, often in the Medical attendant, often in the patient. He asks for food, often insists on getting up and walking about; this feeling is often the precursor of death. The disease, in a mild form, may last three or four days; a more serious fulminating case may carry off the patient in less than two days. That which goes through its periods may last even eight or nine days. Recovery from yellow fever will often revive old complaints, which of themselves may prove fatal.

Diagnosis from Marsh Fever, etc., or Bilious Fever.—Yellow fever prevails in some localities, while marsh fever prevails in many other climates besides those peculiar to yellow fever. Yellow fever respects those who have been once attacked, while marsh fever may be repeated frequently in the same patient. Marsh fever is to be found in all parts of the globe; not so with yellow fever, which is to be found only upon the borders of the sea. Localities where intermittent fever is never found, may be the most infected by yellow fever. Thus, their geographical relations are but a mere coincidence, while their topographical ones are, on the other hand, essential characters of the cause. Yellow fever is not the most intense expression of the endemic fever of the place where it exists; else, why has yellow fever its mild form, as the other fevers have their severe forms? Is it a form of bilious fever? Jaundice is always inseparable from bilious fever, while it may be absent in yellow fever. Vomiting also accompanies bilious fever, of bilious matters; may be absent in yellow fever; and when it is not, may appear in the form of black vomit. The hæmorrhagic patches of the skin of the cellular tissue and muscles are peculiar to yellow fever; but albuminuria is common to both. Swelling and softening of the spleen is common to marsh, not to yellow fever. The anæmic discoloration of the liver, its fatty condition, does not resemble the sanguineous or sanguino-bilious congestion of the liver in marsh fever. Yellow fever is not a marsh fever, nor a bilious remittent, nor a bilious hæmaturic.

Nature of yellow fever is a pestilential one, having two distinct phases—the one of reaction against the infectious poison, constituting sometimes the entire malady, and very like to an infectious fever; the other, of depression or adynamic ataxia, counterfeiting nervous hæmorrhagic putrid fevers.

Treatment.—Keeping in view the nature of the disease, how quickly reaction against the effect of a poison is followed by a sometimes fatal depression, our treatment ought to be such as, while adapted for the elimination of the poison, may not depress the system; hence, the old plan of bleeding cannot be defended. When pains are intense in the first period, cupping over the spine, and leeches to the anus may be employed, but not over the stomach; mustard poultices or even blisters are preferable over that part. Should the stomach appear overloaded, I begin frequently by giving an emetic of ipecacuanha; if not, I give five grains of blue pill or grey powder, to be followed a few hours afterwards by a little castor oil in syrup and lemon-juice. After the bowels are gently moved, I have recommended a mixture containing the salts of potash and soda, including the chlorate of potash. Dr. Ashenbrenner, a very practical, scientific Physician in Havana, recommends the same plan. I have practised the above plan in Porto Rico with excellent results; but we must carefully study the particular epidemic type which may prevail, which changes so often, that the remedy which may be valuable this year may prove useless the next. Carbolic acid in gum-water has been used with great success. Acid water may sometimes be employed; lemonade, cold tea, which produce diaphoresis and allay thirst. Quinine, even when symptoms appear to resemble intermittent, never to me appear to have produced the desired good; indeed, I believe quinine does harm, especially in the first stage, and in the second it appears to have increased the anxiety, and to precipitate a fatal ataxia. Should, however, a complete and well-marked intermittence be noted during the period of a calm—often an insidious one—in the transition from the first to the second stage, large doses of quinine may be tried. Ipecacuanha emetics are greatly recommended in Havana; in all cases, I believe, they are too indiscriminately used, and ought to be used with great caution, as whatever provokes vomiting must favour the formation of black vomit. Respecting the use of quinine, when properly combined it appears to have a safer effect. We used to administer, in the Casa de Salud de Garcini, an excellent formula—a pill every three hours, containing one grain of quinine, one of myrrh, and one of camphor; it relieved anxiety, restlessness, and was useful where hæmorrhage was to be dreaded. When the second period is about to enter, emetics are positively dangerous; gentle purgatives, as castor oil, with syrup and lemon-juice, are best. Injections are sometimes preferable; they act as derivatives in sanguineous congestion, calm nervous excitement, and favour the elimination of the poison. Valuable adjuvants are sinapisms to lower extremities, hot foot-baths in the horizontal position, cold compresses to head; others of tepid water to epigastrium, and frictions over the loins, of lemon-juice or hot vinegar, afford great relief; a tepid lemon-bath is very useful for nervous subjects, in which the patient may be plunged ten or twelve minutes thrice a day, and cold applied to the head. Perhaps the expectant treatment is the best. The judicious application of cupping, diaphoretics, external revulsions, an ipecacuanha emetic at the outset, when the stomach is embarrassed, light purgatives, injections, tepid bath with cold affusions—in a word, all means which favour the elimination of the poison and moderate its congestive action over certain organs, without increasing the functional disturbances already so alarming and threatening, such are the agencies which succeed best. I am informed that an eminent Physician in Havana, whose experience of this disease is considerable, uses aconite largely in the first stage of yellow fever. Aconite acts powerfully as a sedative to the circulation, and is useful in controlling inflammation and subduing the accompanying fever; it may be useful in the sthenic forms of disease, as in pneumonia pleuritis, tonsillitis, etc. But the fever of yellow fever is not of a sthenic character like that in inflammatory fever, it is the effort of reaction against an infectious poison. Hence the inefficacy of aconite, as I am informed by those who have tried it, as it has no effect in subduing the cause of yellow fever, but rather increases its depressing tendency. The best remedies are such as are calculated to eliminate the poison without depressing the vital powers. The country people in Cuba employ with excellent effect, at the commencement of an attack of yellow fever, the following:—To half a pint of salad oil is added one teaspoonful of common salt and half an ounce of lime-juice. The dose to be repeated if necessary. I never yet could find a native who could explain to me the *rationale* of this not agreeable compound. Taught by a feeling of instinct and self-preservation, and from long experience, they recur to it like the dog, who, from the cravings of instinct, is said to pick out and select in the field the herb best suited to his ailment. Yet the combination may be termed a scientific one. The large quantity of sweet oil acts as an emollient application to the mucous membrane of the stomach, to which the poison of yellow fever is most frequently directed. It acts as an aperient and easy purgative; or, should the stomach be foul or overloaded, the mixture will assuredly act as a gentle emetic, while the capillaries distended by the act of vomiting will be soothed by contact with some remaining part of the oil. The common salt is antiseptic, and lime-juice must prove valuable in all diseases in which a change in the blood is concerned, as in scurvy, yellow fever, etc. This remedy has been adopted for some time in the Quinta del Rey, one of the principal Hospitals of Havana. I should not hesitate to recommend it in whatever part of the world yellow fever should make its appearance. In the second period we must attack the predominant symptom. Vomiting may be nervous or sympathetic, or it is essential or hæmorrhagic. What is vomited at first is bile or greyish liquid. Here apply sinapisms or blistering; ice-water in small quantity; champagne wine is excellent. If there be spasm, give morphia; if there be black vomit, give ice, lemonade, with the mineral acids (especially the muriatic), astringents, ergotin. Quinine does harm in black vomit. If cerebral symptoms predominate, apply lotions to forehead, small blister between the shoulders, injections; opiates, if nervous symptoms predominate. Hæmorrhages: As they are the effect of a dyscrasia of the blood in general—not from a local cause, as in phthisis, etc.—we can easily understand how difficult it is to avoid them. We may try the mineral acids, the nitro-muriatic with serpentaria; spirit of turpentine (which is used largely, I am told in New Orleans); perchloride of iron; ice inwardly; secale cornutum. Against suppression of urine: Terebinthine frictions over the loins, nitre and camphorated injections, etc., etc. In troubled respiration, strychnia may rouse the paralysed energy of the nervus vagus.

Such is an outline of the treatment best adapted to yellow fever in its two stages, with its varied complications and particular symptoms.

Our remedies may be innumerable, but all will be useless without the knowledge of their proper application, which knowledge can only be acquired by observation, patience, and experience.

Havana.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE.

CARIES OF CARPUS RESULTING FROM WHITLOW OF THUMB, FOLLOWED BY ABSCESS IN THE SHEATHS OF THE FLEXOR TENDONS—AMPUTATION OF FOREARM—DEATH.

(Under the care of Mr. ERICHSEN.)

JANE S., a married woman, aged 60, was admitted into University College Hospital, on January 14, 1871, with the following history:—Whilst cutting a piece of wood with a knife, nine or ten weeks before, a splinter ran into the outer side of the right thumb, opposite the joint. After three or four days the thumb began to swell, and became very painful; the neighbourhood of the wound was much discoloured, and the whole hand swelled and became "quite black." She now took to bed, and under Surgical advice poulticed her hand, but the little finger suffered so severely that it was necessary to amputate it through the middle phalanx. Two incisions were made at the same time, one through the ball of the thumb, and the other just above the wrist on the outer side. These measures had been taken a month ago; there had been profuse suppuration since, and the patient had kept her bed constantly. On admission, it was noted that the woman was old-looking, very feeble, and with an anxious expression of countenance. There was general inflammatory swelling and œdema of the whole hand, extending a little above the wrist. Pus welled from a small opening the size of a pea in the dorsum of the hand; and on examination, the wrist-joint was found completely disorganised, the carpal bones loosely grating against one another when the arm was rotated.

Mr. Erichsen having decided that the only course to adopt was amputation of the hand, this was performed on January 18, the forearm being divided a few inches above the wrist, with equal antero-posterior flaps. The vessels were tied, and the flaps brought together with silver sutures. Free support, with 10 oz. of wine, was ordered.

A careful examination of the amputated hand was made by Mr. Marcus Beck, the Surgical Registrar, who made the following note of its condition:—"The whole of the articulations of the carpal bones with each other, with the radius, and with the metacarpal bones, were found to be affected. The cartilage was destroyed in almost all; a little was left on the end of the radius. The synovial sheaths of the thumb and little finger were found to be the seat of suppuration, as well as the general synovial membrane of the flexor tendons. The disease seems to have commenced in the thumb, and spread by means of the synovial sheath of its tendon to the general synovial membrane of the wrist, in which abscess must have formed, at last opening the joints of the carpus. By the synovial sheath of the little finger flexor tendon, the disease spread into that finger, necessitating amputation. The other three fingers escaped, as their sheaths do not communicate with the general sheath."

The patient experienced great relief from the operation, and at first seemed likely to do well, the flaps uniting nicely; but a fortnight later she began to lose strength, sloughing of the partly-healed wound set in, a severe bronchitis further exhausted her, and, in spite of free stimulation, she sank on February 5.

At the autopsy, the cause of death was found to be extensive bronchitis and emphysema, other lesions being a very fatty heart, and suppuration extending up from the stump into the elbow-joint. The flaps, excepting in one place, had united, but the union was very soft.

LYMPHADENOMATOUS TUMOUR OF AXILLA—REMOVAL—RECOVERY.

(Under the care of Mr. ERICHSEN.)

Jane D., a married woman, aged 30, was admitted into University College Hospital on October 3, 1870, under Mr. Erichsen's care, with a large tumour in the axilla.

She was born at Doddington, in the fens of Cambridgeshire, and had very frequently suffered from ague. When only 13 she began to complain of lumps around the neck and under the chin, for which she was ordered cod-liver oil and iron. The lumps never suppurated, but became smaller when the swelling formed in the axilla two years ago. She had always been weak and thin, and from the age of 15 to 20 suffered from a severe cough, with occasional blood-spitting. The cough was so severe that at times, during a paroxysm of coughing, blood would flow from her nose and "drop like tears from her eyes." There was no history of symptoms of syphilis. Menstruation had always been regular until marriage. Had had four children, and no miscarriages. The tumour in the axilla, in spite of various medicaments, steadily increased in size.

On admission the woman was observed to be thin and delicate-looking, but not markedly pale. The glands around the neck and under the chin were distinctly enlarged, as were also those behind the sterno-mastoid, and a hard lobulated tumour, about the size of a man's fist, projected from the centre of the axilla, the skin covering it being perfectly free, and the tumour being itself freely movable in the axilla.

On October 6, Mr. Erichsen, deeming the tumour to be of a glandular nature, caused chloroform to be administered, and then, making an incision, about three inches in length, over the centre of the tumour, with the aid of a few light touches with the knife enucleated it from its bed. No ligatures were needed. A bit of lint was placed in the wound, which was covered by another bit soaked in solution of carbolic acid, and the arm bound across the chest. The wound healed steadily by granulation, and three weeks later the woman left the Hospital well.

A microscopic examination of the tumour was made by Mr. Beck, who made the following report:—"Under the microscope, the tumour presented a perfect specimen of tissue, resembling that of lymphatic glands—the adenoid tissue of His. A thin section showed at first nothing but masses of small round cells, with single nuclei, and some red blood corpuscles. But on brushing away these cells with a camel's-hair pencil, a delicate reticulated stroma was found, having small knots at the places where the meshes intersected, and in some of these was a nucleus. In some parts the fibres forming the stroma seemed to run almost parallel to each other, with occasional intersections."

This case is interesting as affording an example of a disease of which many specimens have been brought before the notice of the Profession in England during the past year or two. Mr. Beck's report of the microscopic structure shows it to be of the nature of those lymphomatous tumours which seem to occupy a position between hypertrophies and genuine neoplasms. These growths attain at length so huge a size as to place them fairly in the category of tumours, although their histological elements point conclusively to their origin as mere hypertrophies of lymphatic glands.

ST. MARY'S HOSPITAL.

CASE OF MODERATE BRONCHIAL CATARRH—EXTREME DYSPNŒA—ALBUMINURIA—GOUT—GREAT IMPROVEMENT.

(Under the care of Dr. HANDFIELD JONES.)

R. Q., aged 48, wood turner, admitted November 22, 1870. This man was brought in by the police in a quasi-insensible state, having fallen in the street. When admitted he was gasping for breath, with noisy inspiration. His temperature was 99°; pulse, 104; respiration, 28. Emetics were administered, first of ipecacuanha, and then of ant. pot. tart., which did not bring up any phlegm, but which seemed to have relieved him much; he was also ordered to inhale steam, "as a good deal of the difficulty of breathing was in the larynx." I did not see him till next day. I then learned that he had been strong and healthy until three weeks ago, and that he was then attacked with shortness of breath and cough. He had no idea how his illness came on; he was not aware that he had got chilled. He felt no pain in the side, or any part of his body; only a sensation of tightness across the chest. His breath getting shorter, and his cough worse, he was compelled to give up work. For fear of losing his place, he soon went to work again, fancying himself a little better; but after two or three days, having on the last had a hard day's work, he was taken in the way described. He worked during the last day with great difficulty, and at last had to get a boy to turn the lathe for him. It was dyspnœa which prostrated him at last; he was not insensible at any time.

23rd.—This morning he is much better, breathing much easier; he lies down well. Pulse regular and quiet. Heart's sounds normal; impulse felt in fifth left space. Tolerably good resonance in both backs, except at the very bases. Air enters pretty freely in deep breathing, producing a great deal of medium-sized half-moist râle. The lower ribs expand fully in deep inspiration. More play of upper ribs than is usual in males. He has had turpentine stupes applied to the chest, and is taking spt. chlorof. ♏xv. and tr. scillæ ♏xx., and liq. ammon. acet. ʒij., and aq. ad ℥j. *quât. diê;* also wine ℥iv. Simple diet, beef-tea, milk. He asks to-day for a chop.

25th.—Only complains now of weakness; almost fell down when he got up to-day. Has no expectoration, and almost no cough. Urine is highly albuminous, sp. gr. 1020. The next day it deposited a copious white sediment, which was made up almost solely of mucous (or pus) corpuscles, and presented no casts. No dropsy. Pulse firm. Liq. ferri peracet. ♏xx. + liq. ammon. acet. ʒj. + inf. quass. ℥j. t. d.

December 10.—Went out yesterday on pass; walked a few hundred yards, but turned giddy and breathless, and felt tight at chest, just as he did before his admission.

12th.—Much shortness of breath to-day. Pulse 90 before a quick turn in the ward, 105 after. Respiration 23 before, 27 after; very little expectoration; a good deal of small crepitation in the right lower back, scarce any in left, or in other parts of lungs. He lies down and sleeps well, but cannot lie on right side.

17th.—Feels decidedly better; less sediment in urine, sp. gr. 1012; it is still notably albuminous.

28th.—Urine quite free from sediment, of light colour; sp. gr. 1010; hazes from albumen when nitric acid is added. His breath now feels all right; but since yesterday he has got inflammation of the left great toe.

30th.—Inflammation of toe is much less; nothing has been done for it. First sound of heart prolonged, and quite murmurish at apex; natural at base and at xiphoid. Second sound natural at base and apex. Pulse 90 lying down, of fair force; after a quick turn up and down the ward, it was 106; he says this exercise did not put him out of breath nearly so much as that on the 12th. Moist râles heard in right back and front. Lying on the right side sets him coughing in five minutes. Urine of 28th, after being filtered, and treated with HCl, deposits in two days a tolerably good amount of uric acid.

January 4, 1871.—Voice lost from catarrh; lungs nearly free. The urine continued slightly albuminous on the 7th and 11th. He left the Hospital about the 15th.

On February 11 he came to show himself; was troubled by cough, but could work well—in fact, complained of the scantiness of work.

Remarks.—This case was not at first by any means a clear one; nor am I now quite sure that I can give you a clear and coherent view of the several phenomena we observed. But let us try. It was certain that he had at first catarrh of his air-passages, and great debility: these, at least, were the prominent symptoms the day after his admission, and for some time after—in fact, he was seized when he went out on pass, eighteen days after he came in, much in the same way as he had been originally. The existence of bronchial catarrh was established by the presence of râles in the air-tubes, though there was little cough or expectoration. It is, however, quite certain, I think, that the extreme dyspnœa which he suffered when taken ill was not dependent on obstruction of the tubes by accumulated mucus. The dyspnœa was of comparatively short duration; no phlegm was brought up by the emetics, and much of the difficulty of breathing appeared to be laryngeal. Another very important feature of his condition was the albuminuria. Though no casts were found in the urine, and though the sediment deposited appeared to be solely ordinary mucus, and not renal epithelium, I can scarcely doubt that the albumen proceeded from the vessels of the kidney. Under treatment the amount of albumen diminished considerably, but it was always present, and betokened, I cannot but think, especially as the specific gravity was low, the existence of renal degeneration. This opinion is further confirmed by the occurrence of a mild attack of gout—a disorder which is known to coincide often with morbus Brightii, in the form which induces contraction of the kidney. It is true that the urine appeared to contain a tolerable amount of uric acid just about the time of the gouty attack; but unless an accurate quantitative analysis had been made, this counter-evidence could not be insisted on. The heart's action was good and steady, and was not inordinately accelerated by exercise, so that I cannot regard failure of circulation as concerned in producing the dyspnœa. The factors of this disorder were probably two—viz., spasmodic contraction of the glottis, and deranged innervation of the pneumogastric; both, I believe occasioned by the impure blood and the influenzal prostration. It may be more correct to say that deranged innervation of the vagi was the sole cause, the glottic spasm being regarded as the expression of irritation of their recurrent branches. Graves speaks of severe dyspnœa occurring in influenza out of all proportion to the amount of bronchial inflammation, and fully recognises its dependence on the disorder induced by the miasm in the pulmonary nerves. I see no reason to doubt that the emetics and the steaming had a very beneficial effect on the extreme dyspnœa with which the patient was admitted. They acted as relaxants to the spasm of the glottis, just as they do in asthma. As I did not see the case at the time, I do not question the propriety of giving the emetics; but theory suggests that the same purpose might have been attained by applying repeatedly a sponge, wrung out of very hot water, over the larynx, and giving some doses of opium and ether. If the pulse were feeble, I should prefer in another case the latter procedure. The subsequent treatment after the albuminuria was detected consisted, besides rest, in giving steadily liq. ferri peracetatis, and the results were certainly beneficial. The urine became more natural, and the patient regained ability to follow his employment.

Let me advise you, in conclusion, to get into the habit of thinking and conning your cases over, especially those which present any points of obscurity. These may often be cleared up by careful consideration, and, if not, the remembrance of them will stimulate you to further observation and research. By such mental training you cannot but be gainers; and you may depend upon it that it is not the mere seeing of cases, but the studying of their details, which will make you keensighted and able Practitioners.

ROYAL INFIRMARY, EDINBURGH.

CASE OF VAGINISMUS—REMARKABLE ABSENCE OF SEXUAL APPETITE—TREATMENT BY DILATATION—REMARKS.

(Reported by Dr. J. R. Hardie.)

C. W., aged 40, is married, but has had no children; she came to Dr. Matthews Duncan's Ward on January 4, 1871, complaining of great pain when her husband attempted to have sexual connexion with her.

At the age of 17 or 18 years she began to menstruate, and at that time had sexual feelings to a slight extent. For the last twenty years, however, she has had no sexual appetite, and was on that account unwilling to get married, and only did so at the urgent and long-continued request of her suitor.

About five years ago, her courses began to lose their usual periodicity, and have never since been regular. She frequently has no discharge for three months. The menstrual fluid is always thin like beef brine, and leaves a greenish stain on the cloths. Slight pain in the loins and leucorrhœa have troubled her for many years.

Physical Examination.—The hymen is observed to be ruptured in the usual way; in its neighbourhood the mucous membrane of the vagina is seen to be quite natural. The vagina is somewhat more contracted than usual. On passing the examining finger into it, patient experienced great pain, and when an ordinary-sized speculum was passed, she threw herself about, evidently in the greatest torture, and appeared as if she would go into convulsions.

Treatment.—January 7.—On examining W. to-day a caruncle was observed at the orifice of the urethra, and as this is sometimes the source of great suffering, it was removed with a pair of probe-pointed scissors.

February 2.—The wound which resulted from the amputation of the caruncle having healed, and the pain on vaginal examination still persisting, patient was put under the influence of chloroform, and a speculum of the largest size was passed into the vagina, in order to dilate it.

13th.—Patient can now more easily endure vaginal examination. The parts being healed, she was dismissed to-day.

Remarks.—A case like the one just described, would be considered, as the nomenclature of diseases of women at present stands, a typical example of the so-called vaginismus or spasm of the vagina. The absence of an unnatural degree of redness or any other visible signs, to account for the severity of the symptoms exhibited on vaginal examination, is in itself a remarkable circumstance. It has been urged by some writers, that a fissure or crack, similar to that which obtains in fissure of the anus, is frequently present, and that this accounts for the pain endured. No fissure was observed in this instance. In the majority of cases, all that can be detected by examination is some redness, tenderness, and hardness in and about the region of the hymen at its posterior part. Slight abrasions are frequently present. The symptoms which may arise from such lesions vary in degree, from slight inconvenience to intense agony on sexual contact. In the severer forms of this complaint, a diminished degree, or, as in the case narrated, a total absence, of the natural sexual appetite is sometimes observed. This circumstance changes the act of coitus from its ordinary character into a measure of simple violence. The treatment differs as the symptoms. Sometimes absolute rest of the parts is all that is requisite in order to effect a cure; the application of the ointment of the subacetate of copper is attended with benefit in other instances. In the more extreme class of cases, forcible distension of the vagina, or even incisions into its substance in the neighbourhood of the hymen, may be had recourse to. There is still another class of cases in which no treatment seems to do good.

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Medical Times and Gazette.

SATURDAY, MARCH 18, 1871.

THE SMALL-POX EPIDEMIC.

There was a further decline in the registered mortality from small-pox in London last week. In Liverpool, where the epidemic has been raging very much more severely, the mortality is stationary. The number of deaths registered in London was 194. Hitherto the Eastern districts have furnished the largest number; but, after distributing the deaths in the Hospitals to their proper localities, the Registrar-General finds that this is no longer the case; the South and the North of London are the parts to which the chief severity of the disease has been transferred. Thus, 55 of the 194 deaths belonged to the South districts, 54 to the North, 42 to the East, 24 to the West, and 19 to the Central districts. This change was foreshadowed by the returns of the Association of Health Officers. The maximum appears to have been reached in Islington in the week ending March 4, while in St. Pancras and Hackney the highest number of fresh cases was recorded last week. The epidemic is wearing itself out in the several districts of London in succession.

Dr. Grieve's paper, read on the 8th inst. before the Epidemiological Society, consisted mainly of a summary of his reports made fortnightly to the Asylum Board. Some of the facts referred to have been already laid before our readers. His observation as to the uniformly fatal issue in hæmorrhagic cases is fully borne out by general experience, as also the rarity of this variety of small-pox in children. Still, although the experience of the Hampstead Hospital furnishes no instance, it is certain that hæmorrhagic small-pox does occur in early life. Only a few days ago we saw two children in one family lying dead together from this form of the disease. At the same time, there is no question that it is chiefly met with in persons who have constitutions damaged in some way, either by previous attacks of illness, privation, misery, previous residence in a hot climate, or intemperance.

ARMY REORGANISATION AND THE BRITISH AND INDIAN MEDICAL SERVICES.

During the discussion in the House of Commons on Monday night concerning the abolition of purchase and the general reorganisation of our land forces, some points were incidentally raised by Mr. Eastwick and Mr. Auberon Herbert which may excite among Medical officers of the British and Indian services a greater interest in the question at issue than many of them at present feel.

At first sight it may not appear of much importance to Medical officers whether or not their combatant brethren shall purchase their first commissions and subsequent steps; but when the proposed abolition of purchase involves the consideration of such a complete reform of our army system as has been advocated by some of the best-informed and most thoughtful members on both sides of the House and below the gangway, it soon becomes apparent that the personal interests of Medical officers cannot escape being influenced to a considerable degree. The re-establishment of the local European army in India, suggested by Mr. Eastwick, and in which he was supported by Mr. Auberon Herbert, as part of the plan of reorganisation of the home army, opens for the consideration of Medical officers of both services questions of extreme importance.

The substitution in 1858 of an Imperial for a local European army in India rendered necessary the complete withdrawal of the Medical care of European troops from the Indian Medical Department, and as a corollary to this change there resulted a considerable increase to the administrative and executive ranks of the British Medical service in India. The loss of the Medical superintendence of the European soldiers transferred to the Crown was very seriously felt by the Medical officers of the Indian service, by whom, doubtless, the prospect of the restoration of such duties would be eagerly hailed. Mr. Eastwick proposes that 32,000 men belonging to the Imperial forces should still remain in India, thereby reducing them by more than 20,000. A corresponding reduction in the British Medical staff would very seriously affect the Army Medical Department as regards numbers, promotion, and the attainment of comparatively lucrative appointments in India. Mr. A. Herbert would entirely separate the Indian and home armies, the result of which would be entirely to withdraw officers of the British Medical service from India.

If any such changes be impending, it may be just as well that no amalgamation of the two Medical services should have taken place. Our readers will remember that in 1858 this question of amalgamation was debated, and that the complete transference of all Medical duties with native troops to the British Medical service has also been suggested as the means of bringing all Medical officers serving with troops under one responsible head, in the same way as all military authority is vested in the Commander-in-Chief. The thorough consideration of such questions is inseparable from the plans of army reorganisation proposed by Mr. Eastwick and Mr. A. Herbert, and we trust that those members of our Profession who have seats in the House of Commons may endeavour to preserve the interests of the members of both the British and Indian Medical services from the injurious influences of any change which may be effected in the organisation of the army.

SICK TRANSPORT AND VOLUNTEER AID IN WAR.

The appearance in the *Contemporary Review* of a paper by Mr. Berkeley Hill on the above subject, may be taken as an indication that the more thoughtful classes of the reading public are at last awaking to the importance of the duties to be performed by that department of the military service which provides for the treatment and transport of the sick. The public can comprehend the necessity of soldiers, guns, and amunition, but has yet to learn that the loss by sickness from the effective strength is always far beyond that of the killed and wounded in battle, and that it is only during the leisure of peace that effective preparations can be made with the view of diminishing the terrible loss and suffering which have become well-nigh habitual in all military expeditions. The writer points this moral by many instructive and well-selected instances.

We believe, however, that in stating that the amount of transport allowed by the War Office regulations for a force taking the field is sufficient only for the carriage of 36, or at the most 48 per division of 5000 men, thus leaving, at the usual computation of 5 per cent. or 250 men constantly sick, transport for 202 quite unprovided for, Mr. Berkeley Hill has fallen into an error from a misconstruction of the several articles of the code of Medical regulations. The intention of these, although obscurely expressed, we believe will be found to be that, in time of war, carriage shall be provided for 5 per cent. of an army taking the field, and that under exceptional circumstances such amount may be increased on the recommendation of the Director-General in concert with the Secretary of State for War.

Professor Longmore(a) in his treatise on Ambulances notices the liability to such error, and observes that if on an army taking the field the amount of transport be not sufficient, the deficiency must arise from one of two causes—either that the Director-General has not applied for the necessary amount of carriage, or that the authorities have not complied with his requisitions. As, however, even Professor Longmore states that the precise amount of ambulance transport is not laid down by regulations, but is left to be decided by the Director-General in each case, according to the probable exigencies of the campaign, Mr. Berkeley Hill is quite justified in his comment that such a system is radically bad, as it leaves the due equipment to the mercy of the moment when every department is overwhelmed with business.

On the subject of bearers for the wounded, Mr. Berkeley Hill advocates the introduction of the German practice of detailing one non-commissioned officer and four privates in every company of infantry for such duties; but he does not appear to be aware that in the German army a company consists of 250 men, and in ours of only sixty; consequently the proportion of bearers on his suggestion for our army would much exceed that in the German. The advantages of the system of having trained men told off as bearers of the wounded are so obvious, and have been so strongly brought into notice by the experience of recent wars, that we trust soon to see the system introduced into our army.

The views expressed on the disastrous results of the over-centralisation of the French Intendance, on the advantages of evacuating field Hospitals, on hut Hospitals, on the operations of private aid societies, and on several other points, coincide so completely with those which we have ourselves so frequently advanced, that we gladly see them so clearly presented to the class of readers who study the *Contemporary Review*.

THE WEEK.

TOPICS OF THE DAY.

We are threatened with three Medical Bills. Mr. Headlam seems to be hesitating, and holding the British Medical Association Bill back for a time. Dr. Lush has compassionately taken the office of foster-father to the unhappy offspring of the *Lancet*, which Mr. Forster turned from his door so hard-heartedly the other day. Dr. Brady has also a Bill; what this may prove to be we do not pretend to say. The Medical Profession is just now in the position of a *malade imaginaire*. It is a capital case for the Doctors. One celebrated Physician from Chester proffers his assistance, but assures the unhappy patient that nothing can do him good but the very expensive nostrum called "direct representation." Another learned Doctor, who, however, is known as a writer rather than a Practitioner, says that no medicine will have any effect until the patient has pulled down the old houses in Pall-mall East, Lincoln's-inn, and Blackfriars, in which he has lived so long, and got himself a new one, which is to be built under the direction of an amateur architect who is to be heard of in the Strand. A third Doctor, who dates from Ireland, recommends that the patient should undertake a peripatetic tour through the three kingdoms for the benefit of his health; and the fourth, who has a grand residence near Whitehall, gravely assures the unfortunate sufferer that he is not capable of taking care of himself, but that he must be placed under the superintendence of an officer provided by the department of State which looks after nuisances. Meanwhile, the patient, if he would but determine to take a few baths and keep himself clean, have his houses put in good repair, look after his business, and concentrate his powers on the improvement of his circumstances, would be as healthy a body as any in the kingdom.

We are glad to announce that on Wednesday last the Council of the Royal College of Surgeons refused to confirm Mr. Simon's amendment, carried, it will be remembered, at their previous meeting by the bare majority of one, which had for its object to send back the draft scheme for a Conjoint Examining Board to the Committee of the three English Medical Corporations for reconsideration, on the ground that the scheme did not perform the legal impossibility of binding all the Medical authorities of England to cease granting registrable diplomas save through the Conjoint Examining Board, and because the scheme did not insure the co-operation of the Universities. With regard to the first objection, no one knew better than the mover of the amendment that no scheme could deprive of their legal rights the Universities and Royal Colleges, but that practically the scheme in question effected the very real reform of providing an uniform standard of examination for nine-tenths of the Practitioners of the country. With regard to the second, the non-coöperation of the Universities, the scheme was not presented as perfect, and it is clear that the help of the Universities may be obtained as a supplement to its provisions, always supposing the Universities be willing to submit their graduates to the examinations of the Conjoint Board. The admission of a few assessors or examiners from the Universities would by no means necessitate its reconstruction. But had Mr. Simon's amendment been confirmed, it would simply have thrown back the whole matter into the chaos of two years ago, and its success would have afforded the best reason for the reintroduction of a Government Medical Bill, which would hand over the Profession bound hand and foot to be regulated and governed, ostensibly by the General Medical Council, but in reality by the Medical Department of Her Majesty's Privy Council. It is difficult to suppose that these were not the reasons which inspired the amendment. We are glad that the practical good sense of the majority of the Council of the College of Surgeons have repaired the error of rejecting the labours of their own Committee. The Council has now resolved itself into a committee for considering the details of the scheme, and for that purpose will meet on Tuesday next, the 21st inst. This course will commend itself to the judgment of the Fellows of the College and the Profession at large. So important a measure should not be passed without due deliberation; and if the main features of the scheme be preserved, no objection can be taken to an attempt being made to extend it by the inclusion of the Universities.

(a) Note to page 69.

Mr. Curling has been elected a Member of the Court of Examiners of the Royal College of Surgeons.

Dr. B. W. Richardson has been elected Honorary Physician to the Royal Literary Fund, in the vacancy occasioned by the death of Dr. Copland. The Literary Fund, as a charity, has an especial interest for Medical and scientific men. It sprang originally out of a club of which Benjamin Franklin was chairman, and it was founded in 1790 under the presidency of Dr. Alexander Johnson, a Physician. It has relieved a large number of Medical men who, having united the pursuits of literature with those of Medicine, have found both callings fail when broken down by age and bad health. Although founded so long ago as 1790, there have been only three Physicians to the Fund. The first was Dr. Stevenson, who was elected in 1799, and held the office until 1810. He was followed by Dr. Copland, who is now succeeded by Dr. Richardson.

On Monday, Dr. Richardson exhibited to the Medical Society of London a substance known amongst chemists as metachloral. It is a white powder, insoluble in water and alcohol. It is believed by Dr. Richardson, from experiments made on the lower animals, to possess mild narcotic properties. Metachloral is isomeric with chloral. It is produced when chloral hydrate is brought into contact with sulphuric acid. Chloral, also, may be changed into metachloral spontaneously when it is kept for a long time in a stoppered bottle, or when a quantity of water insufficient to produce the hydrate is added to it. Heat converts metachloral into the liquid chloral, which becomes the hydrate on the addition of a sufficient quantity of water. Owing to its affinity for water, chloral is a caustic, and Dr. Richardson thinks that this fact, taken together with that of its after soothing effects, may be turned hereafter to practical value. The specimen of metachloral exhibited by Dr. Richardson was prepared by Dr. Versmann by bringing chloral hydrate in contact with sulphuric acid at 140° Fahr. By treating it with alkalies, metachloral yields a formate and chloroform.

A meeting of the Chamber of Agriculture will take place at the Salisbury Hotel, Fleet-street, on Tuesday, May 2, at 11 a.m., for the discussion of a paper by Dr. Rogers, the President of the Poor-law Medical Officers' Association, "On the Economic Aspects of Efficient Poor-law Medical Relief."

Four cases of gastric fever, one of them fatal, in a clergyman's family, are reported from Weymouth. They are supposed to have been produced by drinking water from a tank in which a rat's body had been allowed to putrefy. It must, however, be remembered that sewage gas or sewage liquid may have come by the same route by which the rat came, as the rat is sure to have come from a sewer.

LEGISLATION FOR HABITUAL DRUNKARDS.

We have before us Mr. Dalrymple's Bill to Amend the Law of Lunacy, and to provide for the Management of Habitual Drunkards. With the principle of legislation for the care and management of habitual drunkards we thoroughly agree; but we fear that at present the Legislature will not see its way clear to compulsory legislation. Still, if we could only obtain permissory legislation as in Scotland, we are sure a great gain to society would accrue. The first clause of the Bill defines an habitual drunkard to be—

> "Any person who, by reason of frequent, excessive, or constant use of intoxicating liquors, is incapable of self control, or dangerous to himself or others, or incapable of proper attention to and care of his affairs and family."

The second clause gives the power to confine an habitual drunkard in any—

> "Licensed reformatory, asylum, or refuge, or in any reformatory, ward, or building attached to or belonging to any union or parish workhouse, while under the influence of such unsoundness of mind, and for such sufficient length of time afterwards as may be necessary for the restoration of the mind and health of such person."

The third provides for the establishment of reformatories, sanitariums, or refuges, by private individuals, or associations, or corporations, or unions, or by magistrates assembled in quarter-sessions. The fourth provides that such reformatories are to be licensed under Act of Parliament. The fifth, that habitual drunkards may be admitted to such reformatories without certificate on their own written request. The sixth, that they may be admitted upon the request of a near relation, friend, or guardian, upon the production of certificates from two Medical men, countersigned by a magistrate. The certificates are only to be given on separate examination, and they are to be sent by the keeper of the reformatory, within forty-eight hours, to the Commissioners of Lunacy. The next clauses provide for the discharge of the patient, for the management of his estate, and limit the period of detention to not less than three months, or more than twelve months. This latter provision, however, may be modified by a Commissioner in Lunacy or magistrate.

The second part of the Bill relates to the commitment of habitual drunkards by magistrates. The following are its principal provisions:—

> "It shall be lawful for any two or more justices of the peace or magistrates sitting in petty session, or for a stipendiary magistrate, and in Scotland for the sheriff or sheriff-substitute of the county, to send to a reformatory, sanitarium, or refuge, any person who, on it being proved by evidence given before him and by the certificate of two Medical Practitioners that such an one is a person affected in the manner described in section 1 of this Act, and who is unable to pay for his maintenance in any other reformatory, sanitarium, or refuge, for a period not less than three months nor more than twelve months.
>
> "It shall be lawful for any two or more justices of the peace or magistrates sitting in petty session, or stipendiary magistrate, and in Scotland for the sheriff or sheriff-substitute, to commit to such reformatory, sanitarium, or refuge, without certificate, any person who has been convicted of drunkenness or a breach of the peace while drunk three times within six calendar months, for a period not less than three months nor more than twelve months.
>
> "The period of committal may be extended to a period of not more than six months beyond the time of the first committal, upon the evidence or certificate of a duly qualified Medical Practitioner that such extension of the period of detention is required for the restoration of the mind and health of the detained party."

INTOXICATION BY FUNGI.

In Kennan's interesting "Tent Life in Siberia" there occurs the following passage:—After due conclusion of the ceremony (a Korak marriage) we removed to an adjacent tent, and were surprised, as we came out into the open air, to see three or four Koraks shouting and reeling about in an advanced stage of intoxication—celebrating, I suppose, the happy event which had just transpired. I knew that there was not a drop of alcoholic liquor in all Northern Kamtchatka, nor, so far as I knew, anything from which it could be made; and it was a mystery to me how they had succeeded in becoming so suddenly, thoroughly, hopelessly, and undeniably drunk. Even Ross Browne's beloved Washoe, with its "howling wilderness" saloons, could not have turned out more creditable specimens of intoxicated humanity than those before us. The exciting agent, whatever it might be, was certainly as quick in its operation, and as effective in its results, as any "tanglefoot" or "bottled lightning" known to modern civilisation. Upon inquiry, we learned, to our astonishment, that they had been eating a species of the plant vulgarly known as toadstool. There is a peculiar fungus of this class in Siberia known to the natives as "muk a moor," and as it possesses active intoxicating properties, it is used as a stimulant by nearly all the Siberian tribes. Taken in large quantities, it is a violent narcotic poison; but in small doses it produces all the effects of alcoholic liquor. Its habitual use, however, completely shatters the nervous system, and its sale by Russian traders to the natives has consequently been made a penal offence by Russian law. In spite of all prohibitions, the trade is still carried on, and there were twenty dollars'-worth of furs bought with a single fungus. The Koraks would gather it for themselves, but it requires the shelter of timber for its growth, and is not to be found on the barren steppes over which they wander; so that they are obliged, for the most part, to buy it at enormous prices from the Russian traders. It may sound strange to American ears, but the invitation which a convivial Korak extends to his passing friend is not "come in and have a drink," but "won't you come in and take a toadstool"—not a very alluring proposal, perhaps, to a civilised toper, but one which has a magical effect on a dissipated Korak. As the supply of these toadstools is by no means equal to the demand, Korak ingenuity has been greatly exercised in the endeavour to economise the precious stimulant, and make it go as far as possible. Sometimes, in the course of human events, it becomes imperatively necessary that a whole band shall get drunk together, and they have only one toadstool to do it with. For a description of the manner in which this band gets drunk, collectively and individually, upon one fungus, and keeps drunk for a week, the curious reader is referred to Goldsmith's "Citizen of the World," Letter 32. It is but just to say, however, that this horrible picture is almost entirely confined to the settled Koraks of Penzhinsk Gulf—the lowest and most degraded portion of the whole tribe. It may prevail to a limited extent among the wandering natives, but I never heard of more than one such instance outside of the Penzhinsk Gulf settlements.

This practice, which has long been known, furnishes a curious illustration of the tendency of men of all races to provide themselves with some stimulant—generally also of a narcotic character. The fungus so used is closely allied to the bright orange-red *amanita muscaria* of autumn growth. Its effects, however, seem to differ considerably from those produced by the poisonous fungi of this country. These are ordinarily either irritant or narcotic, and although they sometimes produce the staggering gait of drunkenness, do not produce the exhilarating effect which would seem to be the result of the Siberian species. It is worth noting that the poisonous qualities of most fungi may be removed by boiling. Thus, the *amanita muscaria* above mentioned is a very dangerous plant, but when boiled its flesh is harmless, though the water in which it has been boiled becomes a powerful poison.

SMALL-POX.

The Registrar-General, in his Annual Summary of Births and Deaths in London, says that "small-pox destroyed 25,061 lives in the thirty-one years, 1840-70. The annual deaths averaged 808. The lowest number of deaths in any one year was 154, in 1857; the highest number was 2012, in the year 1863. In eleven of the years the deaths exceeded 1000, in thirteen they were below 600; thus they fluctuated to the extent of one-fourth every two or three years. The deaths rose above 1200 six times, and fell below 400 eight times. Taking this standard, the disease is very fatal every five years on an average. The disease can be followed week by week, quarter by quarter, and taking the quarter of highest small-pox death return as the keystone of the arch, we have ten epidemics in thirty years—one every three years. A new small-pox epidemic of unexampled severity began at the end of the year 1870. The seasons do not affect the mortality of the epidemic to any great extent. Thus, the weekly mean number of deaths was 16; the weekly deaths in the winter quarter was 17, in the summer 14. The mortality is highest in winter, lowest in summer; it is at the average in spring and autumn.

COMPULSORY VACCINATION.

A very brief allusion was made in last week's number of the *Medical Times and Gazette* to the decision of the Wolverhampton stipendiary magistrate in a prosecution for neglect of vaccination. The particulars of the case may not be uninteresting, as they embody the opinion of the law officers of the Crown (the Attorney and the Solicitor-General). Mr. Spooner, the stipendiary, recommended that the opinion of the law officers of the Crown should be obtained through the Poor-law Board. Such recommendation having been acted upon, the opinion arrived at by the Crown lawyers was that it appeared to them impossible to hold that the parent who appeared without the child could maintain that the justice had no jurisdiction because there was not an appearance, and, at the same time, maintain that he had appeared in obedience to the summons. If there was an appearance, the justice could proceed under the Vaccination Act of 1867. If there was not an appearance, he could proceed under 11 and 12 Vict., cap. 43, sec. 3, taken in conjunction with the Vaccination Act, section 31. They did not think a writ of *habeas corpus* applicable to the case. If the child was of sufficient age to give evidence and be required as a witness, it appeared to them that the magistrate might put in force the provisions of section 7 of the 11 and 12 Vict. to compel its attendance. Upon these opinions the decision will be appealed against in the Court of Queen's Bench. The section 3 of 11 and 12 Vict. here referred to empowers the justice or justices whose summons is not obeyed to issue a warrant for the apprehension of the defendant, to be dealt with according to law.

VACCINATION AND REVACCINATION OF SEAMEN.—THE DUBLIN MARINE BOARD AND THE BOARD OF TRADE.

The increasing number of cases of small-pox imported from Great Britain and elsewhere renders it necessary for Government to facilitate measures devised by the local authorities in Ireland to check the spread of the disease. It was with this view that the Dublin Marine Board authorised their Medical Inspector to attend on stated days at the Dublin Custom-house for the purpose of gratuitously vaccinating all seafaring persons desirous of that protection. The Board communicated their resolution to the Board of Trade, in full expectation that the latter department would sanction their very natural and laudable resolution; it is, however, with much regret we have to state that the Board of Trade replied that "*they are responsible neither for vaccination of the men nor for the payment of the Medical officer.*" It appears the receipts of the Dublin Marine Board from examination of seamen for qualification as masters and mates amounts to a sum considerably over the cost of that department. The measure recommended by the Dublin Board has the fullest approval of such able Professional gentlemen as Dr. Dickson, Medical Inspector H.M.'s Customs, London, Dr. Holcombe, Medical Inspector of Emigrants, Liverpool, and others Professionally connected with seamen, who hail the action of the Irish local authorities in the matter as well worthy of imitation in Great Britain. It seems a great pity that the Board of Trade have not at once authorised the Dublin Local Marine Board to take the necessary steps, when the entire expense is so small as probably not to exceed eighteenpence to two shillings per head.

DR. GORDON AND SURGEON-MAJOR WYATT.

Dr. C. A. Gordon, C.B., Deputy Inspector-General of Army Hospitals, has arrived in town from Paris, where he had been employed during the entire period of the siege, in concert with Surgeon-Major Wyatt, Coldstream Guards, on a special mission of observation. We are happy to hear that Dr. Gordon is in good health, notwithstanding the privations and anxieties to which he was subjected. Surgeon-Major Wyatt, we regret to add, in consequence of slight indisposition, has not yet been able to leave Paris.

THE TORPEY CASE.—ADMINISTRATION OF NARCOTIC VAPOURS FOR CRIMINAL PURPOSES.

The acquittal of the woman accused of having taken part in the late jewel robbery has excited universal surprise, in that it has proclaimed a legal argument, in respect to the relationship of a wife to her husband, not a little startling. But there is another and Medical, or better say physiological, aspect of the question, which is also a cause of marvel. The defence did not deny that the jeweller's assistant who was robbed was first made insensible with some narcotic vapour administered by inhalation, and hence it is assumed that the felonious administration of narcotic vapours—against which Lord Campbell endeavoured to legislate, in 1851, in his Prevention of Offences Bill—is a possible and a practical offence. We ourselves regret that at the trial a more determinate inquiry was not pursued relative to the administration of the narcotic vapour. What was the agent employed? How long was the inhalation sustained? The case differs from all other adduced cases of a similar kind, in that physical force is stated to have been employed together with the narcotic. The male prisoner held his victim, it is stated, while the female administered the vapour. In all preceding cases, it has been urged that the narcotic was simply applied without force—that is to say, a handkerchief holding the narcotising fluid was simply thrown over the face. We of the Medical Profession have often denied the possibility of producing insensibility by this last-named method, while we have admitted that the insensibility could be induced if the body of the person to be made insensible were forcibly restrained. The Torpey case, therefore, in our opinion, presents the possible fact of felonious administration of a narcotic vapour; but we believe it to be the first case of the kind, and we beg the public to be reassured on this point—that no volatile substance can be used, with felonious intent, unless there be present a pinioner as well as a poisoner.

CORONERS' INQUESTS.

At the Durham Lent Assizes (just over), three men—Spencer, Hayes, and Watson—being respectively the viewer, underviewer, and overman of a large colliery, stood charged with manslaughter on a coroner's inquest. They had never been taken before a magistrate. Baron Martin told the grand jury that he did not think any bill would be preferred, as the only evidence which the coroner's jury seemed to have had, to give colour of warrant for their finding, was that of the three men themselves against whom the verdict had been found. A bill, however, was sent up, with an array of about forty witnesses, and was thrown out. The counsel for the prosecution, however, insisted upon proceeding on the coroner's inquisition. It need scarcely be added that the prosecution broke down. Baron Martin emphatically and peremptorily disallowed the whole of the costs, and observed that during the twenty years he had been a judge he had never known a prosecution proceed upon a coroner's inquisition after a bill had been ignored by a grand jury. Here are three men invited to give evidence at the coroner's inquest, and then, upon their own evidence, thus elicited, committed for trial! No doubt they might have objected to give evidence which might tend to criminate themselves, but who on earth can tell what may not criminate a witness in the enlightened eyes of a coroner's jury? A magistrate is bound to caution a prisoner charged before him, and to hear any witnesses the prisoner may desire to call in explanation of the transaction, before he commits him for trial. The coroner commits a man for trial either behind his back, unconfronted with his accusers, or, as in this case, after having used the man as a witness; the commitment of the magistrate is subject to revision by an intelligent grand jury, charged and instructed by a learned judge of assize. The coroner and his alehouse jury have an absolute, uncontrollable power to force a man, despite judge and grand jury, into a felon's dock! There are also humane provisions for securing the attendance at the assizes and providing for the expenses of material witnesses called by a prisoner before the committing magistrates, which do not apply to witnesses before coroners. Surely it would be sufficient that the finding of a coroner's jury should operate as a warrant to apprehend the person so accused and charge him before a magistrate, to be dealt with in the ordinary way. Such changes as thus indicated in the coroner's functions need not one whit impair his efficiency in ascertaining the cause of violent deaths, which ought to be the subjects of properly constituted and well-conducted inquiries. It might reasonably be supposed that were Mr. Baron Martin's example followed by the rest of the judges, in disallowing the whole of the costs in such cases, a check would at once be put to such vexatious proceedings. But such would not in all cases be the effect. In the instance before us a strong feeling had been imported into the case, which was that of men against masters. Subscriptions to prosecute the prisoners had been invited by advertisements in the public papers circulating in the county, and the coroner's jury, composed of the small shopkeepers in a pit village under the control and surveillance of colliery proprietors, evidently only too eagerly accepted every *scintilla* of twaddle and hearsay as evidence of criminality. How the costs of the poor prisoners were defrayed is left in obscurity.

THE FEMALE MEDICAL STUDENTS AT EDINBURGH.

On Monday last the new Board of Managers of the Edinburgh Infirmary refused to admit female Medical students to the wards by a majority of 13 to 5. This is the third time the question has been discussed by the Board in the negative. The Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh have declined to preside at the distribution of prizes to the students of the extra-academical school on the ground that mixed classes have been sanctioned by the teachers. It is hoped, however, that next year the scandal of a mixed anatomical class will be checked by the appointment of a new and popular teacher of anatomy. The action for malicious slander brought against Miss Jex Blake, by a fellow-student, is fixed for trial on 30th May next. It is rumoured that one of the extra-academical teachers is unpleasantly involved in the affair.

PROFESSOR FAYRER ON SNAKE POISON.

Dr. Fayrer has just brought to a conclusion an elaborate and valuable inquiry into the characters of the poisonous snakes of India, and the possibility of discovering an antidote to their bite. The research, it is to be regretted, is only too conclusive; nothing which has yet been found can stay the deadly effects of snake-bite, when inflicted by the more poisonous species of India. The results of Professor Halford's plan of injecting ammonia into the veins from time to time reaches us from Australia. Sometimes it is successful, at other times it must be confessed a failure; but in India the same plan has had one uniform result—unsuccess. It would seem that the only hopeful plan is that already inaugurated, and which in other lands has succeeded with other plagues—extirpation, fostered by a reward for each snake killed.

A CHEMIST FINED FOR SELLING A TOOTH-POWDER WITHOUT A LICENCE.

At Richmond, on Wednesday, the 8th inst., Mr. Lloyd, chemist, was summoned by the Excise authorities, under 42 Geo. III., cap. 56, for selling patent medicines without a licence. The defendant admitted the sale, but submitted that the article (a box of "Rowland's Odonto") was not a patent medicine within the meaning of the Act, but a tooth-powder. He was further summoned under 24 and 25 Vict., cap. 91, for selling methylated spirits without a licence. He contended that he had a right to sell methylated spirits for mixing with varnish, or for similar purposes. The Bench held that all tooth-powders came within the meaning of the Act as patent medicines, and they fined the defendant in the mitigated penalty of £17 10s.

GULSTONIAN LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS, BY DR. OEE.—LECTURE I.

The lecturer began by referring to the modern theory of the indestructibility of force—the force which the body sets free in the form of heat and mechanical work being contained originally in the air which is breathed and the food which is eaten. He then passed on to discuss the three theories concerning the production of animal heat. The ancient doctrine of innate heat was first briefly referred to. The second, or chemical theory, was definitely propounded by Lavoisier in 1777, but had been hinted by Galen and others before that time. Lavoisier's doctrine, in the words of Mayer, is this—the sole source of animal heat is a chemical process, specially an oxidation process. But the oxidation theory requires reservations to be made: first, the combustion-heats of the compounds burnt in the body are not the same as the combustion-heats of the elements of those compounds; secondly, the oxidation of much of the combustible is incomplete (this is especially true of nitrogenous matters); thirdly, other processes besides oxidation generate heat. Oxidation being the chief source of the heat, where is this heat produced—in the lungs, or in the body at large? The fact that the blood in the left ventricle is usually a little warmer than the blood in the right, seems to leave no doubt that heat is produced in the lungs. Nor is it less certain that the more active tissues of the rest of the body, especially the glands and muscles, generate much heat. Another question was then debated—Is it the elements of the blood itself, or of the tissues, which are oxidised? Mayer's argument, drawn from the muscles, was deemed to be substantially correct—namely, that the oxidation which goes on in muscles is, to a very small extent, direct oxidation of the muscular fibre: and therefore oxidation of this kind probably takes place in the blood or the fluids outside the muscular fibres. But possibly the muscular plasma becomes oxidised in its synthesis. The experiments of Alex. Schmidt were quoted as rendering the oxidation of certain constituents of the blood all but certain. The third or mechanical theory of animal heat was then discussed, and found to form, in reality, merely a portion of the chemical theory, the contraction of the heart and other muscles implying chemical change. Lastly, the means by which the body loses heat were narrated, and the loss of potential heat consequent upon mechanical work and electrical discharges was more particularly dwelt upon.

FROM ABROAD.—M. GUÉRIN ON MEDICAL DEPUTIES TO THE ASSEMBLY—REPORT ON THE CONCOURS FOR THE PROFESSORSHIP—THE LYONS HOSPITALS.

It is a pleasant thing once more to grasp the hands of our friends the *Gazettes* from Paris—full, we are rejoiced to see, of the old life and vigour in their writing, and sanguine in their hopes that some social and Professional good may be extracted from amidst the calamities that have overtaken their country. That veteran Medical reformer, M. Guérin, has again taken the helm of the *Gazette Médicale* into his own hands, in the hope that, as the state of things in reference to Medical politics which existed in 1848 has been revived, although by so sadly different a procedure, in 1871, some of the views which he then put forth, and which met with but a sorry realisation, may now, if reproduced, be attended by more practical results. Now, as then, he advises that Medical men should take a more active part in the political and social life of the country, and believes that the more than twenty years which have intervened at once demonstrate the necessity of their interposition, and supply them with the teachings of experience as to how this may be usefully employed for the public interests. Perhaps our friend's aspirations will be considered in this prosaic part of the world pitched in somewhat too high a key, when he tells us—

> "The competence of the Doctor in relation to political and social organisation arises alike from the aptitude which he offers for the solution of the questions to be resolved, and from the nature of these questions themselves. In both these points of view, demonstration is of the easiest. What is the true position of the Medical man placed face to face with society? He is a man initiated in the whole range of human knowledge, no one portion of which does not possess its utility in the practice of his art. His is the independent mind which his Profession brings incessantly into the presence of the most varied facts of nature, whose observatory, indeed, is entire nature. He has constantly before him reality in all its forms—that is to say, a control as to every truth, and a guarantee against every prejudice. But to these general qualifications and conditions of the independence and liberality of his mind the Doctor adds others, which assure him a constant and pervading preponderance. He is brought into relation with every class of society, entering alike the palace and the cabin, the abodes of the rich and the poor. He observes all abuses, appreciates all wants, frequents all parties, observing them in operation, and receiving their confidence, and is thus more apt than anyone soever to judge of their weaknesses and their dangers. But this is thus far only the somewhat passive part taken by the Doctor, and his active part is not less decisive and well-marked. His independence excludes all distrust, and he is able to plant truths which, coming from any other quarter, would be rejected, and to smooth differences which else would often remain irreconcilable. From his mouth men are disposed to receive all kinds of initiations. He is the priest of the religion of truth. Such is the Doctor regarded as a citizen. Considering him only under this general point of view, he is not only of an aptitude and a competence equal to those of other citizens, but he derives from his title and his Profession a primary superiority which assures to him a general and absolute competence in the management of public affairs."

It will be admitted that, if this ideal Doctor does not meet with the success anticipated for him in political life, it will not be from want of a sufficiently elevated conception of his functions on the part of his deviser. As to his more special attributes, those on account of which we are accustomed to wish to see members of the Profession in our own Parliament, they will have a wide field enough for display in France, and, one would think, might suffice for any ambition. There are the population question (now more than ever pressing in France), the immense mortality of nurse-children, the lunacy laws, the reform of the sanitary laws, the Medical aid to the poor, the condition of the Hospitals, the regulation of the hours of labour for children, the amelioration of the physical condition of the lower classes—these and various other measures, all may derive great and enlightened aid from the presence of well-informed members of the Profession in the Legislature, even if they do not believe themselves invested with the majestic attributes before adverted to. M. Guérin has always been a sanguine man, and the precedent of 1848 does not discourage him.

> "We do not dissimulate from ourselves that the co-operation of Doctors in the different assemblies which followed 1848 has not, perhaps, sufficiently justified the pretensions which we are now expressing. Without recalling the names of those who took part in them, it is a fact that they did not leave very luminous traces of their presence. It may be replied that the insufficiency of individuals should not negative the value of a principle; but we believe that a more just reason than this may be adduced—viz., that those assemblies, more political than organic or social, were much more occupied in securing the political bases of the new order of things which they wished to establish than in examining the true problems of organic and social legislation. Surely, when Buchez and Trousseau, to name only the dead, had to aid in the defence against the insurrections and violence of the advanced party, they scarcely could have found the opportunity of furnishing their contingent of light to the laws for the various modes of ameliorating our race."

We fear there is some of this kind of work to be yet gone through before the French Doctor will find his appropriate place in the Legislature; and so he seems to think himself, for M. Guérin states that out of the 750 deputies of the present Assembly only five or six are Doctors. He consoles himself with the reflection that the present body was only summoned for a special purpose, although he thinks that even in it Medicine should have occupied a much more conspicuous position.

The *Gazette Hebdomadaire* anticipates the speedy establishment of the *concours* will be one of the results of the present state of affairs. This had long been demanded by a large party of the Profession, and its suppression was one of the most unpopular acts of the late Government. A committee of the Faculty of Medicine, composed of Professors Wurtz, Denonvilliers, Tardieu, Behier, Broca, and Gavarret, have just delivered a preliminary report upon the subject. They observe that the Medical student throughout his career is submitted to the operation of the *concours* with the object of ascertaining his progress and position; the various appointments to which he is afterwards eligible are awarded through the operation of the same test; and when he has passed through his career, and the honours of the *agrégéship* await him, he has to win his way into it through the severest contests. How effectual the *concours* has been in judging of merit may be to some extent inferred from the fact that although for the last forty years the *agrégés* have no longer enjoyed any exclusive privilege in furnishing candidates for Professorships, yet out of fifty-three Professors who have been chosen since 1830 only eight have not been *agrégés*. Formerly the Professorships themselves were the rewards of successful *concours*, and some of these celebrated contests, which have brought to the surface men of the highest talent and genius (some of them, as in the case of Velpeau, springing from a position of extreme poverty), constitute almost epochs in the history of Medical science in France. All this was altered by the late *régime*, and since 1852 the Professors have been nominated or dismissed at the pleasure of the Crown, on the simple recommendation of the Minister of Public Instruction. It is true that, as a general rule, they were self-elected by the Faculty itself, which furnished to the Minister a list from which the selection was made; but there was no obligation on the part of the authorities to confine their choice to persons so indicated. It is however, not to be concealed that many men who have arisen to high position in public estimation are averse to submit their claims to Professional posts to the *concours*, and that with a portion of the Faculty itself the mode of selection is not in favour. Still, in the opinion of the Committee—

> "Of all the modes for nominating Professors, it is incontestably the one which furnishes the best guarantee. But it must not be forgotten that, in order to obtain good results from it, the *concours* should be so organised as to satisfy two essential conditions. On the one hand, the scientific claims of the candidates ought to be taken into very great consideration, and be most seriously examined, studied, and discussed in the private meetings of the jury; and on the other, the public trials, reduced in number to what is rigorously necessary, to allow of the appreciation of Professorial qualifications, ought to be so chosen and regulated as to prevent all surprises or vain discussions—placing the candidates, in a word, in the conditions which are imposed by the needs of the higher teaching and the nature of the chair for which they are contending. With trials thus combined, when all possibility of surprise has been eliminated, and when acquisitions will have full liberty to display themselves, it can be no longer feared that men of incontestable merit and of great notoriety justly acquired will stand aloof for fear of compromising their reputations. What legitimate motives could they allege for abstaining to offer themselves, when they have become assured that, at the period for the definitive judgment being delivered, their scientific acquisitions will weigh with their entire force in the balance, and when they are only asked to accept before a jury of competent men, in a locality freely open to the public, a position which is incumbent on every Professor?"

The committee brings forward a "Projet d'organisation du Concours," by which it seeks to attain these ends, and to obviate objections to the operation of the institution which have sometimes been urged. To this we may again advert when it seems somewhat nearer realisation.

The following is the Hospital accommodation in the second city of France:—

1. The *Hôtel-Dieu* contains 1093 beds—viz., 929 gratuitous beds (including 26 for married lying-in women), and 164 beds for which payment is made. Of these, 160 pay 1¼ francs per diem, and 4, for lying-in women, 1½ francs per diem. There are also 3 private rooms, which are almost always occupied. Each of these contains a patient, who could not receive the necessary care without very great expense at home, and is charged at the Hôtel-Dieu 12 francs per diem, this including any operations that may be required. The insane, patients with contagious disease of the skin, the syphilitic, and the epileptic are not admitted into the Hôtel-Dieu.

2. The *Croix Rousse* is especially intended for the inhabitants of the part of the city so-called, and only patients suffering from non-surgical affections are admitted, the same exemptions in regard to these also being observed as at the Hôtel-Dieu. There are 293 gratuitous beds, 10 being for married lying-in women and 43 for beds paying 1¼ fr.—total 336 beds.

3. The *Antiquaille* receives the insane, the syphilitic, and those with infectious cutaneous diseases of both sexes, the expense of their treatment being defrayed either by their families or by the *communes*. The Antiquaille also admits persons of either sex on payment of an annual pension of 500 francs; and if this is for life, a capital is paid over to the Hospital, adjusted according to the age of the person to be admitted. In a service recently appointed, female epileptics, above 10 years of age, if they do not exhibit symptoms of insanity, are admitted at 500 francs per annum.

4. The *Hospice de Perron* is for 100 indigent incurable patients of good character—viz., 40 gratuitous beds for men and 60 for women. There are also 9 beds for men and 6 for women, who pay 350 francs per annum. The insane, the epileptic, persons suffering from contagious diseases, and those who are under 25 years of age cannot be admitted.

5. The *Asile St. Eugénie* is for poor convalescent men on their leaving the Hôtel-Dieu or Croix Rousse, and will accommodate 93 patients.

PARLIAMENTARY.—FORTIFYING WINES—RINDERPEST—AMENDMENT OF THE MEDICAL ACT—RAILWAY COMPANIES BILL.

On Thursday, March 9, in the House of Commons, in answer to a question by Sir J. Lawrence,

The Chancellor of the Exchequer said the duties of the Customs with regard to the fortifying of wines in bond were regulated by statute. In the case of wine intended to be imported into this country, the Customs would permit them to be fortified to the extent of 10 per cent. of spirit, provided that the whole strength of the wine did not exceed 40 degrees, but with regard to wines intended for exportation the Customs had power to permit an admixture of a larger quantity of spirit, if it should appear to them to be necessary in order to prevent the wine fermenting in the course of a sea voyage.

Sir J. Lawrence then gave notice that he would ask the Chancellor of the Exchequer if the Board of Customs had equal power with regard to permitting the admixture with wines in bond of articles other than spirits for the purpose of fining or flavouring them.

In answer to a question by Mr. M'Lagan, Mr. Forster said the Privy Council, in consequence of the prevalence of rinderpest in France, had come to the conclusion to prohibit the importation of cattle from France and Belgium.

On Tuesday, Dr. Lush obtained leave to bring in a Bill to amend the Medical Act of 1858.

Dr. Brady also obtained leave to bring in a Bill for the same purpose.

The sitting of the House of Commons on Wednesday was taken up in discussing Sir H. Selwyn-Ibbetson's Railway Companies Bill, which, amongst other provisions, establishes special tribunals for the trial of compensation cases, and limits the amount recoverable. The debate was adjourned.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	Week ending				
	Feb. 18.	Feb. 25.	Mar. 4.	Mar. 11.	
	Cases.	Cases.	Cases.	Cases.	Sent to Hospital.
WEST—					
Chelsea	10	12	?	?	—
St. George's, Hanover-square	28	14	16	7	6
St. Margaret's and St. John's, Westminster	100	47	30	—	—
St. James's, Westminster	14	8	3	3	1
NORTH—					
St. Pancras	?	64	62	69	?
Islington	36	31	62	23	16
Hackney	?	30	36	41	—
CENTRAL—					
City of London	?	20	22	?	—
St. Giles's-in-the-Fields	?	10	5	10	5
Holborn	14	5	2	3	3
St. Luke's	?	?	20	?	—
EAST—					
Whitechapel	31	31	34	32	—
Poplar	?	?	9	?	—
SOUTH—					
St. Mary's, Newington	25	8	16	19	5
St. Olave's, Southwark	?	4	2	9	2
St. George-the-Martyr, Southwark	?	3	?	17	8
Bermondsey	?	20	15	?	—
Lambeth	18	28	12	28	17
Clapham	?	5	28	17	3
Battersea	?	14	?	13	?
Wandsworth	?	5	4	?	—
Putney	—	—	—	1	?
Streatham	?	?	1	?	—
Camberwell	?	5	26	14	1
Greenwich	?	—	2	?	—
Lewisham	?	2	1	16	?
Plumstead	?	4	1	1	—

THE PRESENT EPIDEMIC OF SMALL-POX.

(*From a Correspondent.*)

THE meeting of the Epidemiological Society on the 8th inst. was devoted to a consideration of the present epidemic of small-pox. The President (Dr. Seaton) opened the proceedings by a brief account of the more prominent features which had characterised the outbreak. He stated that it had been the most intense within his knowledge—intense in a degree not altogether explicable by the amount of neglect of vaccination. It was important to determine to what extent such neglect had contributed to the exceptional intensity of this epidemic; but in his remarks under this head it became obvious that the neglect of vaccination had been so great, and that there had been so large an accumulation of imperfectly vaccinated adults, that exceptional intensity of diffusiveness of the disease could only be stated with considerable reservation. At the time of the commencing spread of the epidemic, the number of unvaccinated children was probably not greater than at the outset of the epidemic of 1866-67, yet the malady had been diffused among the population of the metropolis, particularly among adults, to an extent unexampled for many years. But Dr. Seaton's remarks further showed that the metropolis was probably the worst vaccinated place in the kingdom; that much of the vaccination done in recent years had been of the most slipshod character, and that the adults who suffered chiefly from the epidemic were those who had been thus vaccinated; that, in fact, we were probably suffering now from the accumulation of imperfectly vaccinated persons, whose partial protection by vaccination, such as it had been, had worn out. Dr. Grieve, the Medical Superintendent of the Hampstead Small-pox Hospital, who followed Dr. Seaton, and read a brief analysis of 800 cases of small-pox observed in that Hospital during the present epidemic (of which we append an abstract), largely confirmed, in our opinion, the point of view which was suggested by Dr. Seaton's remarks—namely, that much of this question of the state of vaccination had to be eliminated before the inference of a peculiar intensity of the present epidemic could be placed on a satisfactory foundation.

At any rate, the observation of the epidemic, notwithstanding assumed peculiarity of intensity, had confirmed Dr. Seaton, Dr. Grieve, and, in addition, Mr. Marson, in their entire faith in vaccination. Of its influence in controlling the course and diminishing fatality from the disease, the data of this epidemic repeated in every respect the data of preceding epidemics. In both the Highgate and Hampstead Hospitals the mortality among the unvaccinated was 44 per cent., among the vaccinated 9 per cent. As to the protective influence of vaccination, Dr. Grieve related the remarkably instructive fact that of sixty attendants and persons constantly engaged among the sick at Hampstead—the largest accumulation of small-pox patients in the metropolis within living memory—all these attendants and others about the Hospital having been carefully revaccinated at the time of commencing their duties, not one had been attacked with the disease since the Hospital had opened on December 1 last. This fact is of itself sufficient to prove that vaccination has lost none of its efficacy, and to lend some probability to the conclusion that the intensity of the present epidemic is more a measure of the prevailing quality of vaccination than an indication of any more occult cause. At any rate, this was the practical deduction which clearly flowed from the remarks of Dr. Seaton, Dr. Grieve, and Mr. Marson. As throwing incidental light upon this subject, is was mentioned in the course of the evening that several attendants in another of the metropolitan small-pox Hospitals, who had been selected as having suffered from small-pox, and had not been vaccinated or revaccinated when introduced to their duty, had been seized with the disease. An interesting question arose out of this fact as to whether persons who had suffered from small-pox, and who were brought as attendants or under other circumstances into immediate and frequent contact with small-pox patients, should be vaccinated or revaccinated, as the case might be. Mr. Marson stated that he had never vaccinated persons engaged as nurses at the small-pox Hospital who had clearly suffered from small-pox; and he had not had occasion to conclude that he was wrong in so doing. He expressed an opinion, moreover, that probably, in the cases of seizure mentioned, the statement of the nurse as to a previous attack of the disease had been taken with too much credence, as it was astonishing how readily persons deceived themselves as to having had the small-pox. Mr. Radcliffe, however, speaking on this subject, held that practically, and having regard to the occasional occurrence of second attacks of small-pox, unless the evidence of a previous attack were indisputable, the wiser course would be to vaccinate or revaccinate, as the case might be, all persons who for the first time were placed in attendance upon the sick of the disease.

The discussion which followed Dr. Seaton's remarks and Dr. Grieve's paper was very discursive, and chiefly dealt with the question of revaccination. Upon this question, statements were made of great importance respecting the quantity of careless revaccination which was being performed in the metropolis at the present time, and Mr. Marson was appealed to, to express his opinion as to whether revaccination should be considered revaccination unless some perceptible effect was produced. Mr. Marson's opinion was very decided, that unless some of the effects described in text-books on the subject or in the instructions to public vaccinators had been produced by the operation, revaccination had not been successfully performed. Dr. Seaton insisted upon the importance of vaccination being as regularly performed at puberty as vaccination in infancy. But upon this question there seemed to be much confusion of thought among some of the gentlemen present, from their failing to distinguish what belongs to public vaccination, what to private. Public vaccination provides for the primary vaccination of infants in the first place, and affords certain facilities only for revaccination. The primary vaccination of the infant is compulsory; revaccination is a matter of choice. The law compels primary vaccination, and of necessity must make provision for its due performance with those who are unable or unwilling to have the operation carried out at their own cost. This is the first, and necessarily the over-ruling consideration for public vaccination. Revaccination is a question of Medical advice. The law facilitates its being carried out among the poor and impoverished; but it is the duty of the private Practitioner to advise its due and proper performance. The law here has no place. The question is, as the law stands, a Medical question, a question between doctors and patients, and the responsibility of seeing systematic revaccination carried out rests with the private Practitioner.

Abstract of Dr. Grieve's Paper.

The paper consisted of a brief statistical analysis of the first 800 cases of small-pox treated at the Hampstead Hospital between Dec. 1, 1870, and Feb. 18, 1871. He regarded the high fatality to be due to the worst cases having been forwarded to Hampstead. Nevertheless, there could be no doubt that the epidemic is extremely virulent, as manifested by the large number of cases in which a hæmorrhagic character was exhibited. In his experience, variola hæmorrhagica has been uniformly fatal, and the deaths of vaccinated adults had mostly been due to the small-pox having been of this variety. He considered that it was mainly due to intemperance and to the neglect of sanitary laws that this form of the disease occurred. He could not recollect a single instance in which it had happened in a child. As to the fatality of small-pox generally, he thought that it was fatal to persons who would otherwise have succumbed to other zymotic maladies had they been prevalent in the place of small-pox. The author then referred to his observation that the proportion of vaccinated to unvaccinated persons admitted increased with age. Thus, under 10 years of age, the unvaccinated were to the vaccinated as 2 to 1; while between 10 and 20 the vaccinated were to the unvaccinated as 4 to 1; between 20 and 40 as 5 to 1, and over 40 years as 9 to 1. The unvaccinated persons admitted became fewer and fewer as age advanced. It is his belief that this may be explained, not by assuming a lessened liability to small-pox with advancing age, but rather on the ground that few unvaccinated persons reach 40 years without suffering from small-pox. Vaccination shows its beneficial effect in three ways—namely, by lessening the liability to small-pox, by rendering it a less fatal disease, and, where it is not fatal, by lessening the duration of the attack. The fatality among his 591 vaccinated cases was 58, or 9·8 per cent., and among the 209 unvaccinated cases, 96, or 45·8 per cent. The average stay of vaccinated cases which recovered in Hospital was twenty-four days; of unvaccinated, thirty-five days. The author criticised the arguments of the Registrar-General, from which that gentleman drew an inference that the effect of vaccination did not wear off. Dr. Grieve's numbers lead to a different conclusion. Taking the vaccinated persons, he finds that under 10 years of age the fatality was $9\frac{4}{5}$ per cent (this high fatality being due to complications, which, everybody knows, carry off young children), between 10 and 20 it was $2\frac{4}{5}$ per cent.; 20 and 40, $12\frac{3}{5}$ per cent.; and over 40, $22\frac{1}{2}$ per cent. Hence the necessity of revaccination about puberty, the value of which is attested by the fact that not a single case of small-pox had arisen among the officials at Hampstead, while no person unquestionably revaccinated had been admitted there. There had, however, been two cases of second attacks of small-pox. At first the male admissions were much in excess of the females, but lately more women and children have been admitted.

REPORT OF THE ROYAL SANITARY COMMISSION.

No. II.—Defects of the Existing Laws.

In considering the report of the Commissioners, we need be under no apprehension that they have overlooked or underrated any out-lying portions of the subject. How comprehensive the inquiry has been is evidenced by their own statement as to what they have regarded as relevant!—

"The sanitary laws we understand to include all the laws which provide for the supply of water, sewerage, drainage, removal of refuse, control of streets and buildings, prevention of overcrowding, and *other means of promoting the public health*; as also the laws for preventing the introduction and spreading of contagious and infectious diseases and epidemics affecting the health of man." The words which we have placed in italics open the door for the treatment of an unlimited range of subjects bearing more or less directly upon sanitary science.

To numbers of our readers who have been labouring for years in the cause of sanitary reform, the points noted by the Commissioners as illustrating the importance of the subject will be as "twice-told tales"; but appearing with the sanction afforded by this Report, and as the result of the voluminous evidence submitted, those points acquire a weight—a value "for instruction and for reproof"—hitherto, perhaps, to some extent wanting. In refutation of any who should hereafter be disposed to deny the need of health-legislation, it will but be necessary to point to the following conclusions:—That "mortality is greatly increased by want of sanitary provisions; a marked reduction of death-rate has followed the improvement of drainage and sewerage, and the supply of other obvious sanitary requirements. Many causes of disease are preventible; and much chronic weakness and incapacity for work are the result of sanitary negligence and want of the ordinary requisites of civilised life. A large proportion of the population, both in town and country, is habitually drinking polluted water. In many places accumulations of filth are widely vitiating the air. A considerable portion of the working classes is debilitated, and thrown into sickness and poverty, by a tainted atmosphere and unhealthy dwellings. No classes are exempt from these evils. Overcrowding is the cause of much physical as well as moral evil. Whether smoke be more or less noxious, and more or less consumable in various circumstances, may admit of argument; but there can be no doubt that it is permitted in excess, from unpunished neglect of possible and prescribed means. The importance of the subject cannot be too highly estimated. The constant relation between the health and vigour of the people and the welfare and commercial prosperity of the State, requires no argument. Franklin's aphorism, 'public health is public wealth,' is undeniable. But what is more important still, is the close connexion between physical and moral pollution; it is significant that the Registrar-General's returns show that the 'black country' presents the blackest calendars to our assizes, a fact which practically illustrates the effect of filth and sunless atmosphere on the minds as well as the bodies of the sufferers. The mere money-cost of public ill-health, whether it be reckoned by the necessarily increased expenditure, or by the loss of the work both of the sick and of those who wait upon them, must be estimated at many millions a year." And, after all, what proportion of relative value does the "money-cost" of public ill-health bear to the "vital-cost"?

Having reassured ourselves as to the importance of the subject, let us see whence comes the failure in the existing laws. In the first place, the law itself is confused. Little is needed to convince of that beyond a glance at the catalogue of the statutes in our analysis last week. The Public Health Act of 1848 and the Local Government Acts, all worked on the voluntary principle, form in themselves an intricate mass of law, and, with other Acts, local and general, contribute to the fatal result that "the law is frequently unknown, and, even where studied, is found difficult to be understood." The optional principle alone is enough to account for the very partial administration of the law; but add to this the confusion of "authorities" designated for special purposes by each new Act, and the wonder is, not why the measure of success has been so small, but how any advance whatever can have been effected. Another cause of confusion is, that sanitary functions are classed together, or distinguished, with no apparent regard to any real affinity or difference. The removal of nuisances, for instance, seems to have been considered a work apart from local goverment; and the prevention of epidemic disease, a work unconnected with the suppression of its causes. Such distinctions without differences, the result of casual legislation, regardless of what had preceded, are far more than merely illogical or unmeaning—they cause grave misunderstanding of the law, mislead public opinion, multiply expenses, and aggravate disinclination to improvement, and distrust of science.

But the optional principle alone appears to have been quite sufficient to account for past failures. The Public Health Act, 1848, was "applied" by the central authority (then the General Board of Health), whereas the Local Government Act, 1858, deprived the central authority, save under certain exceptional circumstances, of all such power, and gave to the "locality" the fullest discretion as to the adoption or non-adoption of the whole or any part of that Act. Those places, however, where the greatest negligence prevails, and where the most serious evils have arisen, are shown by the evidence submitted to the Commissioners, and by daily experience, "to be the least ready to move by petition, or, indeed, any other process; and the limitation of the central initiative to cases where the mortality has exceeded a certain proportion, pre-supposes the existence of those mischiefs which it is the duty of public authorities to prevent by action in time, rather than to remove when too late, after the population has been diminished by death, weakened by disease, and demoralised by the pauperism and social degradation which ever accompany a low physical condition."

Although thus speaking of some of the evil results of the system which relies on local action for the initiative, the Commissioners do not attempt to blink the fact that there are two sides to this, as to every other question. Indeed, the point is of an importance far beyond the question of sanitary reform, being really at the root of the whole controversy between the advocates of local administration on the one hand, and of centralisation on the other hand. But the summing up of the Report upon this point appears, on the whole, sound. We are reminded that, in arguing the question, "it is necessary to balance the inconvenience which may arise from the unfortunate exercise of discretion by the central authority in assigning urban powers against the far more inconvenient consequence of impeding its freedom by restrictions which may prove an impediment to the introduction of more perfect government. On the whole, it would appear more prudent to trust the Minister, who will be obliged in Parliament to defend his conduct. Undue exercise of authority will always be restrained by the natural reluctance of every Minister, in a country with representative institutions, to place new duties on an unwilling community. The Minister will also feel that no system of law or administration can be so efficient when imposed from without as when voluntarily adopted by those whose interests are most closely concerned. Unchecked by conditions, the Minister will probably move too slowly; checked by restraints, he may hesitate to move at all, except under circumstances of extreme and unusual exigency."

These arguments lead the Commissioners to the inevitable conclusion that the optional principle must be done away with, and to the recommendation which they have embodied in the following resolution:—"That, instead of the present scheme of law, under which it rests to a great extent with the localities to adopt, wholly or partly, or to remain without, the provisions of the existing general Acts, it is expedient that there should be *no option* left with the localities to adopt or escape from the provisions of the new statute, but that, with necessary exceptions, they should be applicable everywhere."

Reverting to the decisions arrived at by the Commissioners to the effect that the existing law is confused and incomplete, we find that confusion and incompleteness to arise mainly from the following causes:—

"1st. There are many statutes, some to be read together, some in repetition of each other, some for special cases only, and some in practical conflict.

"2nd. Much is of optional, of uncertain, and of partial application.

"3rd. There are many local and private Acts, producing want of uniformity.

"4th. The provisions themselves are incomplete."

The natural result is that the Commissioners recommend the reduction of the present series of enactments to one consolidated statute, and they add—"We have no hesitation in recommending, as the only satisfactory preliminary to this necessary consolidation, the total repeal of all the Acts to be consolidated, so that the whole law may be seen clearly arranged in one statute, and that nothing in that statute should be laid down merely by reference, but that all should be expressly stated in the statute itself. We even recommend that if it be necessary to engraft any parts of the various 'Clauses Acts,' they should always be set out *in extenso* either in the text or in a schedule to the statute.

* * * * *

"Then comes the task of perfecting what is defective, and adding what is still further required; making obligatory what is now permissive, and general what is now applied without reason only to particular localities."

This *recipe* appears simple and complete, and suggests that the same Commissioners might with advantage take in hand some few other Acts—say, for instance, the Lunacy Acts, and subject them to similar *improvement*. Its general adoption, however, would seem likely to be a sad blow for the bookmakers, as obviating the necessity for "notes and references," and to the lawyers. But, beyond these two classes, it would probably be difficult to find a voice raised either for the retention of the present legislation or for its tinkering by means of amending Acts.

(*To be continued.*)

UNIVERSITY OF ST. ANDREWS.

EXTRACT FROM THE REPORT OF THE SENATUS ACADEMICUS OF THE UNIVERSITY OF EDINBURGH, ON AN APPLICATION TO HER MAJESTY IN COUNCIL BY THE UNIVERSITY COURT OF THE UNIVERSITY OF ST. ANDREWS, FOR AN EXTENSION OF THE RIGHT OF THAT UNIVERSITY TO GRANT DEGREES IN MEDICINE WITHOUT UNIVERSITY STUDY.

"It had been represented to Sir James Graham that, when a general Practitioner of talent and success in Medical practice, who had not so studied in youth as to be qualified to obtain a Medical degree from a university of repute in the ordinary way, desired to exchange general practice for the position of Consulting-Physician, there was no way for him to get the necessary title of Doctor except by repairing to St. Andrews, or to King's College, Aberdeen, where at that time a system of graduation the same as at St. Andrews existed in a less degree; or to a Continental university in the custom of selling its diploma of Doctor of Medicine without either residence or examination. Sir James Graham therefore proposed that the Scottish universities, who had been more faithful to their trust, should grant annually, in all, ten degrees of Doctor to licensed Practitioners of forty years of age, after a thorough examination on all branches of the practice of Medicine.

"This scheme the Universities Commissioners adopted, but confined the privilege to St. Andrews alone, and, for preventing any abuse of the privilege, enacted the regulations now complained of by that University.

"The University of St. Andrews now says that its Medical degree has become a respectable one, and much in demand; and the conclusion come to is, that the limitation put upon it should be withdrawn, that the University should be authorised to grant the degree of Doctor of Medicine without limit as to number, and to licensed Practitioners of only five years' standing, and still without any university education.

"To this proposal the Senatus Academicus of the University of Edinburgh have to object—

"1. That the main cause of the credit recently attached to the St. Andrews degree is the very limitation which the University desires to break through; this limitation having the effect of enabling the University to select able candidates.

"2. That the number of graduates passed on the St. Andrews plan is amply sufficient for the wants of the Medical Profession, as explained above, and for the good of the community.

"3. That the proposed right of unlimited graduation, without university study, and at an age really only three years later than that at which students at the other universities now receive the regular university degree of Doctor, after at least six years of careful study and varied severe examinations, would prove a fearful blow to that university education, which has hitherto opened to Scottish Medical graduates a welcome reception, and the way to Professional success, in all quarters of the world.

"4. That if university graduation, without university education, be desirable on a more extended scale in Scotland, it is not easy to see why the duty of conferring these degrees should not be confided rather to the Universities of Edinburgh, Glasgow, and Aberdeen, which have each a full staff of Examiners, academical and extra-academical, of the first rank, than to a University which has no Medical school, and can only secure a staff of Examiners by drawing them from the schools of the other universities.

"5. That a serious objection, however, to such a course would obviously be the certain injury which graduation on such a scheme would inflict upon university education.

"6. That if this result be admitted, as it obviously must be, the Senatus Academicus of the University of Edinburgh believe that the effect would be still more injurious were such a duty committed to a University which could have no interest in checking over-facile graduation, but quite the reverse, and which has already shown in its past history that it is unworthy of having intrusted to it a privilege which can be used in so dangerous a manner.

"The Senatus Academicus, therefore, humbly pray your Majesty, that your Majesty in Council do not approve of the alteration in Ordinance No. 19 (St. Andrews, No. 3) of the Scottish Universities Commissioners, as craved by the Court of the University of St. Andrews; and that, if so advised, your petitioners may be allowed to appear by Counsel before a Committee of your Majesty's Most Honourable Privy Council in reference thereto.

"And your petitioners will ever pray, &c.

"Signed in the name and by the authority of the Senatus Academicus of the University of Edinburgh the eighth day of March, 1871. "A. Grant, Principal."

DEEP-SEA EXPLORATIONS IN THE MEDITERRANEAN.

On Friday, Dr. Carpenter gave a lecture at the Royal Institution, in which he described the results obtained by the expedition of last autumn for the purpose of deep-sea dredging and exploration in the Mediterranean and Straits of Gibraltar. The results obtained in the expedition of 1869 were so important that the Council of the Royal Society urged upon the Government the advantage of continuing the investigations over a different area: and hence the *Porcupine*, still, as before, under the command of Captain Calver, R.N., was again placed at the disposal of the explorers. The work of the expedition was divided into two cruises—the first to examine the deep-sea bottom between Falmouth and Gibraltar; the second to make the like examination of the western basin of the Mediterranean, between Gibraltar and Malta, and to determine its physical and biological relations to the Atlantic, with special reference to the Mediterranean current. The first cruise was under the direction of Mr. Gwyn Jefferies, assisted by Mr. Lindahl, of Lund, and Mr. W. L. Carpenter; the second, under that of Dr. Carpenter, assisted by Mr. Lindahl, and Mr. P. H. Carpenter. Professor Wyville Thompson was to have taken part in this expedition, but was prevented doing so by illness.

Dr. Carpenter's lecture was confined to an account of some of the results of the second cruise, and he first spoke of the barrenness of the Mediterranean bottom in respect of animal life. He then proceeded to describe the general formation of the sea-bed in the parts visited, and exhibited diagrams of the narrow portion of the Straits of Gibraltar, and diagrammatic sections, first of the length of the Mediterranean from Gibraltar through Malta to Egypt, next of the Straits from Cape Trafalgar to Cape Spartel, from Europa Point to Apes-hill; and again, longitudinally, from one of the foregoing sections to the other. These sections showed that although the Mediterranean is generally nearly 2000 fathoms in depth, it is divided by a ridge, of which the island of Malta forms part, into an eastern and a western basin, and that its depths are cut off from those of the Atlantic at the Straits, where the bottom is nowhere deeper than about 200 fathoms. The temperature of the Mediterranean is altogether exceptional; for whereas that of the North Sea and the Atlantic steadily descends and approaches the freezing-point at about 2000 fathoms, the general deep-sea temperature of the Mediterranean does not fall below about 55 degrees, which is attained at about 100 fathoms. The cause of this was explained to be that the surface water, heated by the sun, was also concentrated by evaporation, and thus, being rendered at once hotter and heavier than the strata below, sank down, carrying its heat with it. Without some compensating influence, the continued action thus produced would tend to a regular and steady increase in the degree of saltness of the water, especially as the rate of evaporation is in excess of the supply brought in by rain and rivers, and therefore leads to a steady surface current inwards from the Atlantic. The lecturer showed, however, that beneath this surface current there would be another in an opposite direction. A given column of Mediterranean water concentrated by evaporation, and with its loss in point of quantity made good by the Atlantic, would be heavier than a column of Atlantic water of the same dimensions, and would displace the latter by pressure. The existence and direction of the deep outward current thus produced had been experimentally determined by an ingenious current-drag, contrived by Captain Calver; and the demonstration was on the whole complete that the sinking water, concentrated by evaporation, was thus so borne outwards through the Straits that the concentration had no tendency to exceed a certain degree. The Mediterranean receives from its river feeders, especially from the Rhone, a vast amount of mud in a state of very fine division; and Dr. Carpenter found the turbidity of the deeper strata to be very marked, and to be due to the presence of particles so small that they could scarcely be removed by filtration. He believed these particles were the cause of the absence of animal life at great depth, and that they would act by mechanically clogging the gills or other respiratory membranes of any deep-sea fauna. He referred to Professor Tyndall's electric light test of the presence of fine particles, both in the water of the Mediterranean and in that of the Lake of Geneva, and quoted a marine engineer to the effect that the incrustation formed in boilers used in the Mediterranean consisted not only of salt, but also of very finely-divided mud. Geologists were aware of the scarcity of fossils in strata that had been formed by the deposition of extremely minute particles.

The lecture was illustrated by a very ingenious experiment for showing the course of equatorial or polar currents respectively, and by many maps and diagrams. It attracted a very large audience, and Dr. Carpenter was more than once interrupted by applause during its delivery.

REVIEWS.

What is Malaria? And Why is it most Intense in Hot Climates? By C. F. Oldham, M.R.C.P.E., M.R.C.S.L., Assistant-Surgeon H.M. Indian Forces; late in Medical charge of Dalhousie Sanatorium. 1871. London: Lewis. Calcutta: Wyman and Co. Pp. 186.

This is a question of vast importance, since malarious diseases have a powerful effect in checking the spread of Europeans over a large portion of the globe, and (as our Army Medical Reports testify) prevail to a terrible extent in our Indian possessions. Even in singularly healthy seasons, one man in three of our British troops in India is attacked, and individual regiments, even when stationed in healthy localities, often exhibit a higher ratio of illness. Thus, at Sealcote, the 38th Regiment had 554 cases in a strength of 1004 (Army Medical Report, 1867); and it is an historical fact that every officer and every man of Sir C. Napier's army of 17,000 soldiers was attacked with fever in the Scinde campaign.

Unfortunately it is a question not easily answered; and a host of Indian Medical officers have offered suggestions as to the origin and cause of the so-called "malarious diseases," none of which are altogether satisfactory. Sir John Pringle, from his experience of intermittent and remittent fevers that prevailed in the British army serving in the Netherlands in 1743-48, concludes that they are due to "the heat and moisture of the air." Lind, who saw a great deal of remittent fever in Bengal in 1762, while regarding malaria as due to vegetable decomposition, adds that "violent heat is a powerful exciting cause of this fever," and he observes further on that "sudden cold, in hot marshy countries, is to be reckoned, next to the marsh miasmata, as the strongest exciting cause of this disorder; and many are of opinion that cold alone, provided the body is sufficiently predisposed, is sufficient to generate a disorder perfectly like that which is produced by the marsh miasmata." We quote Lind's opinion on this subject, because, as we shall presently see, it is in close accordance with the latest view that has been propounded. Ferguson, Morehead, and other high authorities ascribe the production of malaria to the prolonged action of the sun's rays on a marshy surface; the poison being most intense when the drying of the ground begins. Parkes, while laying great stress on the internal predisposition, says that the external cause of malarious fevers is presumed to be decomposing vegetable matter, derived from a moist and putrescent soil. Sir Ranald Martin, on the other hand, ascribes the origin of malaria to electricity, and considers that ferruginous rocks and soils are intimately connected with its production. M. Armand, whose experience is based on the fevers of Algeria, agrees with Sir Ranald Martin in rejecting the idea of a specific marsh-poison, and ascribes these diseases to "thermo-electro-hygrometric influences." Lastly, we come to the germ theory, which was first distinctly propounded by Dr. Salisbury, an American Physician, in 1866. He finds the cause of malarious fevers in the spores of gemiasma, a form of algoid vegetation resembling the palmellæ. He states that he found these vegetations abundant in marshy places, where the residents were subject to intermittent fever, and he likewise detected them in the sputa and urine of patients suffering from that disease. On visiting the spots at which these vegetations were most abundant, he experienced a dry, feverish, constricted feeling in the mouth, fauces, and throat, which soon became parched and hot. There was irritation of the bronchial tubes, and a constant desire to hawk and spit—symptoms which lasted two hours, and which he referred to the inhalation of malarial matters. He also found that the cryptogamic spores rise and are suspended in the cold, damp exhalations from the soil, after the sun has set, and that they fall again to the earth after the sun has risen, and that the day air of malarial districts is quite free from these spores, and never gives rise to intermittents.

Professor Niemeyer has "no hesitation in saying decidedly that marsh miasma—malaria—must consist of low vegetable organisms, whose development is chiefly due to the putrefaction of vegetable substances." He is apparently unacquainted with Dr. Salisbury's memoir, as he observes that "no one has seen malaria spores." We may add that, during the last few months, an Italian Physician, Dr. Bolestro, asserts that he has found ague germs—similar, apparently, to those discovered by Dr. Salisbury, of whose researches he seems ignorant—in the water of the Tuscan marshes.

After observing that all these theories, excepting that of Lind, are untenable—or, at all events, want confirmation—the author proceeds to develope his own view, *that malaria, as a specific poison, does not exist; but that the cause of the disease attributed to it is chill—or, in other words, the sudden abstraction of animal heat.* He arrives at and supports this opinion partly by the results of "careful observation while serving for some years in different parts of India, in localities differing greatly in physical aspect and in climate," and partly from the evidence that exposure to cold is not only capable of causing relapses of malarious fever, but also of producing the disease in its primary form. In support of the latter view, he quotes the case of "a gentleman who was attacked with intermittent fever, for the first time, in a very healthy part of North Devon, from sleeping on a cold, damp floor, in a crowded hotel, while nursing a brother who was very ill from another complaint. There was no suspicion of malaria in the neighbourhood, and no one else was attacked. This gentleman has several times since suffered from recurrences of the same complaint after exposure to cold or wet." He also adduces M. Brachet's well-known experiments (referred to in Sir Thomas Watson's "Lectures"). After seven successive prolonged nocturnal baths in the River Saône, he was attacked for the next six nights, at the bathing hour, with all the phenomena of a true paroxysm of ague. Further evidence is afforded by the statement of Dr. Mouat that, while serving in the Madras Presidency, he found 1372 soldiers attributing their illnesses of various kinds to cold, while only sixty-two ascribed their disorders to exposure to the sun.

Dr. Oldham concludes an instructive chapter on "The Geography of Malaria" with the remarks—

> That the cause of malarious disease exists in almost every part of the habitable globe.
>
> That in cold countries it prevails only in low and swampy spots; but, as the heat of the climate increases, it becomes more generally distributed.
>
> That, though malarious disease may prevail at any season in those countries in which winter occurs, it is most prevalent in autumn; while, where there is no winter, the rainy season is that in which it becomes general.

From the chapter treating of "The Connexion between the Forest and Malaria," we extract the following paragraph on the hygienic value of trees:—

"Trees in themselves are harmless in temperate climates, and are highly beneficial in the tropics, where they tend to moderate the intense heat by sheltering the ground from the rays of the sun, and where they constantly supply the place of house or tent to the weary or benighted traveller. . . . . Many cases have been cited to prove that belts of wood have been sufficient to arrest the course of malaria, and it has been suggested that, by an extensive system of planting, swamps, moors, fens, and marshes may be rendered salubrious. The trees in the forests of Burmah, the Soonderbuns, the Terai, or the forests of Oronoco do not, however, seem to produce any such effect. The fact is, that trees and shrubs alone will not render a marsh healthy, nor will they make a well-drained country unhealthy. The cause of malaria lies far beyond the trees." (P. 35.)

In connexion with this subject, we may remark that it is hard to understand why the humid and swampy banks of some South American rivers, as the Orinoco, Magdalena, are intensely malarious, while the equally swampy and wooded banks of the Amazon are comparatively healthy. Dr. Oldham is decidedly opposed to the view supported by many writers, including Dr. Morehead, that trees attract malaria. "Far from this being the case, the safest place at night in a malarious district is in a tree or at the foot of it." European travellers in India, whenever they can do so, pitch their tents in a grove.

In his chapter on "The Characteristics of Malarious Situations," the author directs attention to a subject of vast importance in India—viz., the influence of artificial irrigation upon the public health. In Northern India it has been found that excessive irrigation of any land, however highly cultivated it may be, produces intense malaria. The result of Dr. Oldham's personal observations, which coincide with those of engineer officers of great experience, shows that there is little fear of malaria being produced by irrigation, so long as the supply of water is not greater than can be absorbed by the soil, and any surplus that exists can be carried off by effective drainage. When, however, the supply of water is in excess, and the ground remains saturated, malaria is the certain result. "In Southern India," says Major-General Cotton, "we know nothing of the ill-effects to health from irrigation;" and rice-cultivation, which requires that the soil should be covered with water, presents a parallel case. In Northern India it produces malarious diseases; while in Southern India it is considered to improve the health of the locality—the difference being due to the fact that a degree of humidity of the soil, which is sufficient to cause pestilence in the chilly autumnal season of Northern India, is scarcely, if at all, injurious in the hotter, moister, and more equable climate of Southern India.

In all times and in all climates there has been a general belief in the protective action of fire against malaria. At the present day it is recognised by the natives of Central Africa and the Guinea Coast, of Venezuela, India, Ceylon, and Madagascar; and all modern armies, when bivouacing in malarious countries, invariably, unless when prevented by strategical reasons, keep up large fires throughout the night. Fire, according to our author's views, by maintaining warmth at night, is "the antidote at once to malaria and to chill." Dr. Oldham fully endorses Dr. Livingstone's view, that "the best preventives against fever are plenty of interesting work to do, abundance of wholesome food to eat, and to be well housed and well clothed." He further recommends the moderate use of fermented liquors, and protests against the absurd opinion that sickness in the tropics is confined to drunkards. Drunkenness, he maintains, only indirectly increases the liability to malarious diseases, by causing that reckless exposure to climatic influences to which men in a state of intoxication are so subject. "The steadiest man does not escape fevers; while, if he be fortunate enough to avoid exposure, the drunkard does not suffer more from malarious diseases than his sober comrades." With this judicious remark we close our notice of Dr. Oldham's instructive volume.

⁂ It will strengthen Dr. Oldham's case, and be doing an act of justice to an independent worker, if we add that a precisely similar line of argument, supported by the same class of facts, is brought forward by the Italian Physician Minzi in his treatise "Sopra la Genese delle Febbri Intermittenti," Roma, 1844. He contends that fluctuations between intense mid-day heat and evening damp-chills rob the body of the power of resisting cold, and that the ague fit is a reaction from chill. Fires are the preventive; but how, he asks, can a fire neutralise poisonous air? He also denies the specificity of the action of quina.—Ed.

NEW BOOKS, WITH SHORT CRITIQUES.

Lecture on Small-pox, Vaccination, and Revaccination. By John Dixon, M.D., L.R.C.P. Delivered at St. James's School, Bermondsey, on Thursday evening, February 23, 1871.

⁂ Popular addresses by competent persons appear a proper mode of counteracting the noxious pamphlets which the anti-vaccination party circulate among the uninformed. Dr. Dixon's lecture is well adapted for this purpose, and we heartily commend it to the Profession and to sanitary boards for general distribution. It is printed upon a broad sheet of thin paper, and only costs a penny.

Compulsory Vaccination. By Medicus.

⁂ It has fallen to our lot to read a great deal of anti-vaccination trash; but for barefaced impudence and distortion of facts this pamphlet excels all that we have ever seen. If, as is pretended, it was really written by a Medical man, we can only express our surprise that he should have sent us a copy for notice. He may well be ashamed to affix his name to it.

GENERAL CORRESPONDENCE.

USE OF VACCINE LYMPH FROM ADULTS.

Letter from Dr. Edwards-Crisp.

[To the Editor of the Medical Times and Gazette.]

Sir,—Pray allow me to correct an error quoted in your journal of last week, arising probably from careless writing. The numbers should be—out of 42,071, 35,484 were under 15, not 13. Of these, it should be noted that 10,368 were under 1 year, and the greater proportion probably not vaccinated.

As regards the lymph taken from adults after secondary vaccination, when the vesicle is perfect and the subject healthy, I am not anxious to attach too much importance to my own opinion, as my experience, compared to that of many, is of little value; but, seeing that cow-pock in the cow occurs spontaneously (as far as I know) only in the adult animal, and knowing that many vesicles are as perfect in the adult man as in the infant, I see no reason why, in times of scarcity of lymph and danger of infection, matter should not be taken from adults; but I leave this question—a very important one—to your more experienced readers. I am, &c.,

Edwards-Crisp, M.D.

29, Beaufort-street, Chelsea, March 11.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, February 21, 1871.

Mr. Hilton, F.R.C.S., President, in the Chair.

(*Concluded from page 294.*)

Dr. Moxon next exhibited two specimens illustrating the Change of Diffused Miliary to Softening Grey Tubercle. The first specimen was from a young man who came into Guy's with tuberculous pyelitis and cystitis. He lay on his back confined to his bed for two months before death, and latterly signs of chest-complication appeared. A distinct gradation of small grey tubercles into cavities is seen with all intermediate stages of yellowness preceding the softening. When cavities and tubercles are present, it may be said these are not "true" tubercles. It may be said that the tubercles have arisen secondarily to the cavities, by a mode of local infection comparable to the infection we now are so familiar with in the celebrated inoculation experiments. Here the trueness of the tubercle is shown by its being part of a general diffused tuberculosis, with all the characters of the so-called "general tubercle," secondary to the tubercular pyelitis; and the idea of a local infection will not be entertained by anyone who observes the very gradual change from the small cavities to the grey tubercles, and the very slight degree of difference between the successive stages of change. The next occurred in a man who died of gangrene of the foot, from exposure while weakened by phthisis. His lungs show the structure of the large masses of iron-grey tubercle, sometimes called "granular pneumonia." The granules are seen to be tubercles receding and shrivelling, making clusters of wasted minute knots, which knots form at the surface of the cluster, and waste as they are carried, as it were, to the centre, by the rise of new tubercles outside them. Thus large masses of tubercle arise, and the black change that accompanies all chronic active lung disease comes about and defaces them. In both patches the centre is occupied by old cornified tubercle. But the outer part in one is composed of recent grey tubercles, and in the second the otherwise similar patch is composed of soft yellow tubercles, the two being evidently varieties of the same change.

Dr. Moxon then exhibited specimens of Lardaceous Spleen and Kidneys, Syphilitic Orchitis, and Subacute Pleurisy with Pneumonia. They were from a man, who, when carrying a sack of barley, suffered fracture of cervical spine by another sack falling on him. The case appeared important, as showing what a great degree of muscular exertion a man so diseased was capable of. The pleurisy was certainly in part recent; it had a new surface of soft lymph, and the roughness of this, with its transverse ridges, showed that rubbing must have been rather vigorous. The state of the kidneys and spleen and liver certainly made his muscular power remarkable. What he brought the case to show was the kind of pneumonia which is seen in the lung. The condition is not so plain now as when fresh; then it was remarkable because of the roundness of the edges of the patch like the advancing curve of a spreading eruption. The belief that pneumonia is caused by syphilis has its advocates. The question is discussed rather fully by Lancereaux. A white hepatisation was the chief condition mentioned in a series of cases of infantile syphilis in Virchow's *Archiv*. Authors on "Fibroid Phthisis" adduce syphilis among the other conditions. He would say that in the relation of syphilis to lung disease these propositions are true: That phthisis will run through its course in syphilitics in an ordinary way; that a chronic white hepatisation, with tendency to circumscribed gangrene, occurs especially, but not only, in persons certainly syphilitic; and, thirdly, that syphilitic gumma occurs in small quantity in some cases. From these present and other cases, I believe that circumscribed scars on the pleura, such as are seen here, and insidious chronic pneumonia, occur especially in syphilitic people.

Mr. De Morgan exhibited a very Large Tumour, removed from the axilla of a man aged 45. The patient had been in good health until a kind of hard œdema made its appearance all over the body. A tumour appeared in the neck, but subsided. After that, one began on the side of the chest, which became very large, but not otherwise inconvenient, being neither tender nor painful. It was rather loose and soft in the centre; when removed, it was found to be firmly adherent in certain parts. The man did very well. The tumour was a lymphadenoma. Others had been described as accompanied by wasting disease; it was not so here. Still, there must have been some lymphatic affection with the œdema.

Mr. De Morgan also showed a Tumour of the Jaw, removed from a lady aged 40. It began in 1869, and another appearing in 1870, both were removed with a portion of the jaw, as her health, which had previously been good, rapidly deteriorated. It was found to be a rapidly-growing fibrous tumour, with nuclei and some myeloid cells.

Mr. Wagstaffe showed an exceedingly rare specimen of probable Fibrous Tumour of the Heart. It was removed from the body of a child three months old. The child was well developed and apparently healthy, and there were no symptoms which drew attention to the heart, but for some weeks before its death the child had rather frequent fits of syncope, and in one of these it suddenly died. The tumour was globular, about two inches in diameter, pinkish-white on section when first examined, and of a very firm, uniformly fibrous texture. It was situated in the substance of the septum ventriculosum, and projected equally into both cavities, but the muscular structure of the septum was still spread out over the tumour. Microscopically it appeared to be mainly composed of well-developed white fibrous tissue, but owing to the time it had been immersed in spirit, it was difficult to determine whether any other structures were associated with this tissue. The history of the case and the microscopical characters proved it not to be the simple organisation of inflammatory effusion or blood-clot, nor did it appear to be malignant, but rather a simple fibrous tumour. Mr. Wagstaffe said there was only one case on record in the *Transactions* of the Society of a simple tumour of the heart not parasitic in origin, and that as a specimen of fibrous tumour of that organ it was an unique case. Its occurrence in a child three months old, without any interference with nutrition, made it a case of extreme clinical interest.

Mr. Henry Morris exhibited a specimen of Strangulated Femoral Hernia, with reduction *en masse*. The subject of this occurrence was a widow, aged 78, who had for some time been suffering from bronchitis and general failing of health, and was admitted into the Middlesex Hospital on Wednesday, January 11. She stated that on Sunday, January 8, while coughing she felt something give way in the right groin, and that during the night and the next morning she suffered considerable pain in the lower part of the abdomen, and vomited several times. On Tuesday morning she applied for relief, and the rupture was detected, and its reduction by taxis and afterwards by ice attempted; again, during the day of Wednesday, taxis was employed by two Medical men, but without producing any diminution of the tumour. She was then sent to the Hospital. On her admission the swelling in the right groin was the size of a large pigeon's-egg; it gave no impulse on coughing, and she was sick, the vomited matter being stercoraceous. Chloroform was at once administered, and Mr. Lawson, in Mr. De Morgan's absence, proceeded to operate. Before doing so, however, he for a few moments tried the effect of taxis with the aid of chloroform, and causing no alteration he forthwith cut down upon the tumour, but without opening the sac

After freeing all constrictions outside the neck of sac and gently pressing upon the rupture, the tumour at once disappeared. During the night and next morning the symptoms of strangulation continued, so that at midday Mr. Lawson deemed it advisable to reopen the wound and make a careful examination of the parts. In doing so his finger passed into a pouch, which he immediately felt was not the peritoneal cavity, and in this he detected a small tumour; no coils of intestines, however, impinged against the finger. As it was conclusive, therefore, that the previous reduction had been one of reduction *en bloc*, and that the neck of the sac was still constricting the contained gut, a free incision was made into Poupart's and Gimbernat's ligaments, and the tumour hooked up from behind the pubis into the canal. The sac, which bore a strong resemblance to omentum, was laid open, the stricture at its neck divided, and a small coil of deeply-congested bowel returned into the peritoneal cavity. The sac was then ligatured at its neck, and the portion below cut off; the end of the ligature was left hanging from the wound, and the parts brought together in the usual way. From this time all signs of strangulation ceased, but the wound had to be again opened to check hæmorrhage. This was done for the time, but a good deal of oozing subsequently occurred, and she died from exhaustion on the evening of January 13, thirty hours after the second operation. At the post-mortem examination, on passing the finger through the wound in the crural region, it could be moved readily about in a large cavity, in which no intestines could be felt, and the walls of which were granular and rough to the touch. This reached upwards for about two inches behind the right rectus muscle, downwards to a considerable depth into the pelvis, outwards towards the iliac fossa, and inner behind the pubis and in front of the bladder; the lower end of the rectus muscle was lacerated, and projected into it from above. The posterior wall of this large pouch was seen, on opening the abdomen, to be formed by the peritoneum detached from this part of the abdominal and pelvic walls, strengthened by the subperitoneal fat and fascia, and having in it, below, the front surface of the bladder, which latter organ with the uterus was displaced backwards towards the sacrum. No trace of peritonitis existed, but the ileum, which was lying free within the peritoneal cavity, was congested in two places. One portion—an inch and a quarter in length, and barely involving the entire circumference of the bowel—was of a deep port-wine colour, excepting at the points of stricture, where the surface was soft and yellowish; the other portion, similar in extent and about eight inches above the former, was much less deeply congested. On the inner surface of the peritoneum, corresponding to the point of application of the ligature, was a rosette-like puckering, which had evidently formed the neck and orifice of the hernial sac. It is impossible to say what amount of taxis had been employed before the patient was brought to the Hospital, but the force used after her admission and at the time of the reduction was not only not great, but very slight, and it was seen at the post-mortem examination that the connexion between the deep layers of the abdominal parietes was very loose and easily destroyed.

Mr. **Waren Tay** exhibited the Contents of a Ranula made up of fatty masses, removed from a man aged 55. Three years ago he had a small tumour, which he would not allow to be touched. When he returned to the Hospital it was as large as an egg, and freely fluctuated. A piece of the wall was removed, and glairy matter and five fatty lumps came away; chemically, these resembled adipocire.

CLINICAL SOCIETY OF LONDON.

Friday, February 24.

Dr. W. W. Gull, President, in the Chair.

Mr. **Gant** read a paper "On the Occlusion of Arteries after Operation," and said that the primary object of this paper was to lay before the Society the author's observations on the process of occlusion in arteries after acupressure, with the view of supplying some guiding knowledge or indications as to the proper period for the safe withdrawal of the needle, without the occurrence or supervention of secondary hæmorrhage. This, although an inferential method of investigation, is obviously a more safe method than by submitting living patients to the risk of removing the needle experimentally, in order to gain the requisite practical knowledge by experience. The process of occlusion would appear to consist essentially in the formation of a conical clot of blood, which soon becomes fibrinous and adherent, so as to securely plug the artery upwards from the transverse line of acupressure; but this is not accompanied or followed by any deposition of lymph and adhesion of the coats of the artery at the said line, the arterial tunics remaining undivided by the compression temporarily applied. Compared with ligature and torsion respectively, the efficacy of acupressure relies solely on the first provision for the arrest of hæmorrhage, when the Surgical appliance, the needle, is withdrawn. In relation to treatment: a firm, fibrinous, and adherent clot-plug having been found to have formed within five days, and in a main artery (the femoral), that period would appear to offer a perfectly safe opportunity for withdrawing the needle. Ligature and torsion may, however, be not less securely effectual than acupressure in regard to the non-occurrence of secondary hæmorrhage, but, as to primary union of the flesh-wound, and also as to the prevention of pyæmic infection, torsion has the advantage of not inducing sloughing of the end of the vessel, as by ligature; and it is superior to either of the other methods of treatment in not leaving any foreign body in the wound for however short a period, to possibly provoke suppuration.

Mr. **Callender** asked if the clot in the first case was limited by the collateral vessel or by the needle.

Mr. **Arnott** said that the statement that the ligatured portion of the vessel necessarily sloughed away had been refuted. The number of cases where ligatures had been used without any suppuration supported this view. In more than one case he had seen the end unite to the other tissues, and remain as a ligament.

Mr. **Barwell** thought the risks of secondary hæmorrhage after ligature exaggerated.

Mr. **B. Hill** remarked on the rapidity with which fibrin was effused after the artery was compressed; and exhibited a specimen where there was a little plug and no clot. Mr. Gant spoke of the clot as the occluding agent; he thought the lymph was.

Dr. **Anstie** asked Mr. Hill his reason for holding this plug to be fibrin, and not decolorised blood.

Mr. **Hill** said the history and appearances supported his view.

Mr. **Haward** said pyæmia did not depend on the artery, but on other causes. Age and condition were important.

Mr. **Hulke** had secondary hæmorrhage more frequently after acupressure than ligature. In two pyæmia followed, and there was always a certain uneasiness with regard to the time of withdrawal of the needles.

Mr. **Gant**, in reply, said the short clot was due to the acupressure being less perfect than ligature as a mode of arrest.

Dr. **Broadbent** read notes of a case of Paralysis of the Ophthalmic and Superior Maxillary Divisions of the Fifth Nerve, of the Fourth Nerve, and of the Branch of the Third to the Levator Palpebræ on the Right Side, from syphilitic disease at the base of the cranium. The interest of the case consisted in the rarity of paralysis of the fourth nerve, and in the illustration of anatomical diagnosis furnished by the simultaneous implication of this nerve and of the two upper divisions of the fifth. The patient, a farrier, aged 41, became an out-patient at St. Mary's Hospital on May 9, 1870. He had been ailing for eight months, and under treatment nearly all that time. At first he had had pain in the right side of the head, worse at night, and for four months had had loss of sensation in the right side of the forehead and face, together with ptosis and double vision. The skin of the entire region of distribution of the ophthalmic and superior maxillary divisions of the fifth nerve was insensible to all kinds of impressions. The eyelid could be raised only to a slight extent by the action of the occipito-frontalis. But though the double vision was very marked, there was no perceptible squint, and the pupils of the two eyes were equal. On more careful examination, it was found that the two images were not on the same level, one being below and to the right of the other; and subsequently, by causing the patient to look at an object in various ways, so that the eyes were successively directed upwards, downwards, to the right, and to the left, it was clear that the double vision was due to paralysis of the fourth nerve, the two images receding when the eyes were directed downwards, approaching each other when they looked upwards, the pseudo-image going far to the right, but coming to near the level of the image proper when the patient looked to the right, getting immediately beneath it when he looked to the left. There was no acknowledged syphilitic history, but the sallow earthy complexion of the patient, a tubercular eruption near the right eyebrow, and facts in his family history, were considered conclusive as to the syphilitic origin of the disease, and iodide of potassium was given in doses of six grains, quickly increased to twenty grains, the result being rapid disappearance of all the symptoms. The lesion was considered to have been a node or gummy tumour of the fibrous structures surrounding the ophthalmic and superior maxillary divisions of the fifth nerve, in that part of their course between the Casserian ganglion and the exit of the latter through the foramen rotundum. Here the fourth nerve lies close to the ophthalmic, and sometimes joins it, so that a single lesion would cause the loss of sensation and the double vision; it does not, however, appear how it could give rise to the ptosis.

Mr. Carter said paralysis of this nerve was so painful on account of the vertigo and the position of the head. Prismatic spectacles completely relieved the state. He thought injury to the cornea followed injury or disease of the inner division of the ophthalmic nerve only, the external portion having more to do with sensation.

Dr. Buzzard thought the diseased condition eminently tractable. He had seen nothing in Medicine more remarkable than the effects of iodine on tertiary syphilis, save the influence of diet on scurvy. He thought the anatomical diagnosis good. He thought sufficient prominence had not been given to these syphilitic affections, for they often occurred when there was no history of secondary syphilis. He had often seen relapses when the iodide was too soon left off.

Mr. Hart thought the case interesting on account of its localised character; this was usual in syphilis. It was best to give large doses of the iodide at once.

Mr. Hulke said that in most orbital syphilitic affections there was no history of secondary syphilis. They had a great tendency to recur. He had seen a woman in her fifth attack. The vertigo was a good rough test for this form of paralysis.

Dr. Lockhart Clarke said most such cases occurred without secondary symptoms.

Dr. Anstie asked if anyone had noted the frequent connexion between deep ulceration of the tongue and paralysis. Both had the same tendency to obstinate resistance.

Mr. Haward said the paralysis might be due to disease of the surrounding tissues. There had recently been a case in St. George's Hospital, under the care of Mr. Hewett, of an orbital tumour which was supposed to be malignant, but yielded to iodide of potassium.

Mr. Barwell thought the condition might be accounted for by periostitis in different portions of the nerve-tracts. The condition of the nostrils would serve to confirm this.

The President thought that, next to thrombosis and embolism, syphilitic affections of the nervous system were the most important additions made to our knowledge of late years. There was often thickening of the bones when the skin had not been affected. The general nutrition was altered, and there was often a peculiar smell about people affected with tertiary syphilis.

Dr. Broadbent, in reply, said hereditary syphilis would account for a certain number of cases. He had noted two cases of paralysis with a peculiar smell.

OBITUARY.

DR. WATERFIELD, M.D., F.R.C.P.

Dr. Waterfield died on the 5th inst., at his residence, South-street, Thurloe-square, at the age of 81 years. The deceased Physician was educated at Christ's College, Cambridge, as a member of which he proceeded B.M. in 1823, and M.D. in 1827. He was elected a Fellow of the Royal College of Physicians, London, in 1830, and was chosen one of the censors of the College in 1833. Dr. Waterfield was formerly a Commissioner in Lunacy, and Consulting-Physician to several dispensaries in the metropolis.

In the *Journal für Praktische Chemie*, No. 17, 1870, will be found a description of a new sulphide of mercury by Dr. Gideon Moore. It differs not from cinnabar in chemical composition, but it is without structure or cleavage, has a brilliant fracture, takes a high polish, and possesses a metallic lustre resembling graphite. Dr. Moore proposes to call this new mineral "Metacinnabar."

Several ladies residing in the neighbourhood of Wavertree have formed themselves into a committee, for the purpose of exercising supervision over the pauper children who may be placed in homes, under the boarding-out system, in that locality. The committee has been recognised by the Poor-law Board.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 9, 1871:—

Elder, George, General Hospital, Nottingham.
Penkivil, John Hugh, Cranbrook, Kent.
Pritchard, Richard Henry, Treborough, Somerset.
Martin, Richard Johnson, Little Hulton, Lancashire.

The following gentleman also on the same day passed his First Professional Examination:—

Robey, Peter John, Queen's College, Birmingham.

APPOINTMENT.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cossar, Thomas, M.D., L.R C.S., etc.—Physician to the West Norfolk and Lynn Hospital *vice* Dr. Williams, resigned.

BIRTHS.

England.—On March 11, at Winchester, the wife of Dr. England, of a son.

Peacock.—On March 13, at Ford Cottage, Churchinford, Devon, the wife A. L. Peacock, M.R.C.S., of a daughter.

Perry.—On March 14, at Kensington, the wife of George Perry, Assistant-Surgeon Scots Fusilier Guards, of a son.

Ralfs.—On March 13, at Bohemia-house, Turnham-green, the wife of Dr. S. Ralfs, of a daughter.

Williams.—On March 6, at 286, High-street, Bangor, North Wales, the wife of O. T. Williams, Physician and Surgeon, of a daughter.

Wilkin.—On March 10, at Roxhy House, Folkestone, the wife of J. F. Wilkin, M.R.C.P.E., of a son.

Wright.—On March 9, at Southsea, the wife of Dr. Wright, 93rd Sutherland Highlanders, of a son.

MARRIAGES.

Cherry—Maxwell.—On February 3, at Christ Church, Cawnpore, William Cherry, Assistant-Surgeon 5th Royal Irish Lancers, eldest son of William Cherry, Esq., Cregwell, New Ross, to Margaret Helen, third daughter of Hugh Maxwell, Esq., Cawnpore.

Smith—Smith.—On March 14, at Walcot Church, Bath, Philip Henry Smith, 11th Regiment, to Georgina Harriett Bingham, daughter of Dr. C. T. Smith, Inspector-General of Hospitals Madras Army (retired).

DEATHS.

Barry, Dr. James Saasfield, Royal Navy, of H.M S. *Teazer*, at the Military Hospital, Bombay, of consumption, on February 2, aged 37.

Clare, Margaret, daughter of the late Colonel Colin Dundas Graham, K.W., relict of the late Sir Michael B. Clare, Physician, Jamaica, and widow of the late General Sir Hugh Halkett, C.B., G.C.H., Hanover, at Cromarty, on March 8, aged 84.

Connel, Dr. A. J. N., late 2nd Life Guards, at his residence, 19, St. George's-road, Warwick-square, on March 9.

Fitzmaurice, George Lionel, F.R.C.S., on March 9, at the residence of his daughter, Upper Norwood, in the 67th year of his age.

Goullett, Sydney Lennard, youngest son of Arthur Goullet, L.R.C.P.L., at 2, Marlborough-road, St John's-wood, on March 10, aged 4 years.

Lee, Washington, M.R.C.S.E., at Warwick, Queensland, Australia, on November 20, from aneurism of the aorta, occasioned by a fall from his horse, in the 29th year of his age.

Mackenzie, Hugh, eldest son of the late T. Mackenzie, Esq., C.B. Inspector-General of Hospitals, on March 8, aged 18.

Maclachlan, Dr. Charles Fellowes, at 7, Bishop-terrace, Rothesay, on February 28.

Reid, James Hunter, D.C.L., Fellow of St. John's College, Oxford, and eldest son of the late James Reid, M.D., of Brook-street, Grosvenor-square, at Durham-lodge, Kilburn-park, on March 6, aged 42.

Syme, Mr. John, of Liskillin, Ballinrobe, Ireland, eldest son of the late Mr. James Syme, Professor of Clinical Surgery in the University of Edinburgh, at Torquay, on March 11.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham General Dispensary.—Resident Physician and Secretary; must have a Medical qualification, and be registered. Applications and testimonials to Dr. G. F. de la Cour, on or before March 30.

Derby County Asylum.—Assistant Medical Officer; must be a Member of the Royal College of Surgeons of England, and be L.S.A. Applications and testimonials to Dr. Hitchman, on or before March 24.

Dundee Royal Infirmary.—House-Surgeon. Further particulars of the Secretary, on or before March 22.

Hospital for Women, Soho-square, W.—Assistant-Physician; must be a graduate in Medicine of some recognised University, and be M.R.C.S. Applications and testimonials to H. B. Ingram, Secretary, on or before March 18.

Kent County Ophthalmic Hospital.—Consulting Surgeon; must be duly qualified. Applications and testimonials to R. Pearson, Esq., Secretary, Maidstone, on or before March 18.

Liverpool Dispensaries.—Two Assistant Resident House-Surgeons are wanted. Candidates must be duly qualified and registered. Applications and testimonials to the Secretary, at the Dispensaries Office, Leith Offices, Liverpool, on or before March 28.

Lincoln County Hospital.—House-Surgeon and Apothecary; must be M.R.C.S.E. and L.S.A. Applications and testimonials to the Secretary, or or before April 10.

Middlesex Hospital Medical College.—Lectureship on Physiology. Applications and testimonials to the Dean, on or before March 30.

Queen's College, Birmingham.—Medical Tutor; must be a Member of the College of Surgeons of England, Ireland, or Scotland, or a Graduate of a University in Great Britain or Ireland. Applications and testimonials to Mr. Henry Harris, Secretary, Queen's College, on or before March 31.

Rochdale Infirmary and Dispensary.—Resident Medical Officer. Applications and testimonials to Mr. Lee, Hon. Secretary, from whom further particulars may be obtained.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

St. George's and St. James's Dispensary, 60, King-street, Regent-street, W.—Surgeon; must be F. or M.R.C.S.E., not practising pharmacy or midwifery. Applications and testimonials to the Secretary on or before March 23. Election on the 30th.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

West London Hospital.—Junior Surgeon; must be a Fellow of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Secretary, on or before April 12.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Berwick-upon-Tweed Union.—Dr. Wilson has resigned the Tweedmouth District; area, 13,252; population, 7372; salary, £50 per annum.

Seaford Union.—Mr. F. McNair has resigned the Osbournley District; area, 12,070; population, 1644, salary, £25 per annum.

West Ward Union.—The Shap District is vacant; area, 48,640; population, 2174; salary, £25 per annum.

APPOINTMENTS.

Alnwick Union.—Adam K. Trotter, L.F.P. and S. Glasg., L.R.C.P. Edin., to the Embleton District.

Aston Union.—James T. Smith, M.R.C.S. Eng., L.S.A., to the Sutton Coldfield District.

Gravesend and Milton Union.—Theodore G. Cresy, M.R.C.S. Eng., L.S.A., to the Milton District.

Hartlepool Union.—John Wilson, L.F.P. and S. Glasg., L.R.C.P. Edin., to the Greatham District.

Helston Union.—Walter Wearne, M.R.C.S. Eng., L.S.A., to the First District and the Workhouse.

Holborn Union.—Reginald Taylor, M.R.C.S.E., L.S.A., to the Third District.

Solihull Union.—Edward S. Page, L.F.P. and S. Glasg., L.S.A., to the First Tamworth District. Jonathan H. Kimbell, F.R.C.S. Eng., L.S.A., to the Second Tamworth District. James Arthur, M.R.C.S. Eng., L.S.A., to the Third Tamworth District.

Thame Union.—George Gent, L.S.A., to the Brill District.

Woodstock Union.—Frederick Stockwell, M.D. Lond., M.R.C.S. Eng., L.S.A., to the First Woodstock District.

Wrexham Union.—Thomas L. Browne, M.R.C.S. Eng., L.R.C.P. Edin., to the Hope and Tryddyn District.

Royal College of Surgeons.—At a special meeting of the Council on the 15th inst., Mr. Thomas Blizard Curling, F.R.S., of Grosvenor-street, Consulting-Surgeon to the London Hospital, was elected a member of the Court of Examiners, in the vacancy occasioned by the resignation of Mr. Samuel Solly, F.R.S. The number polled by the respective candidates were as follows:—Mr. Curling, 11 votes; Mr. Birkett, 3; Mr. De Morgan, 2; and Mr. Hewett, 1. Mr. Curling, who was elected a member of the Council in 1864, obtained the Jacksonian Prize in 1834 for his essay on Tetanus, since which he has been a valuable contributor to the advancement of chirurgical science. The examinations for the present year will commence on Saturday, the 1st prox., on the conclusion of the lectures now being delivered by Professor Flower, F.R.S.

Mr. Robert Elliott, F.R.C.S. Eng., late Medical officer for district No. 2 of the Westhampnett Union, Sussex, has obtained a superannuation allowance of £30 per annum.

Mr. J. Comyns Leach, B.Sc. Lond., M.R.C.S.E., L.S.A., has been appointed a county coroner for Dorsetshire, in the room of Mr. W. H. R. Bennett, M.R.C.S.E., L.S.A., resigned. This appointment, until five years ago, was always held by a member of the legal profession, when Mr. Bennett contested it with a lawyer and was successful. This time there was no opposition.

It has been resolved to establish a Hospital in Birmingham for the treatment of diseases peculiar to women.

Worcester General Infirmary.—At the annual meeting of this institution, held on Friday, the Executive Committee were authorised to carry out alterations and additions to the Infirmary at a cost of £1397.

The sum of £4500 was realised by collection on Hospital Sunday in Liverpool.

The late Joseph Gedge, M.D., of Caius College, who perished at Khartoum, serving with Sir Samuel Baker's expedition in October, has left 1000*l*. for the foundation of a physiological prize, Cambridge University.

Mr. S. Morley, M.P., has made an offer to furnish and fit up a boys' home in London, similar to the two already in existence, and pay the rent for four years.

A man, named Thomas Jones, has been apprehended at Rhyl, charged with a fearful outrage on his brother Richard. He quarrelled with him, choked him till his tongue protruded, and then bit it off.

A sign, announcing "The Vacuum Cure," is hung out from the window of an eating-house in London.

The police of this city, says the *Manchester Examiner*, have just brought to light a baby-farming establishment of the worst character.

Five of the crew of the *Ismillia*, a steamer which sails between Liverpool, Glasgow, and New York, were found dead in their berths, at the last-named city, from suffocation caused by the inhalation of coal-gas.

The Secretary of the National Hospital for Consumption, Ventnor, writes that it is intended to open, for women patients, the second pair of houses on Tuesday next, in commemoration of the marriage of the Princess Louise, by whom the foundation-stone was laid on behalf of the Queen.

The Inland Revenue Commissioners, in reply to an inquiry as to whether receipts for voluntary subscriptions to charitable institutions require to be stamped, state that all receipts for or upon the payment of money amounting to 40s. or upwards are by law liable to stamp duty; but it has not been the practice of the Board to proceed for the recovery of the penalty incurred, in which an acknowledgment of a mere voluntary gift has been given upon unstamped paper.

Several children suffering from small-pox, all belonging to one family living in St. Pancras, have been received at the Hampstead Hospital; their ages ranged from 16 to an infant in arms. Not one of these had been vaccinated, and several of them are dangerously ill. The mother, an anti-vaccination believer, is with the children as a nurse.

Outbreak of Small-pox in Preston.—On Tuesday, at the Preston Board of Guardians, a letter was read from Dr. Ridley, the Medical officer of the union, stating that several families in Preston and its neighbourhood were suffering from small-pox, and suggesting the revaccination of the inmates of the workhouse. Dr. Ridley's suggestion was agreed to, and the guardians were all of the opinion—after seeing the serious consequences of the disease in Liverpool, Manchester, London, and other places—that the town and district should be placarded with bills urging the public to be revaccinated.

The Westminster Small-pox Hospital.—The Westminster District Board of Works last week opened a temporary Small-pox Hospital, in Milbank-street, Westminster, next to the wharf premises occupied by the Board. The Hospital has been fitted up to hold twenty beds, and has besides a mortuary, a convalescent ward, etc. Messrs. Hunt and White have been appointed Medical attendants. A lady superintendent, four nurses, and a cook and general servant have also been appointed. The Board have likewise provided an ambulance. The Hospital is for the reception of persons not of the pauper class.

Unskilful Vaccination causing Death.—An inquest was held on Monday, at Liverpool, on the body of a man named Dingwall. He had been vaccinated whilst suffering from diabetes, by an unqualified Practitioner; and in consequence of the operation pyæmia was induced, from which the deceased died. Verdict accordingly.

Anti-Vaccination.—At the Manchester Police-court, last week, William Waterall was summoned for refusing to allow his child, Jonathan Waterall, to be vaccinated. It was stated that the defendant had been fined 21s. and costs, in September last, for neglecting to have the same child vaccinated. The defendant, in answer to the Bench, now said—"I resist the act of vaccination because it is contrary to God's word, and I take all the consequences of the resistance, relying on God's protection and no other." An order was made for the vaccination of the child in fourteen days.

Kilmainham Hospital.—It appears the recommendations of the Committee are not to be acted on at present, as the items in the army estimates for the ensuing year are precisely the same as before.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The next meeting of this Society will be held on Saturday, March 18, at 7.30 p.m., at the Scottish Corporation-hall, Crane-court, Fleet-street. The President, Robt. Druitt, M.R.C.P. Lond., F.R.C.S., will read a paper "On the Status of Medical Officers of Health, as Modified according to the Report of the Sanitary Commission."

THE cattle plague is making fearful havoc in the neighbourhood of Lille.

THE Privy Council return for the month of February, published on Tuesday last, shows an importation of only forty-four animals—twenty-seven cattle and seventeen swine—all of which were affected with foot and mouth disease.

MR. KNOX, the magistrate at Marlborough-street, decided on Saturday last that insanity entitles a sufferer to sick pay under the rules of a friendly society.

THE child of a tobacconist named Lee, keeping a shop in Brownlow-hill, Liverpool, says the *Sheffield Times*, was taken ill of small-pox, and after a short illness apparently died. The body was laid out, and after the lapse of three days was placed in the coffin; when, to the surprise of all around, it uttered a cry, and awoke from what appeared to be a mere lethargy. The recovery, however, was not final, for in a few days afterwards the child actually died.

PROFESSOR LEONE LEVI, in a report which he has prepared for Mr. Bass, M.P., says that the fixed capital employed in the production of beer and spirits is estimated at £17,400,000, and the floating capital at £23,200,000; making a total of £40,600,000. The foregoing figures relate solely to the production of intoxicating liquors. Their distribution introduces us to a fresh class of interests. The Professor's conclusion is, that the total capital invested in the manufacture and sale of intoxicating liquors amounts to £117,000,000. In computing the number of persons employed in the trade, he thinks four for each public-house a very moderate estimate. We have 150,000 of these houses, and this would give 600,000 persons so occupied. There are also 72,000 persons engaged in the direct manufacture of beer and spirits, besides those employed in bottling, coopering, etc. Adding these figures together, the total arrived at is 846,000 persons, or with those dependent upon them, 1,500,000.

THE PURIFICATION OF THE LEA.—In reply to an inquiry, Alderman Sidney, one of the conservators of the river Lea, said the Conservancy Board had had to give notice to the various authorities in the watershed of the Lea to compel them to take measures with a view to the purification of the river, which was one of the great sources of water-supply of the metropolis, and when the whole of the works were completed, the river would be free from impurity.

SINGULAR CASE OF LOCK-JAW.—On Tuesday, Dr. Hardwicke held an inquest on James Rook, aged 9 years. Deceased was playing with other boys at peg-top in Bolton-mews, when a boy named Neil, about the same age, passed up the mews, and amused himself by kicking about the other boys' tops. Neil then picked up a stone and threw it among the boys; the stone struck the deceased in the forehead, and he fell against the wall insensible. He was taken to St. Mary's Hospital, where he died from lock-jaw, produced from the wound in the forehead. A verdict of "Death from misadventure" was ultimately returned.

DEATH FROM HYDROPHOBIA.—Another death from hydrophobia is reported from Bolton. A little boy, who was bitten by a mad dog on the 14th ult., died in great agony on Sunday morning, making the second death in that town within a fortnight caused by bites from the same dog. On Saturday a young woman was also bitten by a dog suffering from rabies. The Bolton police appear to be vigilant in the destruction of vagrant dogs, for we learn that up to the present time they have seized and poisoned no less than 133 of the canine race.

DR. WOODWARD AND THE WORCESTER BOARD OF GUARDIANS.—Dr. Woodward attended the Board on Thursday, to answer a complaint lodged against him by Mr. Mitchell with reference to his failing to attend a pauper patient named Robert Hull, who, it was alleged, had obtained a Medical order from the relieving officer. Dr. Woodward stated that the Medical order in question was a forgery; it was not signed by either of the relieving officers, although it bore Walker's name. Walker admitted that it was not signed by himself, but by Peter Howell, an aged inmate of the house. Dr. Woodward further stated that Hull was very far from being in a state of pauperism—in fact, he had got Hull's name in his book as a private patient. The chairman said Dr. Woodward's explanation was satisfactory, and there was an end to the case.

MM. HÖHLER AND SCHIMPF have reported in the *Berliner Med. Wochenschrift* that they have repeated the experiments of Personne with the following results:—Commercial oil of turpentine is a good antidote to poisoning by phosphorus. There is no fatty degeneration of the tissues, nor is there any free phosphorus found in the system of the animals experimented on. Phosphorus and turpentine oil form in the stomach a compound resembling spermaceti, which is readily excreted.

COMPLAINTS AGAINST A VACCINATION OFFICER.—At the Wakefield Board of Guardians' ordinary meeting last week, Mr. Connor drew the attention of the Board to some irregularity on the part of Dr. Wade. Sharlston was one of the townships for which Dr. Wade had been appointed vaccination officer. Dr. Wade had attended on the first Tuesday in January, and ought to have attended on the second, but he did not do so. The mother of a child which had been vaccinated on the first-named day attended, and also several other persons with other children. He also heard that Dr. Wade had arranged with Mr. Mackenzie, of Normanton, for the latter to vaccinate the people in Sharlston district, and receive half the fees. No such arrangement ought to have been made without the sanction of the Board. In the course of a desultory conversation which followed, an opinion was generally against the present large districts, and in favour of reverting to the old plan of allowing every Surgeon to vaccinate. It was decided to request Dr. Wade to give some explanation for his remissness.

PARIS REGISTRATION RETURNS.—The return for the week ending March 3, 1871, gives a total of deaths of 3500, 417 of these being furnished by the military population, and 526 occurring in children under a twelvemonth old. The cases of variola had diminished to 147, but those of typhoid fever amounted to 260. There were 424 deaths returned from bronchitis, 338 from pneumonia, and 240 from diarrhœa and dysentery. The civil population of Paris, according to a census taken January 7, 1871, numbered 2,019,877 souls.

THE number of deaths in Paris last week was 2993, showing a decrease of 507, as compared with that of the previous week, and a decrease of 1700 with that of the first week in February. Only 85 persons died of small-pox.

THE EPIDEMIC OF SCORBUTUS IN PARIS.—M. Legroux, in his account of the epidemic scorbutus at present prevailing in Paris, thus notices the remarkable exemption of women from its attacks:—"This disease has attacked far more men than women, and that in an enormous proportion. Among 200 scorbutic patients, we have not met with more than three or four women. And yet, women might be expected to easily become the subject of this cachexia. How many of them, amongst the working classes, have been living in a problematical manner! Often without work or resources, and anæmic, as women usually are in large cities, many of them have but little fuel, and many of them have been fed only on rice-bread (and what bread!) and a little wine, obstinately refusing horse-flesh. I do not profess to be able to explain this slight aptitude of females for scorbutus, nor do I insist upon it much, knowing that the females of Salpêtrière were the only subjects of an epidemic of scorbutus in 1847."—*Gazette Hebdomad.*, March 10.

POISONED BY EATING A TURKEY.—The adjourned inquest on the body of Mr. Marshal George Harrison, of Wisbeach, was held on Monday last. The deceased was taken ill on December 29 last—it was supposed in consequence of something of a poisonous nature in the turkey of which he partook on Christmas-day. Mrs. Harrison, two daughters, a son, and a friend were also seized with vomiting, but all recovered, with the exception of the deceased, who died on January 4. The viscera of the deceased, and portions of the turkey, sauce, catsup, and some water, were sent to Mr. Rodgers, London Hospital, for analysis. In his report of the result of the examination to the coroner, he says that, after very careful analysis, no mineral or irritant poisons were discovered. In his experience he had met with a case equally singular, where a person had died after partaking of goose, and the symptoms in that case were identical with those observed in the present instance. He could come to no other conclusion than that the turkey was poisonous in its nature, like the goose referred to, and that the death of Mr. Harrison was attributable to no other cause. Verdict—"Death from natural causes."

ANOTHER MISTAKE.—We regret to record another instance of death in a police-cell from apoplexy. It appears, from the evidence given before the coroner at St. George's Workhouse, Borough, that the deceased was found lying in the Borough Market, in a state of insensibility, by a police-constable. The officer thought that he was drunk, and caused him to be removed to the station-house. He was taken to the workhouse, after having been seen by Mr. Thomas Evans, the son of the police-Surgeon, who admitted, in answer to the coroner, that, although he was not properly qualified, he was in the habit of going to see patients at the station. This witness, finding no smell of drink about the deceased, gave a certificate to the effect that he appeared to be under the influence of opium. Other Medical evidence showed that the deceased, who was a master tailor, carrying on business in Cheapside, had died from apoplexy, and Dr. Evans, the police-Surgeon, who was called at the desire of the coroner, said that, having been tired after a hard day's work, he had sent his son to see the deceased, also adding that patients were never treated at the station. The coroner having observed that the case might have terminated differently had the patient received prompt Medical aid, the jury returned a verdict, "Death from apoplexy."

The War carried into the Realms of Science.—Count Jaubert has addressed the following letter to the President of the *Academia Cæsarea Natur. Curiosor*:—"Monsieur le President,—I felt myself greatly honoured when, in 1858, I received the diploma of Membership of your celebrated academy under the *cognomen* of Gundelsheimer, the companion of Tournefort in the East—a complimentary allusion to my researches as a travelling botanist in these countries. The present war between the two nations has assumed such a character, that a Frenchman can no longer, without compromising his own dignity, maintain even scientific relations with the other side of the Rhine. Consequently, I beg of you to remove my name from the list of members of your academy.—Count Jaubert, Member of the Institut and Deputy du Cher." A similar letter has been forwarded by the Count to the Ratisbon Royal Botanical Society. Another member of the Institut, M. Pasteur, has also addressed a letter to the Dean of the University of Bonn, renouncing the honorary diploma of Doctor which was conferred upon him by the University on the occasion of the jubilee of 1868.

Anthropological Institute of Great Britain and Ireland.—The loss of power consequent on the existence of two societies having a common object—viz., the "Ethnological Society of London" and the "Anthropological Society of London"—has ever been a matter of regret to all who are interested in the science of man. It has from time to time, therefore, been proposed that they should be amalgamated; and ultimately delegates from both Societies, having received full powers to negociate, met for the purpose of arranging the terms of union, which object was happily attained. It was at first suggested, and agreed to on both sides, that the amalgamation should be effected under the designation of "United Anthropological and Ethnological Society," both Societies thereby evincing a desire to unite on terms of equality. This title, however, being considered inconvenient, Professor Huxley, on behalf of the Ethnological Society, in consideration of the strong wish frequently expressed by members of the Anthropological Society that the word "Anthropology" should be retained, proposed the title of "Anthropological Institute of Great Britain and Ireland," which was unanimously adopted. The vice-presidents and council have been taken in equal numbers from each of the Societies now united, and their rules have been modified and adopted as those of the Institute. Among the officers have been included all those of either Society who were willing to retain office. The honorary members of each have been retained, and life compounders have been included with the other Fellows amongst the Members of the Institute. With the view of including within the sphere of the new Institute all those branches of science which lay within the province of either of the previously existing Societies, the council of the Institute wishes it to be distinctly understood that the term anthropology is not intended to be confined merely to the study of the physical structure of man, psychology, sociology, etc., but will include the several branches of ethnology and prehistoric archæology. Under the head of ethnology, the Institute invites contributions from travellers, geographers, naval and military officers, and the Fellows of the Royal Geographical Society, descriptive of the various human races which may come under their consideration; whilst under that of prehistoric archæology it expects to receive from archæologists and geologists communications especially relating to the study of the earliest condition of mankind. The council confidently believes that, under the new organisation, whilst both labour and expenditure may be much economised, the Institute cannot fail to attain to a greater efficiency than was possessed by either of the previous Societies; and that thus the study of the important sciences in which it is specially interested may be prosecuted with increased advantage and facility.

Murder of the Italian Boy.—Mr. H. B. Tuson has kindly forwarded us the following:—"It was my lot to have witnessed the results of the 'Burking' of the Italian boy. At the beginning of 1830 the formation of a museum was commenced for King's College, at the Hunterian School, Great Windmill-street. Herbert Mayo lectured upon Anatomy, and Mr. Tatum was Demonstrator. Here I witnessed scores of transactions between the dissecting-room porter and resurrectionists—Jack Phillips, Sullivan, Connor, etc., being notorious 'body-snatchers.' At the period here referred to, Mr. Partridge was busily engaged (assisted by your humble servant) in putting up preparations for the museum of King's College. Eventually the collection was transferred to 'King's,' and the Medical School was opened in October, 1831. Mr. Mayo lectured on Anatomy, Physiology, and Pathology; Mr. Partridge was Demonstrator; Mr. A. A. Cane was Curator, and I was his assistant. Bodies for dissection were only obtained through the agency of 'body-snatchers.' Wm. Hill was dissecting-room man. On a certain morning, Hill was waited upon by Bishop, Williams, May, and Shields, they having brought a body in a sack for disposal. The bag was emptied of its contents upon the stone floor of an open archway near the dissecting-room. Wm. Hill observed a certain red mark upon the upper part of the thorax of the body, which to him looked suspicious. He called my attention to it. I was too young to advance an opinion, and Wm. Hill at once made Mr. Partridge acquainted with what had occurred. Mr. Partridge (who at that time was living at Lancaster-place) promptly attended, and, from what he saw, felt convinced as to there having been foul play. The four men just alluded to were waiting (as they imagined) for payment. By-and-bye Mr. Partridge was brought into contact with these rascals, and I think I am right in saying Mr. Partridge adopted a *ruse* by saying he must get change of a note. Instead of returning with the money, Mr. Partridge brought with him some policemen. The four men were taken to Bow-street office. I was present at the first hearing. The men were tried and found guilty: Bishop and Williams were hung, May was imprisoned (he soon died), and Shields (a Covent-garden porter) was acquitted. The body of Bishop was brought to King's College; his bones were articulated, and the greater part of his skin tanned, and carefully preserved in the museum. The body of Williams was taken to Tuson's School, Little Windmill-street."

There is a French patent for entirely removing the smell from turpentine, and so forming a superior kind of camphine. It is effected by rectifying turpentine over tannin, which is said to remove all the resinous materials which give an offensive odour.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Furneaux Jordan.—The book is in the hands of the reviewer, and will be noticed as soon as possible.

Mr. Jas. Alex. Campbell, of Glasgow, was informed by an eminent oculist in London, some years ago, that even under circumstances apparently most favourable, every ninth or tenth operation for cataract failed of success.

E. S., St. Thomas's Hospital.—Mr. Sidney Chater, who, with his admirable wife as a lady nurse, has been all through the recent war, has just returned to England.

The examination papers for candidates for Assistant-Surgeoncies in H.M.'s army and navy comprise questions:—1. *In Anatomy and Physiology.*—The dissection of the internal maxillary artery; the structure, composition, and development of bone; the ossification of the femur; the anatomy of the os hyoïdes, and the parts divided by an incision in the face, from the eye to the lower jaw. 2. *In Surgery.*—The symptoms and treatment of congenital syphilis; of scirrhus of the breast; of traumatic aneurism; gangrene from compound fracture; hæmatocele; and ruptured brachial artery. 3. *In Medicine.*—Tubercular meningitis; diseased heart, and dropsy; cirrhosis of of the liver; ulcer of the alimentary canal; difficult labour; mineral acids. 4. *In Natural History* (voluntary).—Modifications of heart; crustacea; genus *equus;* tænia; hibernation; botanical terms and species: planets; thermometrics; volcanoes; coal mines. 5. *In Languages.*—Easy translation of French and German into English, and *vice versâ.*

Hahnemann.—What is homœopathy? A system of doing nothing, and taking a long time to do it.

Indignant.—The observations made by Baron Martin on the case of Spencer, Hayes, and Watson, at Durham, apply with double force to the case of Mr. Defriez, who was committed for manslaughter on the stuff that passes for evidence before a coroner's jury.

A Student.—The size of Dubois-Reymond's induction coil may be taken from the diagram in the lecture (the second of the two illustrations). The proportion between the size of the diagram and the actual size is about 1 : 1¾. The strength varies according to the battery employed. Dr. Sanderson uses two Stöhrer's cells. The induction coil can be made by Becker, of Elliott and Sons, St. Martin's-lane. It costs about two guineas.

Army Medical Unification.

(From a Correspondent.)

In the concluding paragraph of the article in the *Medical Times and Gazette*, 4th inst., penned for the summary disposal of the obviously impracticable "Suggestions for the Reorganisation of the Army Medical Department," by a Staff Surgeon-Major, a fear is expressed "that the delay in the appearance of the long-expected warrant for the Army Medical Service implies that the authorities do not yet see their way to remodelling the Department."

It has been long evident that the hesitation in divulging the general staff scheme has been due, not to a desire to gain time for its improvement, but to a wish to avoid the storm of opposition which the unofficial promulgation of its provisions drew forth; and it is now as well known that the same warrant is again on the eve of publication, advantage being about to be taken of the temporary confusion of all things military, which must of necessity exist during the period of transition from the old military establishment to the new condition of army reform, to force upon the Department, when its voice will be drowned in the Babel of grievances that must ensue, that scheme from which the large majority of Medical officers have hitherto so often, and, fortunately, so successfully, expressed their dissent.

Errata in Politzer's Lecture.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to correct two errors which came under my notice. The first is in the twentieth line of the second column. Instead of the words, "at the mouth" I should have written "*with* the mouth." The operation I refer to is performed as follows:—The tube end of Politzer's balloon is taken away from the bag, and after the instrument has been placed in the nose of the patient, the nose is closed with the fingers, and air blown into the pipe with the mouth the moment when the patient swallows.

The second error is that of having added the first article I sent you with the second on "Cicatrices of the Membrana Tympani." The former begins at the thirty-seventh line of the second column, and goes under the head of "Serous Accumulation in the Tympanic Cavity."

Vienna, March 12. I am, &c. Edw. Millingen.

Vaccination a Means of Spreading Small-pox.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It is a well-known fact that vaccinated people may have a modified form of variola without feeling any great amount of uneasiness, and yet be able to infect unprotected persons with variola in its worst and most fatal forms.

Last August, I attended a family of six, suffering from variola—three modified (vaccinated), two confluent (girls, unvaccinated), one distinct (boy, unvaccinated). The three former never laid up, but went about the house as usual; two of them, being children, actually played with their neighbours' children in the street, infecting some with the modified and others with the confluent and distinct. This they were permitted to do, although I had forbidden their parents to allow them to go out, pointing out to them the possible result, and was met with the reply—"Oh, let them get over it as we have to do." The three unvaccinated children in this house first took it from a neighbour's child, said by its Medical attendant to be suffering from chicken-pox. This shows how careful we ought to be in diagnosing between the two, and that it is better to err on the right or protective side.

These cases occurred in an eastern parish, which has since suffered severely, and were known to the parish authorities. An unvaccinated baby, aged six months, entirely escaped.

I am, &c., Gratia Gratiam Parit.

⁂ The parish authorities ought to have proceeded against the persons who exposed themselves.

Vaccination and Revaccination in Glasgow.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your number of March 11, Dr. Dunlop gives his experience in regard to vaccination and revaccination in Glasgow.

He first states that the vaccinations in infants are more successful than usual, the vesicles being more numerous, plumper, more pearly, and accompanied by a greater amount of local and constitutional disturbance. Now, with regard to this assertion, I must state that in the many cases coming to the Dispensary (2100 annually) the results are by no means more successful than usual. If vaccinators find that they now get better results than formerly, it is entirely due to the greater care taken in the selection of vaccine lymph. In no case have I ever failed in obtaining good results where the lymph was taken from perfectly healthy children and from thoroughly characteristic vesicles. Concerning "revaccination," let me state that I pity the poor subjects who accept a few scratches and diluted lymph as a sufficient protective against small-pox. This practice is extensively carried on here, the results being very unsatisfactory, and so far as concerns the patient the effect is void.

On several occasions diluted lymph has been used in vaccinating infants. Vesicles were produced, but in many cases the lymph taken from them failed to produce any effect in children operated on. If, therefore, such lymph fails in a primary operation, how can we expect to protect adults sufficiently by its use?

To render revaccination something else than a sham and money-making dodge, every Practitioner should take the same care to insure success as he would in a primary operation. It were better to abolish revaccination entirely than make people believe they are protected by the shadowy performance at present so widely practised. In due time such a practice will in a very great degree tend to shake the faith of the people in the protective power of vaccine lymph, and will throw discredit on the whole system of vaccination. If Practitioners cannot obtain a sufficient supply of good vaccine lymph, let them do without it rather than by a mean deception send their patients forth still unprotected. I am, &c.

Murdoch Cameron, M.B., C.M.,

Glasgow, March 15. Physician to University Lying-in Dispensary.

The Wine Trade.

The following is a quotation from a letter by Mr. Shaw which appears in the City article of the *Times* of Wednesday:—

"In 1843 you inserted the first of a series of letters urging the reduction of the duty on all wine to a uniform rate of 1s. per gallon. In 1852, owing to the uncertainty and the agitation which had been roused, Mr. Disraeli could not resist granting a Parliamentary Committee on the question, as the revenue was suffering, but with the well-known desire of stopping all hope of a change, aided by the pen of one writer, who much troubled the revenue guardians and the great body of wine merchants. In 1860, Mr. Gladstone being Chancellor, the wedge was got in, but only to a slight depth.

"The ignorance at that time on the part of the Revenue Boards about the strength of natural wine, was such that the highest limit was supposed to be 18° of alcohol, and accordingly this was allowed to be entered at a shilling. The consequence was such a stoppage of trade that it was soon altered to 26°, at which it has since stood.

"The objection first assigned was, that if strong kinds were admitted at a low rate, the revenue from spirits would be injured by these being distilled. The alarm, however, was shown to be groundless, not only by calculations, but even by practical experiments. It is fair to admit that this question of alcohol in wine is difficult, but the members of the Board of Customs are, and have ever been, 'stop-gaps' to all progress.

"While offering these remarks, and advocating the uniform shilling, I believe that if most of the principal port and sherry houses were consulted, they would prefer the retention of the high duty on their importations. They were opposed to the reduction from the old rate of 5s. 9d., desiring no changes and trying to put down agitators. The rich firms of Rheims and Epernay, in their splendid palaces, did not like the change, which enabled numerous small capitalists to enter into competition against them. It would not be very difficult, but would occupy far too much of your space were I to show that the high duty acts as a practical monopoly, even in these branches of the trade, apparently open to anyone. Among all kinds of wines there are everywhere a few which will fetch exceptional prices; but in every noted wine district there are large quantities that are good, and cost little. The opponents of my proposal for a shilling duty used to prognosticate that the French would raise their prices, and put the benefit of our reduction in their own pockets; but so entirely has it been the reverse, that I am not afraid to say that, owing to the increased competition, equally good wine can now be got in many parts of France at from 30 to 40 per cent. less than was formerly charged under the high rate of 11s. 6d., instead of now 2s. per dozen.

"On the other hand, sherries are more than twice as dear, and not nearly so good, and only a small proportion of the importation is now grown in the Jerez district. Ports are also much dearer, and the consumption last year was only 2,947,028 gallons, with a population of 30,838,210, while it was 2,879,608 gallons with 24,500,000 of population in 1830. Were, then, the shilling rate on the wines of those countries, weak or strong, supplies would soon come from all quarters of qualities to suit the palates and the pockets of every class, and we would then see wine one of the most important articles for extent of trade, for revenue, and for a health-giving beverage.

"Cape is certainly not in high repute, but after encouraging its growth for forty years, the reduction of the duty on other kinds has absolutely ruined the growers.

"It is frequently stated by brokers and others, in their circulars, that the wine trade is increasing satisfactorily, but I venture to express an entirely opposite opinion, for, although the consumption is now double what it was previous to the reduction of 1860, the trade and wealth of the country have increased immensely, and the population, instead of being as then about 29,000,000, is now 2,000,000 more, while the total consumption per head per annum does not exceed three bottles.

"The following table exhibits, in a condensed form, the history of the wine trade from January 1, 1856, to December 31, 1870. To make it still more correctly understood, it is well to remark that in the consumption (duty-paid) last year, Spanish was 5,149,757 gallons white, chiefly shipped from Cadiz as sherry; and 849,568 gallons red, mostly from Catalonia. From France there were 3,108,884 gallons red, chiefly shipped *viâ* Bordeaux, and therefore called claret, and 1,048,488 gallons white, the great proportion of which is sparkling wine, almost all called Champagne.

"Of the total consumption of 15,168,304 gallons, 8,085,850 are white and 7,081,454 red.

Year.	Spanish.		Portuguese.		French.	
	Gallons.	Per Cent. of Total.	Gallons.	Per Cent. of Total.	Gallons.	Per Cent. of Total.
1856 to 1859 (average)	2,783,831	39·58	2,201,305	30·99	600,932	8·55
1864 . .	4,974,112	43·41	2,832,217	24·76	2,304,242	20·11
1868 . .	6,181,588	46·38	2,853,470	20·58	4,501,931	23·59
1869 . .	6,300,338	46·90	2,820,956	18·20	4,061,538	22·75
1870 . .	6,269,325	41·3	2,947,028	19·4	4,157,372	27·4

Year.	All other Kinds.		Total Consumption of Gals.	Population.	Bottles per Head.	Revenue. £
	Gallons.	Per Cent. of Total.				
1856 to 1859 (average)	1,505,978	20·88	7,092,046	28,200,000	1 4-10	1,900,000
1864 . .	1,346,144	11·72	11,456,715	29,674,320	2 3-10	1,319,261
1868 . .	1,615,752	9·54	15,151,741	30,400,000	3	1,521,194
1869 . .	1,657,326	11·55	14,840,158	30,760,000	3	1,512,122
1870 . .	1,794,579	11·8	15,168,304	30,838,210	3	1,537,199

⁂ The moral is, that the wholesome wines of France are slowly displacing the brandied compounds of Spain and Portugal.

COMMUNICATIONS have been received from—

Mr. J. McCraith; Mr. Rigden; Mr. J. A. Campbell; Dr. Gee; Dr. John Dixon; Mr. J. C. Brough; Dr. Edwards-Crisp; Dr. Archer Farr; Mr. Furneaux Jordan; An Intending Candidate; Mr. Metcalfe Johnson; Mr. J. Comyns Leach; Dr. J. N. Vinen; Dr. T. Stevenson; Mr. C. F. Maunder; Dr. John Whitmore; Dr. Cossar; Dr. Millingen; Dr. Cameron; Dr. J. Burdon-Sanderson; Mr. J. Chatto; Mr. H. Arnott; Dr. Carter Blake; Dr. B. W. Richardson.

BOOKS RECEIVED—

Dr. C. A. Wünderlich on the Temperature in Diseases: a Manual of Medical Thermometry, translated from the German by Dr. W. B. Woodman—Animal Plagues: their History, Nature, and Prevention, by George Fleming, F.R.G.S.—Transactions of the Obstetrical Society, vol. 12—Dr. C. C. P. Clark on the Management of the Obstetrical Forceps—James G. Curtis, jun., on the Working of the Contagious Diseases Acts at Cork and Queenstown—Rapport sur l'Ambulance de l'Ancien Corps Legislatif—Report of the York Lunatic Asylum, 1870—Journal of the Scottish Meteorological Society—Dr. Clouston on the Action of Neurotic Medicines in Insanity—Subject and Object, as connected with our Double Brain, by R. Verity—Maunsell's Dublin Practice of Midwifery, edited by Dr. T. M. Madden—The American Practitioner, vols. i. and ii.—Dr. Whitmore on the Effects of Recent Sanitary Legislation on the Health of the Metropolis, and on our present urgent Sanitary Needs.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—Pharmaceutical Journal—The Dublin Express—The Wisbeach Chronicle—Gazette Hebdomadaire—New York Medical Gazette—Indian Medical Gazette—The Liverpool Mercury—The Brighton Examiner—Medical Press and Circular—Chemist and Druggist—The Liverpool Daily Courier.

APPOINTMENTS FOR THE WEEK.

March 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Association of Medical Officers of Health, 7½ p.m. Dr. Robert Druitt (President), "On the Status of Medical Officers of Health, as modified according to the Report of the Sanitary Commission."

Royal Institution, 3 p.m. Mr. O'Neill, "Spirit of the Age."

20. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Mr. Jabez Hogg, "On Cataract and its Treatment by the Semilunar Corneal Incision." Dr. Andrew Clark will narrate some Cases of "Perityphlitis" and exhibit a Case of "Peribronchial Fibrosis." Dr. Sansom, "Case of Scarlatina and Variola co-existent."

Social Science Association, 8 p.m. Dr. Guy, F.R.S., "On Vagrancy: its Nature, Causes, and Cure, with Special Reference to Recent Legislative Efforts bearing upon it."

21. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Dr. Payne, "Cancerous Growth in Veins and Endocardium; Suprarenal Capsules, etc., from a Case of Addison's Disease." Mr. Spencer Watson, "Cystic Epithelium removed from the Cheek." Dr. Wickham Legg, "Glandular Tumour growing on the Outside of Jejunum." Dr. Clapton, "Atrophy of the Cerebellum," etc., etc.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

22. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's 1½ p.m.; Ophthalmic, Southwark, 2 p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Hunterian Society, 8 p.m. Dr. Thompson Dickson, "On Epilepsy"

Royal College of Physicians, 5 p.m. Croonian Lectures—Dr. Parkes, "On some Points connected with the Elimination of Nitrogen from the Human Body."

Society of Arts, 8 p.m. Meeting.

23. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

24. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Clinical Society, 8½ p.m. Dr. Duffin, "Case of Roseola Variolosa." Mr. Christopher Heath, "On a Case of Complicated Stricture of the Urethra treated by Mr. Syme's Operation for Impermeable Urethra." Mr. Teevan, "The Treatment Adopted in a Case of Retention from Impassable Stricture." Dr. Broadbent, "Phosphorus as a Remedy in Skin Diseases."

Royal College of Physicians, 5 p.m. Lumleian Lectures—Dr. West, "On some Disorders of the Nervous System in Childhood."

Royal Institution, 9 p.m. Prof. Clerk Maxwell, "Colour."

EXPECTED OPERATIONS.

London Hospital.—The following Operation will be performed on Saturday (this day) at 2 p.m.:—

By Mr. Maunder—Ligature of the Subclavian Artery.

Hospital for Women.—The following Operation will be performed on Saturday (this day) at 9½ a.m.:—

By Dr. Meadows—Ovariotomy.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 11, 1870.

BIRTHS.

Births of Boys, 1141; Girls, 1120; Total, 2261.
Average of 10 corresponding weeks, 1860-69, 2155·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	835	766	1601
Average of the ten years 1860-69 . . .	761·2	728·7	1492·9
Average corrected to increased population .	...	...	1642
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	20	1	5	2	17	...	3	1	4
North ...	618210	72	3	12	5	14	1	2	...	3
Central ...	383321	9	2	4	1	6	...	...	...	1
East	571158	41	2	5	...	17	3	1	6	1
South	773175	52	6	28	1	13	1	9	...	6
Total	2803989	194	14	51	9	67	5	15	7	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·788 in.
Mean temperature	46·3°
Highest point of thermometer	57·2°
Lowest point of thermometer	33·7°
Mean dew-point temperature	39·9°
General direction of wind	S.W.
Whole amount of rain in the week	0·47 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 11, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Mar. 11.	Deaths Registered during the week ending Mar. 11.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2261	1601	57·2	33·7	46·3	7·94	0·47	1·19
Portsmouth ...	125464	13·2	77	35	58·2	34·2	46·9	8·28	0·24	0·61
Norwich	81787	10·9	70	40	56·0	32·0	44·9	7·17	0·38	0·97
Bristol	173364	37·0	123	80	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	66	20	54·8	34·4	45·3	7·39	0·39	0·99
Birmingham ...	378574	48·3	290	174	62·8	31·5	46·2	7·89	0·59	1·50
Leicester	101367	31·7	69	57	56·7	31·0	45·3	7·39	0·40	1·02
Nottingham ...	90480	45·3	55	35	63·5	35·9	46·3	7·94	0·30	0·76
Liverpool	526225	103·0	409	414	56·7	37·9	46·2	7·89	0·31	0·79
Manchester ...	379140	84·5	285	195	...	...	...	...	...	...
Salford	123851	23·9	93	59	55·5	32·5	44·5	6·95	0·39	0·99
Bradford	148030	22·5	127	68	61·0	36·6	45·4	7·44	0·51	1·30
Leeds	266108	12·3	260	123	62·0	36·0	46·1	7·83	0·52	1·32
Sheffield	255247	11·2	171	96	56·0	35·5	45·8	7·66	0·56	1·42
Hull	135195	38·0	76	62	59·0	30·0	44·3	6·84	0·31	0·79
Sunderland ...	103037	31·2	129	51	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	120	56	55·0	37·0	44·1	6·73	0·36	0·91
Edinburgh	179944	40·6	113	79	56·7	39·0	46·8	8·22	0·70	1·78
Glasgow	477627	94·3	372	319	56·0	35·1	45·4	7·44	1·61	4·09
Dublin (City, etc.†)	322321	33·1	204	176	56·7	33·0	46·2	7·89	0·52	1·32
Total of 20 Towns in United Kingd'm	7336941	34·4	5370	3740	63·5	30·0	45·6	7·58	0·50	1·28
Paris—Week ending Mar. 10	1889842	98	...	2993	...	...	...	...	...	...
Vienna—Week ending Feb. 25 ...	622087	68	...	...	...	...	...	...	...	...
Berlin—Week ending Mar. 11 ...	800000	52	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·79 in. The highest was 30·21 in. on Thursday morning, and the lowest was 29·42 in. on Monday afternoon.

The general direction of the wind was S.W.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

LECTURES DELIVERED IN THE PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P
Professor of Practical Physiology.

LECTURE V.—ON THE ARTERIAL MOVEMENTS.

In my last demonstration, we studied the most important of the methods employed for the purpose of measuring the arterial pressure during life in the lower animals. I pointed out to you that, of the various instruments in use for this purpose, one only—viz., the C-spring kymograph of Professor Fick—is available for the complete investigation of the complicated succession of variations of arterial pressure which constitutes a pulsation. For, for this investigation two things are necessary—viz., first, that we should be able to determine the mean pressure as compared with that exercised by a mercurial column of known height; and, secondly, that we should possess the means of ascertaining with accuracy the extent and duration of the arterial expansions and contractions. The ordinary mercurial kymograph which we used last Saturday completely fulfils the first of these requirements, but not the second. Another instrument which we are going to study to-day answers the second purpose, but not the first. It measures the duration and extent of the arterial movements with considerable accuracy, but affords us no exact information as to the arterial pressure.

OBSERVATION XX.—CONSTRUCTION OF THE SPHYGMOGRAPH, AND METHOD OF GRADUATING IT.

The sphygmograph is now so well known that I do not think it necessary to describe it particularly. Its most essential part is the spring, which, by its mode of attachment to the frame of brass, is maintained in a fixed position with reference to the bones of the wrist and forearm. When the instrument is in use, the end of the spring, or rather the ivory plate with which it is covered, presses on the artery and receives its movements. To amplify these movements a light wooden lever (A A'), of the third order is used, which is supported by steel points (C). There is a second lever of the same order (D E) which has its centre of movement near the attachment of the spring (at E). It terminates in a vertical knife-edge (D), and is traversed by a vertical screw (T). When the extremity of the screw (N) rests upon the spring above the ivory plate, every movement of the plate is transmitted to this lever (D E), and, by means of the knife-edge, to the wooden lever (A A'). The purpose of the screw (T) is to vary at will the distance between the wooden lever and the upper surface of the spring, without interfering with the mechanism by which the movement is transmitted. As the distance between the steel points (C) and the knife-edge (D) is much less than the length of the lever, the oscillations of the extremity of the lever (A') are much more extensive than the vertical movements of the spring. The lever ends in a metal point, which writes on a glass plate blackened by passing it rapidly backward and forward through the flame of a spirit-lamp trimmed with paraffin.

FIG. 16.

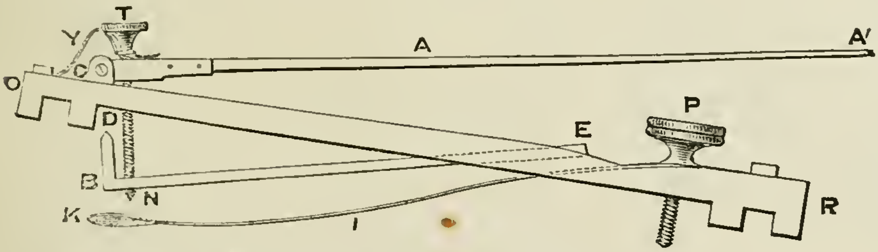

FIG. 16.—Frame of Marey's sphygmograph in profile, showing the arrangement of the levers. (Explanation given in the text. The spring Y is not used.)

The theory of the sphygmograph is simply this. The arterial tube being compressed between the immovable surface of the radius and a spring, the bearing of which is in a fixed position in relation to that surface, it is supposed that it performs movements corresponding exactly with the variations of the diameter of the artery, which are transferred in a magnified but otherwise unaltered form to the lever. As regards the relative and actual duration of the movements, we shall find that this is strictly true. As regards their extent, it is true only in so far as the lever follows the movements of the spring with exactitude, and, as the strength of the spring—that is, the pressure exercised by it on the outer surface of the artery—is adapted to the antagonistic pressure exerted by the blood-stream on the internal surface, and to the movements which it is intended to measure.

The theoretical determination of the relation between the pressure of the spring and its effect on the artery to which it is applied, involves physical questions of very great complexity. I need only touch upon them so far as is needful to explain the empirical solution of the problem on which the use of the sphygmograph as a means of research is based. The instrument has now been many years in the hands of medical men, but has hitherto been of little practical use, chiefly because few are willing to take the trouble which is requisite either to understand the principles of its action or the mode of its application.

The easiest and shortest way of accomplishing the purpose we have in view is the comparison of hypothetical cases. To facilitate our understanding of the subject, let us call the position which the spring takes when left to itself its equilibrium-position; and as regards the artery, let us designate a plane parallel to the surface of the skin, and touching the surface of the artery, when most dilated, the plane of expansion, and a plane in similar relation to it, when least expanded, the plane of contraction. It is evident that, if the sphygmograph accomplishes its professed end completely, the under surface of its spring will coincide with one of these planes at the moment of the pulse, and with the other during the interval. The question is, How ought the spring to be set in order to obtain a movement which shall approach this standard of perfection as nearly as possible? We may proceed one step towards answering this question without difficulty. The position of the sphygmograph must be such that the under surface of the spring either coincides with the plane of collapse or lies within it—*i.e.*, nearer the axis of the artery—for otherwise, it will be affected by the arterial movement only during a part of its extent, remaining for the rest of the time motionless. This being understood, we may proceed to compare three possible cases, viz.:—1. The case in which the equilibrium-position of the spring coincides with the plane of collapse; 2. The case in which it lies nearer to the axis of the artery; and 3. The case in which it lies so far beyond it, that the vessel is either constantly or during its period of contraction flattened against the bony surface.

Let us first suppose that the equilibrium-position of the spring coincides with the plane of contraction. The excursion of the spring begins from that plane, but stops short of that of expansion by a certain distance. If we call this distance n, we have the excursion of the artery greater by n than that of the spring. Let us now compare this with the second case, in which we advance the spring so that its equilibrium-position lies (we will say) as far within the plane of contraction as it did before within that of expansion. Under these circumstances, its excursion will begin at a position nearer to that of equilibrium than before, for an artery yields more in contraction than in expansion. The diminution of its extent by the increased pressure of the spring due to its more advanced position, will, in most instances, be very inconsiderable—*and the more inconsiderable, the greater the arterial pressure.* Hence, as a rule, a larger excursion is obtained in case 2 than in case 1, but the difference between them depends on the mean arterial pressure, being greatest when the pressure is least, and *vice versâ*. The third case is that in which the pressure of the spring is so great that the artery, at the period which corresponds to the diastole of the heart, is flattened against the bone. When this happens, it is easy to understand that just as, when the pressure is insufficient, the spring is motionless during diastole, because it does not reach far enough, so here it is motionless during the same period, because it rests against a rigid surface; and thus we have an explanation of the fact, which at first sight seems rather surprising, that the tracings obtained with excessive and defective pressure are very similar to each other in their general characters.

Let us now see what we have learnt by these comparisons. The professed purpose of the sphygmograph, as I have said, is to obtain on the moving glass slide a true delineation of the successive changes of diameter of the artery. To arrive at this result, the spring must be so set that the ivory plate on its under surface is at such a distance from the opposed surface of bone that the artery is pressed upon at all degrees of expansion, yet not so strongly pressed upon as to bring its walls into contact even when it is relaxed. Within these limits the variations of form of the tracing—in other words, its departure from truth—are very inconsiderable; so that observations made on the same individual at different times yield closely corresponding forms. As, however, the results obtained by strong pressure are less subject to accidental error than those obtained with weaker ones, there is good reason for adopting the rule which I have written on the board, in all cases: In making a sphygmographic observation, always begin with a pressure sufficient to flatten the artery; then weaken the spring until the effects of over-compression disappear—*i.e.*, until you find that the lever continues to descend until the very end of diastole.

So far, I have considered our instrument merely as a means of writing the actual movements of the radial artery. In its original form, this was all that it was intended to accomplish. Soon after the instrument came into my hands, in 1866, it appeared to me that something might be done to render it available, not only for recording arterial movements, but for the much more important object of obtaining a rough measurement of arterial pressure. Clearly, it could not be made into a kymograph—that was out of the question; but methods which fall far short of absolute accuracy are, in clinical Medicine, often of the greatest value, provided the information they give is reliable so far as it goes.

We have already seen that if the spring is so strong that the artery is either entirely or partially flattened against the surface of the radius, the fact is indicated by the cessation of motion of the lever during the periods of compression. It is not difficult to understand that the strength of spring required to bring about this result is, at all events, approximately dependent on the pressure by which the artery is itself distended. The question, therefore, is—first, to devise a means of varying the tension of the spring by some readier contrivance than that of Marey; and, secondly, to measure the variations of pressure. Both ends are accomplished by the arrangement I show you, which is now usually adopted in this country by those who employ the sphygmograph for clinical purposes. (See explanation of figure.)

The brass frame, instead of being bound on to the arm by bandages, rests firmly on the bones of the wrist (particularly the scaphoid) by a plate of brass, the under surface of which is covered with ebonite. In the middle of the upper surface of this plate is a socket for the reception of the point of a finely-cut screw, which revolves in it freely. Above, the screw ends in a milled head (Y), between which and its point it passes, first, loosely through a guide, which is of the same piece with the brass-plate; and, secondly, through a hole in the end of the brass frame of the sphygmograph (Fig. 18, F), in which it fits closely. This being the construction, it is scarcely necessary to explain that by turning the milled head the distance between the ebonite surface and the frame is varied according to the direction of revolution, and that in this way the pressure on the artery may be readily modified when the instrument is in use. The extent of the modifications thus produced, however, still remain undetermined, for they vary according to the form of the limb and the relative position of the arm and forearm at the time of observation. To measure them we must have recourse to another method which is at once simple and accurate. It is obvious that, provided that the spring is firmly and immovably fixed in its place, the pressure which it makes against any object pushed against it from below is determinable by the force which is exerted in pushing it. If, for example, I place the instrument upside down, and place a weight of 200 grammes on what was before the under surface, now the upper surface, of the spring, I push it back some fraction of an inch from its position of equilibrium, and learn that, whenever it is pushed back to this extent, the pressure it exerts on the surface opposed to it is that of 200 grammes' weight. Repeating the experiments with a series of other weights, I can in a similar way obtain other measurements of distance corresponding to them, and thus, by combining the results, accomplish the graduation of the spring in such a way that the pressure made by it can be always known from the extent of its deflexion. The most convenient way of determining this deflexion is either to measure the distance between the head of the steel screw, the point of which rests on the upper surface of the spring, and the surface of the brass lever with a scale (as shown in Fig. 17), or, better still, to have the screw itself graduated. In either case, care must be taken to fix the writing lever in the proper position (*i.e.*, in a direction which coincides with the direction of movement of the writing surface) before making the measurements.

Fig. 17.

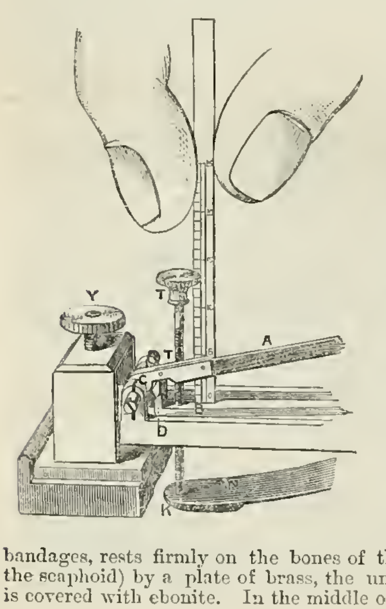

Fig. 17.—Dr. Sanderson's modification of M. Marey's sphygmograph. The frame is supported at the end nearest the hand by a block, which rests on the wrist, as described in the text. By turning the screw Y, the distance between the under surface of the spring K and that of the frame D can be increased or diminished, and the pressure exerted by the spring on the artery modified in either direction, according to the rules to be given further on. After each observation, the pressure actually employed must be ascertained by measuring the distance between the edge of T and the upper surface of B, and comparing the measurement with the graduation table which belongs to the instrument.

Fig. 18.

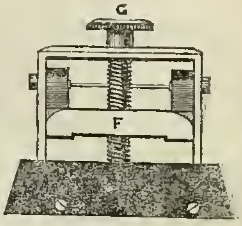

Fig. 18.—Front view of the same.

I have entered somewhat fully into these particulars, because it is in general desirable that every observer should graduate his own instrument. Let me add that, in buying a sphygmograph, care should be taken to see that the spring is adapted for its purpose. It must be of such strength that, when fully deflected, it makes a pressure of not less than 400 to 450 grammes on the artery, and must be so fixed that any pressure between 80 grammes and the pressure already mentioned can be obtained. The usual fault is that the spring is not strong enough, in which case the instrument is useless for the most, if not the only really, important purpose to which it is applicable in diagnosis—namely, for observations relating to the hardness of the pulse; in other words, for judging approximately of the arterial pressure.

Observation XXI.—Method of Demonstrating the Mode in which the Arterial Movements are Produced by Experiments with the Schema.

We are now prepared to go on to the study of the results obtained by the sphygmograph, which we shall best do by first investigating the phenomena of pulsation as they present themselves in an artificial artery; that is, in a schema in which water is projected at intervals along an elastic tube under conditions similar to those which exist in the circulation. The apparatus, you see before you. A number of similar contrivances have been described, from the well-known simple schema of Weber, which I also show you, to the elaborate apparatus of Marey. My apparatus does not, in its external form, in the least resemble a heart and arteries; but this is not of the slightest importance, provided that the physical conditions of the circulation are imitated.

The heart consists of a tube, closed at the upper end, and connected at the lower end by two branches—on one side with a cistern, at a level of some eight or ten feet above this table; on the other with the experimental tube which represents the arterial system. These communications are controlled by valves fixed at opposite ends of a horizontal bar in such a manner that the same act which closes the one must necessarily open the other. Of these valves, the one represents the semilunar the other the auriculo-ventricular valves of the heart. By means of a spring (shown in Fig. 19 to the right of D), when the apparatus is not working, the former is kept closed, the latter open. Under these circumstances the water rises, as you see, into the tube, compressing the column of air which it contains in a proportion which is determined by Marriotte's law. If, as in the present instance, the pressure is about one-third of an atmosphere, the volume of the enclosed air is diminished in the proportion of 2 : 3, and so on. When, by depressing the opposite end of the lever, the aortic valve is opened, and the mitral closed, the compressed air suddenly expands, and forces on the water which the tube contains into the aorta. We shall see, when we come to consider the modes of contraction of the heart, that the above is as close an imitation as could be made by any artificial means. Just as, when the heart contracts, it compresses its contents most energetically at the outset, while its force rapidly diminishes towards the end of the systole, so here you observe that the most rapid movement of the column is at the first moment after the depression of the lever.

Fig. 19.

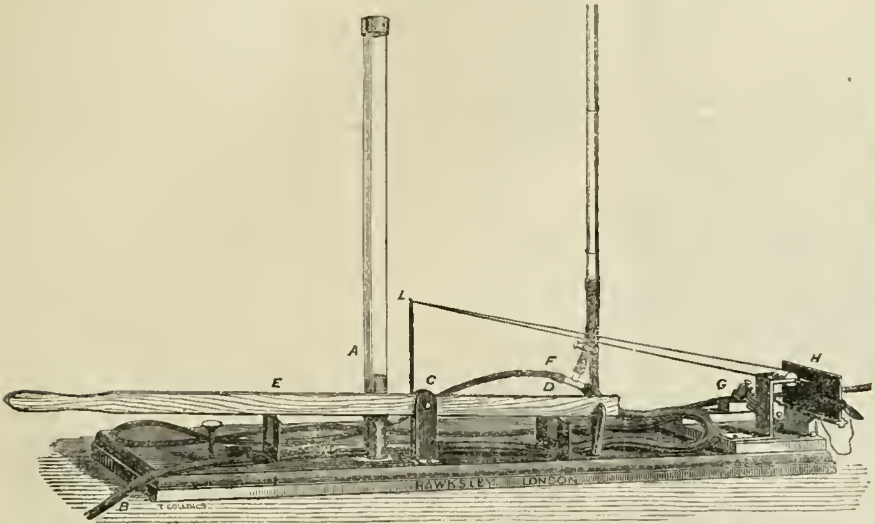

Fig. 19.—Dr. Sanderson's schema for demonstrating the nature of the arterial movements. A, glass tube which represents the heart. B, the tube by which A communicates with a cistern at a height of ten or twelve feet above it. (A much smaller head of water is sufficient.) C, the lever by which the two valves E and D are worked, the same act which shuts the one opening the other. F, commencement of the experimental tube, which is of black vulcanite. At F the tube communicates with a long vertical tube of glass, only part of which is seen; it is closed at the top, and usually shut off from F by a pinchcock. At G the tube passes under the spring of the sphygmograph, the frame of which rests on a block (below G). By error, the tube has been drawn on the wrong side of the block. H, the blackened plate of the sphygmograph. To the left of it is seen the cylinder with its needle for recording the time which intervenes between the opening and closing of the aortic valve, D. L, a rod which is firmly fixed in the lever, and is connected by two cords, one of which is elastic, with the cylinder.

The arterial tube, as you see, passes under the spring of the sphygmograph, at the distance of about a metre from its commencement, and is continued for two or three more metres, finally ending in a receptacle for waste. The first experiment I propose to make has for its object to show you that the wave which is produced in this tube, just as it is in the artery, is not, as one might expect, a mere expansion followed by a corresponding contraction, but that it consists of a complicated succession of expansive and contractile movements, which are always of the same nature.

Here is the artificial pulse we have just made, and there is the natural one taken from the living radial. There are, of course, differences, but they present the same general characters. It will much simplify the description of them if I may call the tube the artery, and may at the same time take for granted that we understand *elevation* of the lever to mean *expansion* of the tube, and *depression*, *contraction*, and if we adopt a phraseology based on this assumption.

Fig. 20.

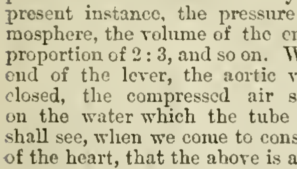

Fig. 20.—An artificial pulse-tracing.

Fig. 21.

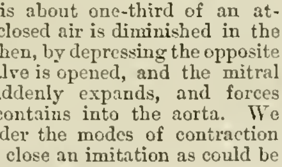

Fig. 21.—A natural pulse-tracing.

You see at once that the opening of the aortic valve determines a sudden expansion of the artery; that so long as the heart continues to act the vessel remains full; that the cessation of the injection of liquid from behind determines a contraction of the artery, which is as rapid as the previous expansion. Next you observe that the artery has no sooner accomplished its contraction than it begins a second expansion inferior to the first, both in extent and rapidity, and then finally contracts, continuing to get smaller till the aortic valve again opens. Let us for the moment confine our attention to the first expansion and the contraction which immediately follows it. The meaning of these movements and their immediate causes have been much disputed. With the schema, dispute is impossible; for the mechanism which represents the heart is under our control, so that we may vary the mechanical conditions in any way that seems likely to serve the end either of research or illustration. No one doubts, of course, what the general meaning of the expansion is. It, however, presents one character in the tracing which does not strictly belong to it. As I have already stated, the artery, like the natural heart, contracts with greatest vigour at starting. Consequently, the expansion of the artery is very sudden at the outset, diminishing in its rate as it goes on—at first gradually, subsequently more rapidly—until it ceases. If the lever followed this movement precisely, it would describe a curve nearly corresponding to that which would be described by a heavy body projected vertically into the air, if the motion of such a body could be transferred to a sheet of paper or other surface progressing horizontally at a uniform rate. You see plainly enough that this parabolic form is not distinguishable in the tracing actually obtained. The reason is, that the lever receives such an impulse at the moment that the expansion begins, that it rises of itself considerably higher than it would do if it closely followed the artery. But soon its *vis viva* is exhausted, and it falls back—often, however making one or two oscillations before it resumes its true relation to the arterial surface.(a)

Fig. 22.

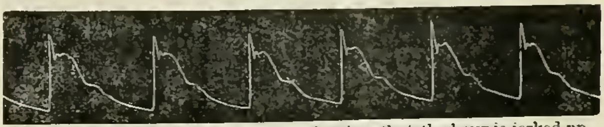

Fig. 22.—Tracing of a natural pulse, showing that the lever is jerked up at the beginning of the expansion. The true tracing would be obtained by connecting the angle at the commencement of the ascent with the first notch.

The next step is to show that the descent of the lever means the cessation of the heart's action. To demonstrate this, I use an apparatus which I will now describe. Its purpose is to write on the plate of the sphygmograph the duration of the contraction of the artificial heart. It consists of a cylinder of boxwood (see

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(a) The accuracy of this explanation has been fully demonstrated by the researches of Mach, who has modified Marey's sphygmograph by connecting the spring with the writing lever, not by an intermediate lever and knife-edge, but by a vertical arm having a hinge joint at either end. In tracings taken with Mach's sphygmograph, the so-called hook produced by the jerking upwards of the lever is got rid of, and a curve is obtained, which closely approaches the true one. (See Fick's "Medicinische Physik," p. 148.)

Fig. 19), the steel axis of which rests horizontally on bearings so placed that the cylinder revolves in a direction at right angles to that of the movement of the plate at a short distance from it. From one side of the cylinder a steel needle projects, which, when the cylinder turns, makes a mark on the smoked surface. Round one side of the cylinder runs a cord of spun silk, the two ends of which stretch, one from either side of it, to the point of a vertical arm (L); this arm springs from the wooden lever already described, by which the valves are opened and shut. Of the two cords, the upper one is rendered partly elastic by the interposition of a short length of caoutchouc. You see that, so long as the aortic valve is closed, the needle remains in contact, but the moment I open it, it is withdrawn, and I obtain, first, an upper horizontal line, broken at regular intervals—which are, of course, limited in time by the opening and closing of the aortic valve—and, secondly, a pulse-tracing, which may be compared with it. This exact correspondence between the length of time the heart is acting, and the time which elapses between the beginning of the expansion and the commencement of the contraction, affords evidence that the latter is dependent on the former.

Fig. 23.

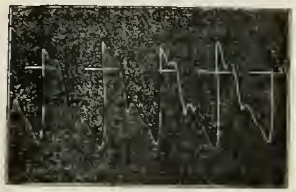


Fig. 23.—Tracing obtained with the schema. The spaces between the horizontal lines correspond to the periods during which the aortic valve remained open Each coincides with the interval between the commencement of the ascent and the beginning of the following descent of the lever.

We now pass to the second expansion. How does it happen that the artery, having once contracted, does not remain so? The answers to this question are various, but with our schema, and with other experimental methods which are applicable, we can readily show that, of all the supposed causes of the phenomenon, which is commonly known as dicrotism, one only is possible.

It has sometimes been advanced that the second expansion is merely a result of mechanical peculiarity in the instrument employed to demonstrate it. The easiest and shortest way of negativing this supposition is the substitution of other methods of demonstration for the sphygmograph. For this purpose, I have attached to our artificial artery a vertical gauge, closed at the upper end. (See Fig. 19, F.) When I open the aortic valve, and allow the heart to discharge itself, the liquid rushes into the tube, and compresses the air it contains. If you will watch the column closely while I make a succession of pulses, you will see plainly that each is dicrotous—that the column rises, falls, rests for a moment, rises again, and finally subsides, just as the instrumental tracing does.

Another experiment, which is equally conclusive, has been lately suggested by Landois. I place on my wrist, over the radial artery, a little flat metal box as large as a crown-piece, and twice as thick. One side of the box (that next the artery) is formed of thin vulcanite cloth, so that the whole forms a tympanum. Its interior communicates on one side with a fine gas-jet; on the other, with the gas-tap by an ordinary connecting-tube. The edge of the tympanum rests, by padded projections, on the bones of the wrist and forearm, and a button of cork is interposed between the artery and the caoutchouc membrane, so as to communicate the motion of the one to the other. If, then, I allow a very feeble stream of gas to pass into and out of the tympanum, and light it at the orifice, you will see that the flame rises and falls rhythmically with the pulse, and that each rise is followed by a second one, inferior to it in height.

Having thus satisfied ourselves that dicrotism is a character which necessarily belongs to the pulse, we may go on to consider its cause. The first point to demonstrate is, that it has nothing to do either with the closure of the aortic valve or the cessation of the contraction of the heart. If, by opening both valves at the same time, I produce a continuous current, and then close the aortic valve, the sphygmograph having been previously applied to the artery, the sudden cessation of the current declares itself by a contraction, the parabolic curve of which is uninterrupted—there is no dicrotism. If I reverse the experiment, and suddenly admit the stream by simultaneously opening the aortic and mitral valves, and keeping them open, the artery expands at the moment I do so, and remains expanded; but the first ascent is immediately followed by a second.

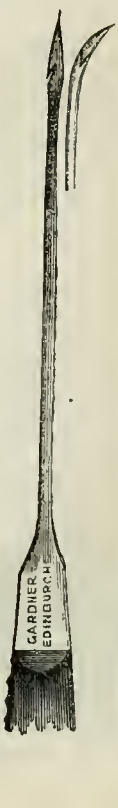
Whatever may be the cause of the phenomenon, it is plainly connected, not with the closing, but with the opening of the current—with the diastole, not with the systole, of the heart. In other words, the second expansion is a postponed result of that disturbance of pressure-equilibrium which is produced in the arterial system at the moment that the heart contracts, independently of any subsequent movement or action of the heart itself. Before inquiring further into the nature of this disturbance, or the mode of its operation, we must study another point which has not yet been touched upon—that of the apparent postponement of the pulse—the fact that the pulse is felt at the wrist considerably later than in the carotids, and later in the posterior tibial than at the radial. We shall see in the next lecture that the meaning of this is, that the smaller and more distant arteries attain their greatest distension more slowly than the larger and nearer ones; and that the reason why the radial pulse is felt later than the carotid is not so much that its expansion begins later, as that it culminates more gradually.

ORIGINAL COMMUNICATIONS.

OPERATIONS FOR VAGINAL FISTULÆ.

By LAWSON TAIT, F.R.C.S.E., etc.

There is certainly no advance in Surgery of which we may be more justly proud than that by which, of late years, we have been able to relieve the terrible suffering entailed by a vaginal fistula. The operative measures for the cure of this affection are not yet complete, and they are still somewhat open to the objection made to them in 1855 by a very distinguished Surgeon, who wrote that this condition "enables us to consign to the Surgical arsenal as curiosities a great variety of instruments, no longer of use, but which will remain as testimonials of the efforts of modern Surgery to cure or relieve a miserable state." Many of the instruments invented for the operation for vesico-vaginal fistulæ have been terribly ingenious, and correspondingly expensive; but none of them that I have yet seen can accomplish any feat which simpler means cannot affect. No complicated wire twister can do what the fingers can; and none is so safe, because no apparatus can appreciate tension. Portes-aiguilles are cumbrous, and seldom effective, while they are always costly. None of the many complicated needles invented for this, and the kindred operations for cleft palate, can, as far as I have seen, do what the two simple needles figured below can; and as I have always made it a rule in my own practice never to use a special apparatus to do what can be effected by one of more ordinary purpose, I make no apology for pressing these on the attention of those who have to perform such operations. One is the ordinary tubular needle of Simpson, which, in making a stitch, I always introduce first by the left hand. I then make slight traction on the wire, so as to lift its loop up from the point of the needle, and, introducing the other needle through the other flap, opposite the first, the wire is easily caught in its notch, and the stitch completed. The mechanism of this second needle is, I fear, too simple to be a novelty in Surgery; but as I have not yet seen a description of it, or of its application to the operation for fistula or cleft palate, whilst I can find an abundance of more complicated and less effectual instruments, I venture to claim it as an original suggestion. In my paper on the "Treatment of Cleft Palate" in the *British and Foreign Medico-Chirurgical Review* for August, 1870, I have figured it, of smaller size, amongst a set of instruments adapted for staphyloraphy, and in that operation I have found it of signal service. In the case of a very small fistula, or one high up in the vagina, these needles are of great service, for a little practice enables one to insert a stitch by their means without any of those preliminary threads or double loops which formerly added to the tediousness or irksomeness of the operation. The absolute certainty, too, which the two needles give of the



points of insertion for each stitch being exactly opposite is a great recommendation for their use. My experience of them has been as yet limited to two cases, but in these they served me so well, and under somewhat trying circumstances, that I believe they will be found equal to any emergency.

Case 1.—B. C. was confined of her fifth child, in June, 1868, and was allowed, by an unqualified Practitioner, to remain thirty hours in acute labour. She was ultimately delivered by the long forceps by Mr. Secker, of Wakefield. I saw her with Mr. Secker, a few days afterwards, for an attack of metritis, and I gave it as my opinion that some sloughing would probably take place, and a fistula form, if she survived the process. Three weeks later I again saw her, and found that a large slough had separated from the lip of the uterus and anterior wall of the vagina, but the tissues were still in such a state that none but palliative measures could be employed. Six weeks later I again saw her, and found that, in spite of the use of the catheter, there remained two fistulæ—one, the larger of the two, being almost within the os uteri, and another, little more than a perforation, about three-quarters of an inch lower down. On September 24, I pared the edges of the lower opening, and inserted easily three stitches, close together, by means of the two needles. From the position and size of the fistula I could not, of course, see the points of the needles; but it will be easily understood that it is not necessary to see them. I removed the stitches on October 4, pared the edges of the other opening, and inserted five stitches. These were removed on the 14th, and a complete cure was effected. During these operations, I had the kind assistance of Messrs. Secker, Horsfall, and Whiteley.

Case 2.—M. S., aged 17, was confined of an illegitimate child in May, 1868, and is supposed to have been two or three days in labour. It is worthy of notice that many cases of fistula occur in unmarried women, and it is due no doubt to their attempts to conceal their condition. After her labour, M. S. passed through what she called a fever, and, when she got well, found that her water constantly drained from her. After many months of suffering, she was placed under my care by the author of it, and I found that she had a small fistula immediately below the anterior lip of the os uteri. It would not admit a sound, and its position was only ascertained after the injection of milk into the bladder. Owing to the fact that the poor girl would not allow anyone to see her but myself, I had to operate on her without chloroform, and with the assistance of her mother alone, who held the duck-bill speculum for me. I pared the edges of the fistula, or rather cut it out in the midst of a piece of mucous membrane, and inserted two stitches. These were removed in fourteen days, aud a perfect cure resulted.

It is very pleasant to record successes, but failures are much more instructive. I therefore narrate (3) the case of ———, a patient of the late Dr. Whitworth, of Heckmondwike, near Bradford. She, too, had "happened a misfortune," as they say in Yorkshire, and had been several days in labour. The resulting sloughing must have been terrible, for she never menstruated after her confinement; and I never could determine the presence of a uterus by examination either by rectum or bladder. On passing the finger into what had been the vagina, and of which the opening seemed all that was left, the finger went at once into the remains of the bladder—a *cul-de-sac* about the size of a plover's egg, in which the papular orifices of the ureters could be felt. About three-quarters of an inch of the posterior wall and the whole of the urethra was left; nothing else but hard cicatricial tissue and an opening into the rectum three-quarters of an inch long could be determined. I must confess I was puzzled what to do; but, on careful consideration, I determined to try to close the rectal fistula, and if I succeeded in this, I should then have closed the orifice of the vulva, and made the whole remnants into a bladder. It is more than possible she would not have submitted to this, for, incredible almost as it may seem, I was given to understand that she still exercised some sort of sexual functions. What these were I am at a loss to understand. On December 8, with the assistance of Drs. Sykes and Whitworth, I pared the edges of the rectal fistula and inserted four stitches. At my visit on the 15th, I found them all torn out, but from what cause I could not ascertain. I repeated the operation, however, and left strict injunctions that no solid food was to be given; half a grain of opium to be given every night, and the gut to be very gently washed out with warm water night and morning. On the 22nd I found that, while the opiate had been regularly administered, my other directions had not been attended to, and I was on that account not surprised to see masses of scybalæ forcing themselves through the much-enlarged fistula, and the whole thing a wretched failure. Dr. Whitworth was very anxious that I should try to take a flap from "somewhere"; but, even if I had tried Jobert's elytroplasty, I did not see where I was to attach the flap after having got it; nor had I any security that it would remain undisturbed. I therefore declined to interfere further in the case; and I had the satisfaction afterwards of learning that several others who tried their hands at the unthankful work were no more successful.

Birmingham.

A NEW OPERATION FOR ENTROPIUM.

By JAMES McCRAITH, F.R.C.S.,

Surgeon to the British Hospital, Smyrna.

I know of no cases in Surgery more annoying to both patient and Surgeon than those of entropium, and of its lesser degree, trichiasis. This disease depends essentially on the contraction produced by a cicatrix. It is perfectly analogous to stricture of the urethra. The original cause of both, muco-purulent inflammation of a mucous membrane. The epithelium is shed; the inflammation attacks the basement membrane; ulceration of this must exist (the cicatrix is a proof thereof); in the lids a state of "granular lid" is produced, which ultimately ends in cicatricial contraction, and, according to its extent and position, produces inversion of the whole row of cilia, or of one or more. In the urethra, after the continuance of chronic gonorrhœa, most certainly depending on an analogous state to granular lid, the result is stricture. In every case of entropium or trichiasis, on everting the lid a cicatrix is always apparent, the contracted tissue drawing in on the eyeball either the entire row or one or more of the cilia, according to the extent and position of such cicatrix.

There are some few cases of temporary entropium, as of temporary stricture, depending on spasm, or temporary swelling, or puffiness of the lid, in which such cicatrix, of course, does not exist. But the real disease has, as its anatomical cause, this cicatricial contraction, and is always preceded by the state known as granular lid. The same in the cases of true stricture.

Some years since, in conjunction with the late Dr. Wood, of this city, I took great interest in diseases of the eye, and this disease, in its various degrees, is very common here, as everywhere else; we performed together all the various operations mentioned or recommended by ophthalmic Surgeons in such cases. First, the removal of a horizontal fold of skin, calculated according to the extent of the disease and quantity of skin existing in each case. This procedure I found was more effectual when the fold was removed as close as possible to the diseased margin of the lid, and, at the same time, the muscle was removed to the same extent, so as to expose the cartilage; and in the place of stitching the parts together, as recommended by authors—on the contrary, we prevented such union by the application of cupri sulphas, making the parts heal slowly, so that the lower border, or tarsal border of the wound was slightly turned up in the process, in order to meet the upper edge of the wound.

This modification gave occasionally good results, but was uncertain, and, on the whole, unsatisfactory, and was a painful operation.

Secondly, in cases of complete inversion of the whole range of lashes, we divided vertically, at inner and outer canthus, the tarsal cartilage in its whole extent (avoiding, of course, the puncture at inner canthus), and then passing a ligature at inner and outer angles, we turned up the entire cartilage, fixing it by strips of adhesive plaster on the forehead, as recommended by the Dublin Surgeon. This occasionally had a greater or less success, but on the whole was not satisfactory. When combining it with the first-described operation, the result was more satisfactory—the operation more painful, of course. This also uncertain and unsatisfactory.

Thirdly, we have attempted, by laying bare the cartilage, to slice away with a very sharp knife the bulbs of the cilia lying imbedded in the cartilage. This is a difficult proceeding, and cannot be easily done effectually—leaving a deformity even if successful, which was rarely the case. Fourthly, when two or three only of the lashes were turned in, we removed a triangular or quadranglar piece of the cartilage, sufficiently deep to include the bulbs and offending lashes. As it is really the cartilage which is in fault, this was effectual; but, on healing of the wound, the neighbouring lashes occasionally took a wrong direction, and gave trouble. Still this generally is a useful proceeding.

The preceding was pretty much my practice and experience in these troublesome cases, when, a few months since, a young Turk (age about 24) presented himself with complete entropium of left eye. The entire row of cilia were regularly all turned in, and swept the eye. He was a soldier, but discharged on account of the state of his eye. It was the result of purulent or muco-purulent ophthalmia, which existed in a chronic state for more than a year. Here some effectual measures were necessary, as otherwise the ultimate loss of the eye was certain. Upon turning up the lid, the cicatrix (result of muco-purulent ophthalmia and granular lid) was apparent, running along the entire extent of cartilage, parallel to border, and about a line and a half distant from it. For this state of affairs, I had no confidence in any of the usual operations as described above. Upon considering the case, it occurred to me that the cartilage, being the seat of the cause, must be the part treated. I saw also that the incisions of this part as usually practised were on a wrong principle. The vertical incisions must leave the contraction in each section or part just as it found such contraction; whereas, if an incision were made parallel to the border, and between the latter and the cicatrix, the border must by such incision be freed, and will naturally resume its normal direction. Upon explaining this view to my son, Dr. J. P. McCraith, he agreed in it; and as the present case, where all the row of lashes were turned in, sweeping the eye, appeared very suitable for the new procedure, I put it in practice. Turning up the lid, I made a horizontal incision parallel to the border, and about on a level with the seat of the bulbs, including the whole extent, or very nearly, from one canthus to another, avoiding the duct at inner canthus; and, making another incision parallel to the first, I removed a narrow slip of the cartilage, less than the twelfth of an inch in breadth. The result was most promising; the border of the lid and the row of cilia immediately resumed their natural direction. I was quite pleased with the immediate result; none of the many hundreds of operations I had performed myself or seen performed by others were so satisfactory. The ultimate result also was perfect; and as the gap made is never repaired by cartilage, but by a membrane which would leave the border of the lid free, I expect that the result will continue perfect. I have succeeded by the old operations in relieving patients for a year or more, and yet eventually the result was unsatisfactory. I very much wish that the present operation, which I believe to be quite a new one, may be taken up by some one with an extensive ophthalmic practice, who may approve of it, and so put it to the test of experience. Judging from this single case in my hands, it promises much.

Smyrna.

ON THE ACCUMULATION OF SERUM IN THE TYMPANIC CAVITY—DIAGNOSIS AND TREATMENT.

By Mr. EDWIN MILLINGEN,
Clinical Assistant to Dr. A. Politzer, University Lecturer in the General Hospital, Vienna.

CATARRH of the mucous membrane of the tympanic cavity is a disease of frequent occurrence, and it has been noticed that this affection in some cases gives rise to an effusion of serous exudation, which, owing to its consistency, cannot escape into the fauces through the narrow outlet of the Eustachian tube. Accompanying opacity of the membrana tympani may prevent the Surgeon from forming a diagnosis by mere objective inspection. If, however, the membrane is normal in its transparency, not only may the fluid be detected, but its movements easily followed: a phenomenon first observed by Dr. Politzer.

The appearance of the membrana tympani depends on the quantity of fluid contained in the cavity.

1st. Appearance of the membrane when the fluid does not occupy the whole tympanum.

On inspecting the membrana tympani, it will be noticed that the handle and short process of the malleus is reddened, and that a sharp dark line crosses some part of the membrane: this is the line bordering the surface of the fluid. It is self-evident that the membrane will possess a different appearance on either side of the line, not only because the colour of the serum can be discerned through that part of the membrane lying in immediate contact with it, but also because the same fluid acts as a light-refracting body, and thus tends to increase the contrast with that part of the membrane on the other side of the line, behind which there is no fluid. The line of demarcation between the two spaces may be compared to the line bordering the surface of some liquid in a transparent vessel. The colour of the part through which the fluid is seen is of a greyish yellow, with a slight greenish tint in it. The usual triangular spot may be brighter and more uneven, and occasionally a second or third spot may be seen on the upper part of the membrana tympani. The position of the fluid may be changed, and this is done by moving the patient's head. Obeying the laws of specific gravity, the fluid runs into the deepest parts of the tympanic cavity. For this reason it may happen that the fluid, which was seen clearly when the patient holds his head upright, disappears totally or partially when he stoops his head downwards and somewhat sideways, so as to allow the serum to run towards the ostium tympanicum of the Eustachian tube. Bubbles are sometimes seen through the membrane; but this is more likely to be the case after air has been forced into the cavity.

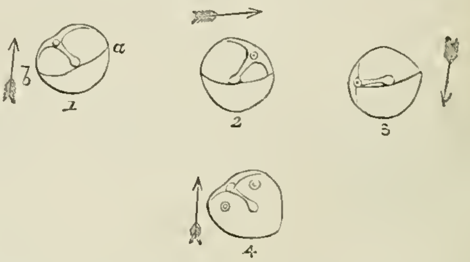


FIG. 1.—Head in upright position (left ear), position of the fluid marked by the line from *a* to *b*. FIG. 2.—Head leaning backwards; and in FIG. 3, head stooping forwards. FIG. 4.—Bubbles at the place where they usually make their appearance after air is forced in the tympanum through the Eustachian tube.

Apart from the visible changes on the membrana tympani, another very interesting phenomenon is worthy of attention.

In all cases of ear disease, when the labyrinth is normal, a vibrating fork, placed on the saggital suture, is sure to be heard louder and more distinctly in the ear which is least capable of receiving outward sounds. Now, it often happens, in cases of serous accumulation in the tympanum, that the watch is heard but faintly when the head is kept upright. As soon, however, as the head is turned downwards, the watch is at once heard louder. If a vibrating tuning-fork is placed at the same time on the saggital suture, it will be noticed that when the watch is heard distinctly, the sound of the tuning-fork is perceived faintly, and on another movement of the head, the watch is heard indistinctly or not at all, and the tuning-fork very loud. But when we take into consideration the various intellectual powers possessed by different patients met with in practice, we must expect that a great percentage will not be competent enough to determine such slight variations in the delicate perception of sounds. These variations, according to the laws of sound, must exist, and illustrate very forcibly the fact that obstructions to outward sounds act at the same time as obstacles to the escape of vibrations transmitted from within, and that, for this simple reason, the tuning-fork placed on the head is heard better with a diseased ear when the tympanic cavity alone is the seat of the affection. People affected with this complaint have a feeling of fulness in the ears. They also experience a temporary diminution or amelioration in the power of hearing, and this may often depend on the position of the head. Some say they hear better when they are lying on their back, and others when they are stooping forwards. Another feeling that some patients complain of is that there must be some movable body in the ear. Noises are not constant.

2ndly.—When the whole tympanum is full of serum, the whole membrane is shining, and of a transparent bottle-green colour; there is a peculiar glassy look about it, which, when once seen, can never be forgotten. The functional disorders in such cases are much greater, and noises are more often complained of.

It is not always that patients present themselves when suffering under the immediate effects of the catarrh, but the secretion may nevertheless be present. The presence of such exudation is highly injurious to the mucous membrane lining the tympanum. Hyperæmia, which is manifested by reddening of the handle of the malleus, is more or less present, and as it takes a chronic form, it leads to the new formation of connective tissue in the mucous membrane, thus causing hypertrophy, which extends to the mucous membrane covering the articulations of the ossicula. Their movements are thus interfered with, and considerable deafness is the result. Hence the prognosis is not very favourable in cases of long standing, and depends on the degree of functional disorder. But, on the whole, there is no disease of the ear whose symptoms are so characteristic, and whose treatment is followed by such good results.

THE CENSUS OF 1871.

The following is an extract from a very interesting circular from the pen of Dr. W. Farr, circulated by authority of the Registrar-General. We feel sure that our readers will do all they can to comply with the Registrar-General's concluding request:—

"A knowledge of the facts about the English people is in itself useful and gratifying to a liberal curiosity; precisely as is an acquaintance with the plants and minerals and animals of the world, and the stars of the heavens, whose 'multitudes' have been numbered by scientific men.

It is, moreover, well established that the relations of men to each other, and all their acts, are governed by universal laws, which can be deduced from the observations of which the census supplies the most essential part. Some of these laws are too recondite for casual discussion, but the doctrines of population and of life insurance may be referred to as of obvious importance.

The area of these islands is limited, and it is a matter of no small interest to know how many people there are to be fed, at what rates they are increasing, and how they are likely to increase by subsisting marriages; how many are dependent on the several kinds of industry, deriving materials from the produce of the soil, or from the wider fields of foreign commerce. The census supplies answers to all these questions, and, with other facts, shows how population is increased or diminished by marriages at different ages, by the different species of industry, and by emigration to our vast colonial possessions.

The numbers of fighting-men, as well as intelligence and wealth, determine the position England holds in the presence of the other great Powers of Europe; and are the measure of the influence which it can exert in the cause of freedom all over the world. The census displays to her enemies the force invaders have to dread, and to friendly States, the numbers of their friends in England.

The first census was taken under Mr. Pitt's administration in 1801. It was the year of the union with Ireland; a year of famine, and a year of sanguinary war with France having the Northern Confederacy for its allies. England in 1871 will take her census in peace.

The population of Great Britain was estimated at 7,392,000 in 1751. Manufactures and the large towns increased, but emigration was commencing, and some country villages were deserted, in the last half of the century. Dr. Price contended that there was an absolute decay of the population. This gave rise to a protracted controversy, which, in the critical state of the country, it was important to clear up. The population of Great Britain was hence enumerated in 1801, and amounted to 10,834,623, which, with that of Ireland, made above 16,000,000. This was a triumphant reply to the doubts of those who despaired of their country.

Notwithstanding the war, the population increased, as the census showed, at the rate of two to three millions every ten years until 1841. Then immense emigrations took place; there was a depopulating famine in Ireland, which had an imperfect poor-law, and cholera was epidemic; yet the population of Great Britain increased, and although the population of Ireland fell off, the enumerated people of the United Kingdom, including the islands in the British seas, amounted to 27,724,849 in 1851, and to 29,321,288 in 1861.

Since those dates there have been great emigrations; but the marriages have increased, the births have exceeded the deaths, and the mortality of the towns has been diminished by sanitary measures. An increase of the population may be expected; but its extent, and the particular classes which have increased or declined, in towns or in the country, can only be determined by the census to be taken on April 3.

The 'number of souls,' in the expressive language of the old writers, will then be known, and will remind the nation of the extent of the institutions for the advancement of education, religion, and justice, required to keep pace with its numbers.

The information which the census supplies admits of innumerable practical applications. It is required for determining the state of the public health; and, by pointing out the variations in the rate of mortality, and the intensity of diseases under different circumstances, will lead to the removal of the real causes of national suffering and decay. . . . .

The census was taken by the legislators of antiquity; it is now carried out in every civilised country. But the English census has in it some peculiarities. It has no connexion whatever with rates and taxes. There is nothing approaching to a poll-tax, and no one has anything to dread from the census inquiries. There is no conscription in England, the services by sea and by land being filled by volunteers. The inquiry elicits no real secrets, as the information asked of each man is known approximately to all his acquaintances; and even in the delicate matter of years numbered by gentlemen, or even by ladies, it is found that, although many may look, they are seldom thought, younger than they are, even by their friends; so that to tell the truth is the right and the prudent course to pursue. . . . .

If the influential classes of society will expend a portion of the interval between this date and April 3 in explaining the measure, in disseminating information among the poorer classes, and in persuading them, or even aiding them, to furnish exact returns, the operation will undoubtedly be as successful as it was in 1861, when the census was taken without the infliction of a single fine under the penal clauses of the Act of Parliament."

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	Week ending					
	Feb. 18.	Feb. 25.	Mar. 4.	Mar. 11.	Mar. 18.	
	Cases.	Cases.	Cases.	Cases.	Cases.	Sent to Hospital.
West—						
Chelsea	10	12	?	?	?	—
St. George, Hanover-square	28	14	16	7	19	11
St. Margaret & St. John, Westm'str.	100	47	30	27	?	—
St. James, Westminster	14	8	3	3	8	3
North—						
St. Pancras	?	64	62	69	63	?
Islington	36	31	62	23	34	9
Hackney	?	30	36	41	31	14
Central—						
City of London	?	20	22	17	13	3
St. Giles-in-the-Fields	?	10	5	10	?	—
Holborn	14	5	2	3	3	2
St. Luke's	?	?	20	27	18	10
East—						
Whitechapel	31	31	34	32	15	?
Poplar	?	?	9	?	?	—
South—						
St. Mary, Newington	25	8	16	19	?	—
St. Olave, Southwark	?	4	2	9	1	—
St. George-the-Martyr, Southwk.	?	3	?	17	5	3
Bermondsey	?	20	15	?	?	—
Lambeth	18	28	12	28	33	28
Clapham	?	5	28	17	29	7
Battersea	?	14	?	13	?	—
Wandsworth	?	5	4	?	3	?
Putney	—	—	—	1	?	—
Streatham	?	?	1	?	2	?
Camberwell	?	5	26	14	13	7
Greenwich	?	—	2	?	?	—
Lewisham	?	2	1	16	2	?
Plumstead	?	4	1	1	4	—

REPORTS OF HOSPITAL PRACTIC

FURTHER HOSPITAL EXI

By T. SPENCE

Surgeon to the Queen's Househ

(*Contin*

THE NUMBERS IN ORDINARY TYPE (322) GIVE THE CASES IN MR. WELLS'S ENTIRE PRACTICE, BOTH HOSPI

No.	Medical Attendant.	Date of Operation.	Age.	Condition.	Duration and Progress of Disease; Measurement.	Previous Treatment and Tappings.	Uterus: Situation, Displacements, Mobility, and Length of Cavity. Catamenia.	Diagnosis.
322 .... (cxlix.)	Mr. Thompson, Nottingham	June 9, 1869	23	Married 4 years; 3 children; eldest 4½ years, youngest 16 months	After last confinement remained large; increased in size very gradually; distinct fluctuation around and at right side of umbilicus; superior and inferior epigastric veins dilated; tenderness in right hypochondriac region; liver pushed upwards to fifth rib; apex of heart in fourth intercostal space, one inch inside nipple; great emaciation; anæmic; girth 39 inches	Five tappings between Sept. 2, 1868, and May 28, 1869 (last tapping); 15 pints of thick, ropy, neutral fluid, sp. gr. 1022; large and small colloid corpuscles in state of fatty decay	Oct., 1868: Uterus high, free; sound only passes 1½ inch; os open; cervix short and soft. No tumour in pelvis, but lower segment felt through fornix behind symphysis pubis. Catamenia irregular for last 12 months	May, 1869: A large c above and to the rigl semi-solid below; a ha nodulated mass behi uterus, felt both by vagi and rectum, pressing ut rus forwards; moveme of upper part of tumo distinctly visible
328 .... (cl.)	Dr. Peacock, Gloucester	June 23, 1869	41	Married 25 years; 4 children; youngest age 19	Eighteen months; girth 37 inches; œdema of legs and abdominal wall	Never tapped	Large, retroverted; 4½ inches; true pelvis free. Catamenia regular	Ovarian cyst, chiefly u locular
329 .... (cli.)	Dr. Wyse, Rostellan, Cork	June 30, 1869	27	Married 8 years; 4 children; 3 stillborn at 7 months and 1 abortion at 4 months	Began to increase after birth of first child 7 years ago; girth 34 inches	Never tapped	Anteflexed; 3 inches; no tumour in true pelvis. Catamenia regular	Adherent multilocul ovarian cyst; extreme hard in some parts
334 .... (clii.)	Dr. Thomas, Nottingham	Oct. 6, 1869	32	Single	Two years; gradual slow increase; girth 37 inches	Never tapped	Normal. Catamenia regular	Free cyst; chiefly ur locular
336 .... (cliii.)	Dr. A. P. Stewart	Oct. 27, 1869	43	Married 19 years; never pregnant	Increase began 18 months before; rapid last 3 or 4 weeks; girth 46 inches; anasarca	29 pints of ovarian fluid removed from peritoneal cavity on Oct. 16, 1869	Normal. Catamenia ceased 18 months	Ovarian cyst burst in peritoneal cavity
337 .... (cliv.)	Dr. Smith, Weymouth	Nov. 3, 1869	26	Single	Three years; slow, painless increase; girth 37 inches	Never tapped	Normal. Catamenia regular	Ovarian cyst, chiefly un locular
340 .... (clv.)	Mr. Davis, Brentford	Nov. 10, 1869	46	Married 9 years; never pregnant	Eighteen months; rapid increase; girth 38 inches; œdema	Once tapped, 6 months before operation; only a little viscid matter escaped	Normal; anteflexed ...	Ovarian tumour; chroni peritonitis; temperatur 102·8
341 .... (clvi.)	Mr. Hunter, Pontypridd	Nov. 24, 1869	29	Single	Slow increase for more than 4 years; girth 37 inches	Never tapped	Small; 2½ inches. Catamenia regular, but with great pain	Ovarian cyst, chiefly uni locular
342 .... (clvii.)	Mr. Webster, Bristol	Dec. 8, 1869	35	Single	Slow increase for about a year; girth 35 inches	Never tapped	Normal; 4 inches. Catamenia regular	Free ovarian cyst ... ..
344 .... (clviii.)	Mr. Tayloe, Clapham-common	Dec. 15, 1869	51	Married 21 years; 9 children; youngest 8 years old	About 2 years; slow increase till last 2 months—then rapid; girth 46 inches	Once tapped, Nov. 25, 1869; 19 pints of ropy fluid, with mucin-colloid	Pressed high up above pubes, by tumour filling Douglas's space. Catamenia ceased 2 years	Multilocular cyst—proba bly of both ovaries—closely connected wit uterus

N MEDICINE AND SURGERY.

IENCE OF OVARIOTOMY.

VELLS, F.R.C.S.,

d to the Samaritan Hospital.

om p. 189.)

NO PRIVATE; THOSE IN ROMAN NUMERALS (CXLIX.) GIVE THE SERIES OF HOSPITAL CASES ONLY.

Operation.						Progress after Operation: Temperature, Pulse, Respiration, and After-treatment.	Result.	Date of Discharge and Subsequent History.
Situation and Length of Incision.	Adhesions.	Pedicle.	Hæmorrhage.	Which Ovary Removed.	Description of Tumour.			
tween umbilicus nd symphysis ubis; 5 to 6 ches	Parietal, omental, and broad band to left iliac fossa; extensive pelvic adhesions	Clamps first used to both pedicles, then ligatures; the ends brought out, and clamp removed	From adhesions; very troublesome	Both	Trabeculated, proliferous colloid cystoid; walls extensively affected by fatty metamorphosis; chambers containing colloid lymph and blood (12 pints); weight 9 lb. 13½ oz. The nodulated mass in pelvis had all the microscopic characters of medullary cancer	Restless; feeble pulse, rising to 150; laudanum; brandy and champagne	Died 27 hours after operation	No post-mortem
dway between mbilicus and mphysis pubis; inches	None	Short; left side; tied in two portions, and ligatures returned	Scarcely any ...	Left	17 pints fluid; 1 lb. 3 oz. solid; thin-walled proliferous cyst, with very large veins	Gradual rise of temperature to 104·6, pulse to 130, with pain and vomiting; opium and belladonna	Died 62 hours after operation	Post-mortem: Blood dark and fluid; dark turbid serum in pelvis; acute peritonitis limited to pedicle and around ligature; intestinal canal obstructed by adhesions at acute angles of coils of intestine near pedicle
tween umbilicus id symphysis ubis; 6 inches	Parietal and omental	Three distinct cords included in same clamp	Little blood lost; several omental vessels tied	Left	18 pints fluid; 5 lb. 9 oz. solid; much fat, hair, bony plates, and teeth	No bad symptoms; occasional opiates	Recovered	Left Hospital 26th day; had a living child in March, 1870
tween umbilicus id pubes; 4 ches	None	Broad, short pedicle; circular clamp	Hardly any ...	Left	16 pints fluid; 1½ lb. solid; thin-walled, vascular, proliferous cyst	Some sickness and tympanites, relieved by morphia and atropine	Recovered	Left Hospital 23rd day
tween umbilicus id pubes; 6 iches	None; free fluid	Circular clamp (which cut), and ligature fastened to it	Scarcely any ...	Left	16 pints fluid; 4 lb. 6 oz. solid; multilocular, colloid, cystoid	Went on well, but free serous discharge continued from lower part of cicatrix	Recovered	Left Hospital 22nd day; a year after operation a fibro-plastic growth removed from cicatrix. In good health March, 1871, but discharge continues
ual situation; 4 iches	Parietal and omental	Small clamp, excluding Fallopian tube	Scarcely any ...	Right; small cyst in left punctured	20 pints fluid; 17 oz. solid; large, thin, vascular cyst, with small intra-mural cysts	Some bleeding from vessel in abdominal wall 3 hours after operation	Recovered	Left Hospital 23rd day
ual situation; inches	Parietal and intestinal	Thick and broad; large clamp	Some oozing from separated adhesions	Left	20 pints fluid; 3 lb. 15 oz. solid; proliferous cystoid; walls lined by lymph and pus	Gradual rise to 109·8, and 136	Died 26 hours after operation	Post-mortem: A little dark serum at bottom of Douglas's space; heart distended *by* dark clot.
ual situation; inches	Very broad attachment in left iliac fossa and between uterus and rectum	No pedicle; cyst dissected out, and many vessels tied; all ligatures brought outside; rectum injured	Very free	Left	18½ pints fluid; 11 oz. solid; non-striated muscular fibres in cyst-wall	Rise to 103·4 and 160; drainage tube, beside ligatures, followed on third day by fæcal discharge; free purulent discharge, not fæcal, from 16th to 30th day	Recovered	Left Hospital 50th day quite well.
ual situation; inches	None	Short; large clamp; vessel behind clamp tied	3 to 4 oz.	Right	13 pints fluid; 10 oz. solid; single cyst; rest of ovary healthy	No bad symptoms ...	Recovered	Left Hospital 23rd day.
ual situation; inches	To omentum and intestine	Clamp and galvanic cautery; 2 ligatures on vessels not closed by cautery	Very little ...	Both; fused into one tumour	12 pints fluid; 14 oz. solid; one large cyst, and several groups of smaller	Much vomiting on 5th, 6th, and from 8th to 12th day; very free suppuration, and slow cicatrisation of incision	Recovered	Left Hospital well, 33 days after operation.

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Medical Times and Gazette.

SATURDAY, MARCH 25, 1871.

THE SMALL-POX EPIDEMIC.

There appears to be no doubt now that the epidemic is in process of declining in the metropolis, slowly, but steadily, the deaths registered during the four weeks ending Saturday, March 18, being 227, 213, 194, and 185. All the districts, except the East, have partaken in last week's decline; but in the East the mortality has again increased to 61. In Liverpool we learn that the mortality has increased to 103. The annual death-rate from small-pox was equal to 3 per 1000 last week in London, and to 10 per 1000 in Liverpool. The health officers' return of public cases shows that small-pox is still severe in the Northern districts, and that it has increased in Lambeth and Clapham, and in St. George's, Hanover-square. For the first time the return from Whitechapel shows a marked diminution in the number of fresh cases.

THE SMALL-POX HOSPITALS AT HOMERTON.

There are two permanent establishments located by the Asylum Board at Homerton: the one was from the first destined as a Hospital for small-pox; the other was intended as a fever Hospital, but this also, during the pressure of the present epidemic, is being occupied by small-pox patients. We took an opportunity of visiting both of them one day last week. The district is one which few beside East-enders and philanthropists know much about, and the site selected for the Hospital is not altogether the best conceivable for such a purpose, although it is probable that it was the best that the Asylum Board could command in the north-east of London. The objections to it are—that the Hospitals stand nearly on a level with the Hackney-marshes, and are surrounded by a dense population of poor persons. In respect of poverty, we learn that the parish of Homerton stands pretty much in the same position as the better-known parish of Bethnal-green. The space of land at the command of the Asylum Board was eight and a half acres, and on this the two Hospitals have been erected. Within about forty feet from one of the fever pavilions stands the north wing of the East London Union Workhouse, a portion of which is used as a lying-in ward. Within fifty or sixty feet of the wards of the Fever and Small-pox Hospitals are densely-populated small houses, and a mission-house and chapel. The only direction in which the walled-in site is at all open is the north; but even here building is in progress, so that in a very short time the selected area will be closely surrounded by dwellings that may be expected to interfere with the free circulation of air about the Hospital buildings. We cannot help saying that, in our opinion, the Board, having settled upon this site, would have done better had they purchased the land up to the roadways on the east and north, demolishing the dwellings now upon it, and adding the space thus obtained to the airing-grounds of the institutions. When it was first known that a Small-pox and Fever Hospital were to be erected here, there arose a considerable amount of alarm, and we understand that the guardians of the East London Union at one time contemplated applying for an injunction to restrain the Asylum Board from proceeding with their project. However, they thought better of it; and, now that the Hospitals are opened, the neighbourhood has quieted down to bear that which is unavoidable.

About two-thirds of the eight and a half acres area on the north are devoted to the Fever Hospital premises, which are separated by a light iron railing from those of the Small-pox Hospital. The two Hospitals are under separate administration—the former being superintended by Dr. Collic, formerly Assistant Medical Officer of the London Fever Hospital; and the latter by Dr. Wm. Gayton, formerly of Bethnal-green. Some of the arrangements in the two institutions are very similar; but as the buildings are not erected precisely upon the same plan, we shall have to give a separate account of each. Both are constructed of brick, and make no pretension to architectural display. We have mentioned the fact that the space of land allotted to the Fever Hospital is larger than that allotted to the Small-pox Hospital. Perhaps the best mode of making the arrangement of the blocks of which it consists intelligible, in the absence of drawings, will be to say, in the first place, that there is a long corridor running from east to west, from which the several Hospital pavilions are entered; and that from the centre of this corridor there passes southward a shorter corridor or passage, about fifty feet long, to an oblong block, in which are the principal entrance-hall, the dwellings of the principal officers of the establishment, and the committee-room. The front of this administrative or residential block looks to the south. The corridors then are in the form of the letter T, the transverse portion being greatly prolonged. On each side of the shorter corridor, and entered from it, are the other administrative buildings—namely, the dining-hall of the nurses and servants, and the dormitories of the former—constituting one block at the rear of the residential building; and behind this, again, a smaller block, devoted, on the one side, to the kitchen, and on the other, to the steward's offices and store-rooms. With respect to this part of the buildings we need say little, except that it would, in our opinion, have been better if separate dining-halls could have been provided for the nurses and servants. The nurses' dormitories are admirably arranged. Each is large and lofty, with a thorough ventilation by opposite windows; while, by means of partitions rising about eight feet from the floor, it is arranged that each nurse shall have a separate and private bed-room, which is entered by a door from a central passage. We cannot say so much in favour of the servants' dormitories in the residential block, where each room contains two or three beds with, as we consider, in some instances, an insufficient amount of space. But the most important part of the building is, of course, that devoted to the sick. This consists of five pavilions, four of them passing off northward from the principal corridor and one southward from the eastern end of the corridor. The corridor then terminates at the eastern end by two pavilions, one running north, the other south; at the western end by only one pavilion running north. Between the pair of pavilions passing northward from the western half of the corridor and the pair passing northward from the eastern half there is a very wide space, in the centre of which, and wholly detached from the other buildings, stand the laundry and disinfecting apparatus. The intervening spaces are laid out in the centre as a drying-ground, and at the sides and between the pavilions as airing-grounds for the convalescents. The principal corridor is about 12 feet high and about 9 feet wide, well lighted by an abundance of large windows along nearly its whole length. The windows open by swing sashes at the top. It would have been better had they been constructed to open more extensively; little more being necessary here than a covered way which could be protected from the weather. The pavilions are all constructed upon the same plan; each consists of two long wards, one above the other. The lower or ground-floor ward is entered by a short passage or corridor from the long corridor, from which the former is shut off by doors. On the one side of this ward corridor is a nurse's room looking by a window into the ward, and behind it the ward scullery or kitchen. On the other side is a small day-room, occasionally used as a separation ward for cases of erysipelas or other disease than small-pox. The upper ward, in all respects similar to the lower one, is approached by a staircase from the corridor. Each ward is about 100 feet long by 26 feet wide, and 14 feet high. The walls are covered with Parian cement, forming a clean, smooth, non-absorbent surface. The wards are lit by seven large opposite windows on each side, and three at the north end. These are fitted with inside venetian blinds. Above each window is a kind of hopper projecting into the ward, the front of which is constructed of laths like those of a venetian blind, directed upwards and inwards, the top being open and capable of being closed by a wooden flap. In this way a current of air is admitted and directed upwards, and ventilation across the ward from side to side provided for at all times. In addition, the upper window-sashes let down. At the time of our visit, although it was a cold day, all the windows at the sides were open to their full extent. In fact, to our feelings, the wards were very draughty; but Dr. Collie assured us that he has known no harm arise from this, but believes his cases have benefited by the freshness of air thus ensured. There are other supplemental arrangements for ventilation, such as openings near the floor between some of the windows, and smaller openings near the ceiling, provided with Arnott's flap ventilators, the value of which, when thus placed, we fail to be able to comprehend. The warming is effected much in the same way as at Hampstead, by two pairs of open fire-places at equal distances along the middle of the ward. Although in some of the wards there were severe cases, giving off a most offensive effluvia, we could perceive no trace of the latter except within the screen placed around the patient's bed. The day-rooms, or separation wards, are less efficiently ventilated, in consequence of the windows all being placed at one end. The bedsteads and bedding are of the same pattern as at Hampstead, feathers being used for the beds. Each bed is provided with a waterproof covering, two sheets, a blanket, and coverlet. The night-chairs are of the usual kind, and it is the practice to keep at all times a pint of water with a little carbolic acid in each. The closet and lavatory for each ward are built out from the side of each pavilion, are entered from the middle of the ward, and separately ventilated. A receiving-ward and head-nurse's room are provided for each half of the establishment, and are situated side by side at the entrance of the long corridor, at its middle. At the top of each staircase is a shoot for foul linen, and another for dust and refuse. One of the most objectionable arrangements is that by which the wards are supplied with coals. Each ward has its own special coal-cupboard, capable of holding in the winter about one day's supply, situated in the short corridor leading to the wards above, and under the staircases at the lower part of the building. The only way of getting coals to these places is by carrying them in iron boxes the length of the corridors and up the staircases—a plan involving much labour, and rendering it impossible to keep these parts of the building clean. Neither can we think that the arrangements are such as to permit of a good supervision of the nursing. Each ward has detailed for its service two day nurses and one night nurse, all of whom the head nurse is supposed to be capable of superintending. What with the length of the corridors, the staircases, and the distance of the pavilions from the head-nurse's room, we can scarcely see how an efficient superintendence can be carried out. It would have been much better to have had one good and intelligent woman attached to each pavilion, who should be responsible for the nursing there, and from whom the other nurses should receive their orders. The practice in this Hospital is for the males to occupy the lower wards and the females the upper ones. The two pavilions at the eastern end of the corridor are devoted to convalescents. Each ward is occupied by twenty-five to twenty-eight beds, instead of twenty as in the acute wards. This extra number is warranted by the fact that the convalescents spend the whole day either in their day-room or in the recreation-grounds, the wards only being used as dormitories.

There is only one children's ward, containing thirty beds, in the upper floor of one of the western pavilions. Two of these beds are for mothers of suckling infants. Children over 10 years of age are distributed, according to sex, among the adult patients. The children's cots are similar to those at Hampstead. We may add that, on the male side of the building, there are two male attendants employed, in addition to the staff of female nurses, and that throughout the establishment no use is made of the labour of the convalescents.

In the treatment of the cases Dr. Collie has the aid of an assistant Medical officer.

The whole of this Fever Hospital is at present devoted to small-pox cases. The complement at present is 230, but it is, we hear, intended to receive 260, including the convalescents. Dr. Collie has no fixed minimum period for keeping patients in the Hospital. On admission into the receiving-ward, if there is no objection to it, each patient is stripped of his clothing, and has a bath, and the clothing is taken away to the disinfecting chamber. This is a brick chamber, with iron racks, which is heated by a flue below, and in which sulphur can be burned. The clothing is retained here, at a heat of 250°, for several hours, and then removed to a wooden chamber, similar to that in use at Hampstead, where it is freely exposed to the air until restored to the patient on leaving the Hospital. Appropriate clothing is provided for the convalescents: for the men, a flannel shirt, thick, loose, woollen grey coats, fastened by a band round the waist, woollen trousers, and a cap; for the women, a flannel chemise and drawers, and a loose linsey dress. Cotton prints are in store for summer use. There seems to be some deficiency in appropriate clothing for the boys, whose dress, much too large for them, was anything but picturesque; but this is a trifle, resulting from the haste in which the arrangements were necessarily made. Each convalescent has at least two carbolic acid baths before being discharged.

We have described the Fever Hospital, temporarily used for small-pox cases, first, because it is larger, and, on the whole, we think, built upon a better plan than the permanent Small-pox Hospital, and also because it is the building which we first visited. It is tolerably clear that the plan of the permanent Small-pox Hospital has been adapted to the comparative smallness of the area devoted to it. The residential or administrative block, in which is the principal entrance, faces north, and is placed *vis-à-vis* to the corresponding block of the Fever Hospital. The corridors are arranged on the same plan, too, and there is neither in these nor in the administrative arrangements any difference worth noting. The divergence from the plan of the Fever Hospital is first observable in the position of the pavilions. The transverse corridor is comparatively short, and instead of the pavilions being placed at right angles to it, they stand at an obtuse angle to the corridor at either extremity, two at each end, those at the east end running N.E. and S.E. from it, and the two at the west end running N.W. and S.W. from it. They are smaller also, although otherwise built very much on the same plan, each having a lower and an upper floor, the wards being seventy feet long by twenty-six wide, and fourteen feet high, giving a cubical capacity of 25,480 feet. In this Hospital, the males are treated on one side of the building, the females on the other, the acute cases being placed in the upper wards, and the convalescents in the lower. The upper wards are approached by a staircase at either end of the transverse corridor, at the top of which is a children's ward for six beds, provision being thus made for only twelve young children altogether. Twelve beds form the complement for each acute ward; twenty are placed in each convalescent ward. There is a head nurse for the male and female wards respectively, whose sitting-room is at the bottom of the staircase, at the end of the corridor, so that here a better supervision is possible than at the Fever Hospital. The Hospital is constructed to accommodate 104 patients, but as many as 140, including convalescents and children, have been there at one time, without any dangerous crowding. Dr. Gayton has no Medical assistance.

The following "notes," from which we have merely omitted so much as has been referred to above, have been courteously furnished to us by Dr. Gayton and Dr. Collie respectively. Dr. Gayton writes :—

"The Homerton Hospital for Small-pox was opened for the reception of patients on February 1. The number of patients that have been admitted since the opening is 322—*i. e.*, 174 males, 172 females, and 26 children; of these 212 had been vaccinated, or at least thought so, and in 110 this precaution had not been taken; of these, 33 have died, or 29 per cent., while in the 212 vaccinated, 12 only have died, or 5·66 per cent. The districts chiefly suffering from the epidemic appear to be Bethnal-green, Shoreditch, Hackney, and Whitechapel, the numbers admitted up to March 18 being as follows :—Bethnal-green, 87; Hackney, 76; Shoreditch, 61; Whitechapel, 39. The number discharged has been 137. Much has been said with regard to the inconvenience attending the admission of patients into this and other Hospitals during the present epidemic. I am inclined to the suggestion made by the *Lancet*, this week, that 'the Hospitals should be placed in telegraphic communication with the central office in Norfolk-street; that the guardians should be directed to apply there, and there only, and that the chief clerk should have authority to apportion the accommodation as soon as vacancies occur.'"

"All servants and others when engaged are required to be vaccinated, and not employed until the result has been seen. With the exception of an old man who was employed in the disinfecting-room during the first week of the opening of the institution, no one has been attacked by the disease.

"No visiting is allowed here unless the patient is considered to be in a highly dangerous condition, and then always subject to the sanction of the Medical superintendent.

"There are three scales of diet—viz., full, ordinary, and low. *Full* consists of, per diem—Uncooked meat, $\frac{3}{4}$ lb.; potatoes $\frac{3}{4}$ lb.; bread, 1 lb.; butter 1 oz.; coffee, 1 pint; tea, 1 pint. *Ordinary* consists of, per diem—Uncooked meat, $\frac{1}{2}$ lb.; potatoes, $\frac{3}{4}$ lb.; bread $\frac{3}{4}$ lb.; butter, 1 oz.; tea, 1 pint; coffee, 1 pint. *Low* consists of, per diem—Milk, 1 pint: beef-tea, $1\frac{1}{2}$ pints; bread, $\frac{3}{4}$ lb.; butter, 1 oz.; tea, $\frac{1}{8}$ oz.; sugar, $\frac{1}{2}$ oz.; arrowroot, $\frac{1}{4}$ oz.

"The times of meals are as follows :—Breakfast, 7 a.m.; dinner, 12 noon; tea, 5.30 p.m. At 7.30 p.m. they retire to bed.

"No definite rule has been laid down as to the time patients should be retained in Hospital; as cases differ in severity, so, I imagine, must the time they should be isolated. Many have been admitted who could with the greatest safety have been discharged the next day, but in no case has this been done. Speaking generally, I should say the average duration in the Hospital has been fourteen days.

"Burials take place three days in the week—viz., Tuesdays, Thursdays, and Saturdays. If the friends are anxious to inter their relatives, they are permitted to do so; but the funeral must take place from the Hospital; and under no circumstance whatever are they allowed to remove the bodies to their own homes.

"Several cases when brought here have forbidden any hope of recovery, but in the majority of cases the removal has taken place soon after the eruption has appeared. The hours of admission, I think, are too long—viz., from any time in the morning (I do not know that any hour has been named) until 8 p.m.; the consequence is that many cases have arrived as late as 10 p.m. The strict carrying out of the defined rules would incur a greater responsibility than I imagine most would care for.

"The patients when convalescent amuse themselves in various ways—by exercising in the recreation grounds; by reading; by playing cards, draughts, and dominoes, and so forth; but the women seem the worst off. For hours together they sit absolutely doing nothing, and I am quite sure that if any philanthropic ladies were to take pity on them by providing plain needlework, it would be done well and considered a boon. The chaplain attends on Wednesday evenings and Sunday afternoons; he delivers a short address to both males and females, and engages in prayer with those who desire it. He also attends upon urgent cases when requested by the Medical superintendent or matron. The general behaviour of the patients is good, but the men give far more trouble in proportion to the women.

"The treatment adopted has been of the simplest kind—salines in the early stages, and tonics in the latter. Chlorate of potash was tried with several, but with no marked results. That which assists most towards recovery is, I believe, plenty of fresh air and perfect cleanliness. Stimulants, to my mind, are absolute necessaries, and many cases, I feel convinced, would have succumbed to the disease if they had not been exhibited in large quantities and with great frequency. Whisky is nearly the only form of alcohol which is used here. The topical applications have been various, olive oil being the chief—glycerine, either alone or combined with oxide of zinc and starch powder, simple ointments, dusting with flour or starch powder, and covering the face with cotton wool soaked in oil or glycerine.

"The type of the disease appears to be much modified. The bad cases are now the exception, whereas a month ago they were the rule. The deaths during the past fortnight have been less than in any previous one; everything, in fact, points to a decrease of the epidemic. The great necessity is, and has been throughout, an establishing of convalescent homes, thereby keeping the Hospitals for the treatment of acute cases only. Every week it would then have been practicable for me to have sent away three times the number of those I have, so making way for others who were really requiring Hospital accommodation. I believe, also, as I suggested in one of my reports, that the erection of open-air tents might have been employed with great advantage; the Hospitals being kept for the convalescents alone. I believe those who have only partially recovered from small-pox are in much greater danger from the effects of changes of atmosphere than those who are in the acute stage. Since the management of this institution has been entrusted to me, I have made it a rule to have the upper sashes of all the windows thrown down night and day. Still I do not remember any single case of bronchitis or other pulmonary affection arising in consequence. On the other hand, one or two convalescents have suffered from slight erysipelas, the effect of too early exposing themselves to the cold air. Hence I see no reason why cases of variola should necessarily be treated in brick or other houses."

Dr. Collie writes thus :—

"Since the opening of this Hospital for small-pox on February 15 last, we have admitted 320 cases. Of these, 32 have died—a mortality of 10 per cent., unvaccinated cases included. It would be interesting if we could compare the mortality during the same period in the other Hospitals, but I cannot find the means of doing so from the published reports, as, of course, the mortality would have to be calculated on the cases admitted between February 15 and March 4.

"Of the 32 deaths, 29 were not vaccinated—*i.e.*, there was no evidence of the fact, and we consider all persons unvaccinated who have not at least one good mark. Of course, we do not think *that* good vaccination, but still we notice the fact and include such cases in the list of vaccinated deaths. On that principle we have had three vaccinated deaths. These deserve some notice. The first, a man aged 24, had been ill for some months of what his friends called a chest complaint. He really died of bronchitis, pneumonia, and pleurisy.

"*Post-mortem* examination showed engorgement of both lungs, especially at their bases, and numerous little abscesses about the size of a pea scattered throughout them. The mucous membrane of the bronchial tubes was softened and covered with muco-frothy fluid. On the left apex was a cicatrix running transversely across the base of the apex, by means of which the point of the apex was dragged downwards and forwards towards the upper edge of the inferior lobe. There was a large quantity of fluid in both pleuræ. Death in this case, then, ought to be attributed rather to previously existing disease than to small-pox. Had the man been otherwise healthy I think he would have got well. He had two good marks of vaccination.

"The second case was that of a boy, aged 19, the period about which the protective power of primary vaccination disappears. He had two *indifferent* marks. It is about this age—say 15 to 25—that the most serious and severe cases of small-pox occur amongst the vaccinated, and even well-vaccinated. I have seen severe attacks (two) in well-vaccinated persons between these periods, but no deaths.

"My third case is that of a woman, aged 22, five months pregnant, who died about thirty-six hours after abortion. She had three indifferent marks.

"Now, I do not think that these last two cases ought to be considered even *fairly* vaccinated. What matters it how many marks there may be upon an arm if they are not *true* and *characteristic* evidences of vaccinia having affected the system? Quality, surely, comes first, and then quantity, if you like, to any extent. The vaccination of London is perfectly shameful. Out of 310 cases of small-pox admitted here, how many do you think have been *well* vaccinated? I speak from memory, at present not having my papers beside me; but I say without hesitation that not more than ten persons out of the 310 have been well vaccinated. These ten persons had but a trace of the disease, *except* two, who had passed the age of puberty. I am frequently surprised at the large numbers of vaccinated persons who die of small-pox, according to the Registrar-General; but I suppose we must take this statement *cum grano salis*, for, according to the same authority, many persons die of 'simple continued fever.' I think it is really time that some reform were made in the registration of deaths, for if men put down simple continued fever as a cause of death, how are we to know about typhus, enteric, etc.? This seems to me to show that the Registrar-General's returns are very unsatisfactory.

"I have had one case of 'black small-pox' in a male child aged 7. He was unvaccinated, and his father said that he had had small-pox when 2 years of age.

"I cannot help attaching some value to our thorough ventilation as having been *one*, at least, of the causes of our low mortality. A notion has got into some people's heads that acute small-pox cases do not require so much cubic space as other contagious diseases; I think the opposite of this more like the truth, for, in addition to the contagious nature of the disease, you have all the evils of a Hospital full of acute Surgical cases—namely, large suppurating surfaces. I am well convinced that air in *unlimited* quantities is an indispensable condition in the proper treatment of small-pox. We give 2000 cubic feet to the acute cases here; I would give 4000, and believe it would materially affect the mortality. In epidemic times we are apt to forget the advice of Dr. Parkes, who says:—'It should never be forgotten by Medical Officers that the rudest shed, the slightest covering which will protect from the weather, is better than the easy plan so often suggested and acted on of putting the beds a little closer together.'

"We have had two cases of erysipelas with small-pox, which were immediately isolated, and we have had two cases of scarlet fever, which were also isolated, and neither disease has spread."

We strongly recommend the remarks of Dr. Collie and Dr. Gayton on the subject of free supply of fresh air, to the consideration of authorities and others contemplating the erection of small-pox Hospitals. There are some who would have felt shocked to see the cold air from an open window blowing down upon the bed of a patient just under it. An extra blanket wrapped round the shoulders, however, sufficed as a protection from injury. And the patients thus exposed, it is to be recollected, were mostly people who, when at home, are in the habit of carefully excluding fresh air from their rooms.

Putting the admissions into the two Hospitals together, the number of patients received up to March 3 from the several parishes was as follows:—

Shoreditch . . .	137	Hackney	54
Bethnal-green . . .	105	Greenwich	1
City of London . .	29	Lambeth	7
St. George's-in-the-East .	9	Islington	1
Mile-end Old Town . .	14	Kensington . . .	3
Stepney	11		
Poplar	5	Total . . .	430
Whitechapel . . .	54		

NATIONAL DEGENERACY.

If the American people are suffering physical degeneration, it is not for the lack of prophets who tell them both of the fact and of its causes. One of the most handy summaries of the matter is contained in a paper published by Dr. Nathan Allen in Dr. W. A. Hammond's *Psychological Journal* for October, 1870, and we venture to call attention to it, in the belief that it concerns ourselves as much as it does the Americans.

We need not give a formal definition of natural degeneracy, but may say that such a condition is on its road when increasing numbers of a community are unable, if men, to work, to fight, to withstand the weather; and if women, to breed and rear children. It may be noticed that it is in time of war when such degeneracy becomes most palpable; and that, at the opening of the late American civil war, "it was," as Dr. Allen says, "matter of surprise to Surgeons what a large number of men in the community were found, whom, by reason of infirmities or diseases, they were obliged to exempt from the draft. If exact information could be obtained as to just what proportion of men, at the present day, are physically disqualified for military service, the result," he says, "would surprise the public;" and he sums up the essence of degeneracy in the terms "loss of muscle" and "increase of nervous temperament." Amongst the causes—

"In the first place," he says, "the increasing migration of our people from the country to the city is decidedly unfavourable to physical stamina and life. . . . To such an extent has this change already been carried in population, that almost one-half of it in the older States is now found in cities and large towns, and there is reason to believe that the proportion is steadily on the increase. Now, no one truth in vital statistics is better established than the fact that city life tends to reduce the physical energies of the body and shorten human life. The close confinement indoors, the breathing of vitiated air, the frequent use of unwholesome water, the increased habits of intemperance and licentiousness found in cities, have a most pernicious effect upon the human constitution, by multiplying its infirmities and its maladies. . . . In the second place, the very general giving up of farmwork and the more laborious employments. . . . It is a well known fact that very few of our young men are now willing to follow agricultural pursuits; and every year witnesses a less and less number disposed to learn or follow the more laborious trades—such as the mason, the carpenter, the millwright, the wheelwright, etc."

But, continues Dr. Allen, it is woman who (as in all other cases) suffers most. In her case changes have been "more marked, more radical, and more disastrous. Within forty or fifty years a great change has taken place in the early training of girls, as well as in the domestic habits of women. Once a large majority of the girls of our American population were taught early to understand and perform housework, which, combined with considerable outdoor exercise, served to develope strong and healthy physical frames. From the age of 6 to 16, of the girls of that period, probably not more than half their time, on an average, was devoted to school education or intellectual pursuits." But now girls are kept hard at schoolwork from 6 to 16, with little exercise; hence a precocious cleverness, and weak muscles. They are unfit for housework, and despise it. "There has grown up in a portion of the community a strange and most pernicious sentiment or feeling that there is some degradation attached to domestic labour, so that nearly all of it is now performed by foreign help"—which, we suppose, is Irish. In consequence of neglect of air and exercise, physical debility and anæmia are universal. Iron is prescribed to an extent unknown in bygone generations. "In almost all the ordinary complaints of women, iron, in some form, becomes an indispensable medicine; in fact, in very many cases they depend upon it from day to day, from week to week, the year in and the year out, almost as much as upon their daily food. Its use has also become extensively necessary in cases of children suffering from debility and anæmia, which would have not been required if they had inherited organisations full of life and vitality, or had been rightly trained in physical exercises, and had their systems properly nourished and strengthened." Fashionable dress obstructs the play of the lungs, and displaces the pelvic viscera. "Connected with this weak and relaxed state of the muscular tissue, and with the above-mentioned effects of fashion in dress, has sprung up a class of very grave complaints, which once were comparatively unknown in our country, and are somewhat peculiar to American women. We refer particularly to weaknesses, displacements, and diseases of organs located in the pelvis. Within twenty or thirty years, this class, comparatively new, has increased wonderfully. No one but a Medical man who has devoted special attention to this subject can realise fully what are the nature and extent of this change, and what are its direful effects. These complaints have frequently been produced—have certainly been aggravated, and sometimes made incalculably worse—by the various means and expedients which the parties have resorted to, in order to interfere with or thwart the great laws of population. . . . The marriage institution itself is suffering terribly from this source." The proper nurture of children decays equally. American women cannot nurse, and have not the necessary organs. If it be said that they can, but will not, then, rejoins Dr. Allen, "this very indifference or aversion shows something wrong in the organisation, as well as in the disposition; if the physical system were all right, the mind and natural instincts would generally be right also." The extensive advertisements and sales of feeding-bottles prove the same fact.

We wonder that he did not point to the number and celebrity of the American dentists, and to the decay of teeth, which is one strong sign of national degeneracy. Darwin believes that the wisdom teeth are becoming rudimentary in civilised man, which is palpably true. The same may be almost said of the bicuspids; but we think that an unsound civilisation which stunts the physical part of our nature.

From physical to moral degeneracy the *descensus* is but too *facilis*. "Besides the inherent defects in such an organisation, in not making the necessary provisions for gestation and lactation, the natural instincts of woman in a pure love of offspring and domestic life become changed: the care and trouble of children are a burden; society, books, fashion, and excitement generally, are far more attractive." The results will be—first, sterility, for no intensely nervous temperaments are favourable to increase; and, secondly, an increasing ratio of degenerate population. It is woman that "moulds the physical systems of those who are to come after us," and "imperfect developments are transmitted in an intensified form." Meanwhile, the mortality of women, instead of being lower in America than that of men, as is the case in the Old World, is higher.

Another sign of physical degeneracy is found by Dr. Allen in the "general complaint in the community about having too many hours of labour. Twelve hours in a day are considered too many; ten also are not acceptable; and if a law passes Congress fixing a day's work at eight hours, we apprehend after a while many persons will want a still further reduction. Without expressing any opinion as to this reform, is there not some philosophy or hidden meaning in its teaching? Does it not indicate some radical change in the physiological conditions of a people, indicative of inability, as well as indisposition, to labour? Would our ancestors or the generation immediately preceding us ever have made such complaints? Would any people full of physical vigour and strength, and abounding in all the elements of healthy growth and activity, thus complain?" We commend these observations to the trades-unionists at home. As a last note of degeneracy, Dr. Allen says that the birth-rate of the American people has been constantly diminishing; so that the rapid increase of the American population has been due to immigration, and not to fertility.

Amongst other elements, whether causes, effects, or evidences of degeneracy, Dr. Allen notices the inordinate passion for riches; overwork of body and mind in the pursuit; undue hurry and excitement in all the affairs of life; intemperance in eating and drinking; the enormous use of quack medicines; the general indifference to human life; the increased use of spirits, tobacco, and opium; the increase of lunacy; the decrease of children.

We have thus far followed Dr. Allen, not with any view of giving a disparaging account of American life, but of pointing out that if like causes produce like effects, we had need take heed to ourselves. There is not one of the evils denounced by Dr. Allen which we do not find here. Large cities are the graves of our population. Women cannot be developed, nor children be reared in them. No one who looks at the stunted race of London "roughs" and "costermongers" can feel that we have anything to boast of. Even our peasantry are not models. The Rev. Dr. Hannah, in a speech at the Brighton School Board, said he was struck, on coming into the South of England, with the want of agility in the children compared with those of Scotland—they had not that firm and erect tread which it was so important that they should have. It is of no use to send men from the East-end of London to the North to work, for they cannot do the work. The very progress of civilisation, too, as Darwin observes in his latest work, is unduly favourable to degenerate members of the community. With savages, he says, the weak in body or mind are soon weeded out; the vigorous only survive. Civilised men do their utmost to check the process of elimination; they build asylums for the imbecile, maimed, and sick; they establish poor-laws; they cultivate Medicine; they vaccinate, and thus save the weaker persons from succumbing to small-pox; and they allow their worst members to breed. It is surprising, he adds, how soon a race of animals or plants may be deteriorated; "but, excepting in the case of man himself, hardly anyone is so ignorant as to allow his worst animals to breed."

THE WEEK.

TOPICS OF THE DAY.

THE Council of the Royal College of Surgeons assembled in Committee on Tuesday last, to consider the draft scheme for an Examining Board in England, prepared by the Committee nominated by the two Royal Colleges and the Society of Apothecaries, seem to have been actuated in their deliberations by the simple desire of trying "how not to do it." We are compelled to admit—and we do it with regret—that the result of their negotiations is a set of resolutions curiously unpractical and feeble. If it were really the desire of the Council that no Conjoint Board should be formed, and that no amalgamation of the great mass of the Profession by the union of examinations should take place, they have taken a course which, unless it be prevented by an exercise of some forbearance, good temper, and good sense in the Committee of the three Corporations, would very likely lead to such a result. In proof of the truth of our remarks, we will review *seriatim* the resolutions at which the Council arrived. In the first place, it was moved by Mr. Charles Hawkins, seconded by Mr. Lee, and resolved—"That, adverting to the resolution of the Council of October 7, 1869, confirmed on the 14th of that month—'That it is the opinion of this Council that there should be instituted a single Examining Board for each division of the United Kingdom, before which every person who desires a licence to practise should appear, and by which he should be examined, and that a diploma from either of such Examining Boards should entitle the holder to practise Medicine, Surgery, and midwifery in any part of her Majesty's Dominion'—the present Committee of the Council affirms anew the principle resolved by the Council, and proposes that the Conjoint Board Committee should, as far as practicable, adhere to that principle." If this resolution have any meaning at all, it simply is this—that the Conjoint Board Committee must obtain from the Legislature an Act of Parliament to institute a single Examining Board for England, Scotland, and Ireland, for in no other way can it be in any degree practicable for the Conjoint Board Committee to adhere to that principle. The phrase, "as far as practicable," indeed deprives the resolution of any real meaning, but the principle of the resolution can only be established, as the better informed of the Council of the College well know, by an Act of Parliament, which certainly cannot be obtained in the present session, and which, if obtained, would either be at the cost of demoralising the General Medical Council by direct representation, or of putting the whole Profession under a department of Government presided over by an irresponsible minister of the Crown and his Medical nominee. So much for the first resolution of the Council.

The second resolution came in the form of an amendment, moved by Dr. Humphry and seconded by Mr. Hilton, to a resolution moved by Mr. Curling and seconded by Mr. Busk. The original motion having been negatived, we will not stop to discuss it, only remarking that it would have required an Act of Parliament to carry it into effect. The following was the amendment, which was afterwards put and carried as a substantive motion :—"That, in the opinion of this Committee, the following resolution should be adopted, viz.—That it is desirable that an Examining Board should be formed by such licensing bodies as may consent to take part in it, it being understood that each co-operating body shall refrain from the exercise of its previous separate privilege of giving admission to the Medical Register." This resolution, which may be intended to open the door for the co-operation of the Universities. on the understanding of the submission of University graduates to the examinations of the Conjoint Board is no doubt well intended, but it is open to this objection—viz., that it prescribes terms which may be objected to by the Royal College of Physicians. We have yet to learn whether the Royal College of Physicians will consent that gentlemen should only be admitted to the Membership, and ultimately to the Fellowship, of the College on the condition that they shall have passed the Conjoint Board. We cannot say what the feeling of the Fellows of the College may be on the subject, but, at all events, the resolution may lead to much discussion. The next resolution passed by the Committee was an assent to that part of the draft scheme which settles that candidates who have passed the Conjoint Board shall be entitled to the licence of the College of Physicians, the Membership of the College of Surgeons, and the certificate of the Society of Apothecaries, "provided that each of the licensing bodies mentioned takes part in the constitution of the Board of Examiners." This is a harmless resolution; but we thought the proviso at the end was understood. The next resolution was moved by Dr. Humphry and seconded by Mr. Simon, and we are afraid it may be regarded as a deliberate attempt to throw an apple of discord into the Committee by reviving the misunderstandings of last year. The resolution is to this effect—"That it is desirable, in the opinion of this Committee, that each of the Examiners in Medicine, Surgery, and Midwifery shall be a Graduate in Medicine or Surgery of a British University, holding the highest degree in Medicine and Surgery of his University, or a Fellow or Member of one of the Royal Colleges of Physicians, or a Fellow of the Royal College of Surgeons of the United Kingdom; or that he shall be, or shall have been, a recognised teacher in the subject in which he is appointed to examine." We can also say that it is desirable, and we have no doubt that, practically, the resolution would never be departed from; but we doubt the wisdom of advising the Committee to make it part of their scheme. We have yet to learn that there is any practical good to be obtained from limiting the choice exercised by the Medical licensing bodies in the appointment of their Examiners. Why, for instance, should the Royal College of Physicians not be free to elect one of its Licentiates, or the Royal College of Surgeons one of its Members, or the Society of Apothecaries one of its Members, if the person possess the necessary Professional knowledge? For their own credit, the Medical authorities are likely to appoint the very best men they can find for the post. But to attempt to put a limit on their choice, which is not sanctioned by the legal authority under which they act, is not very likely to be received with good grace. Fortunately, however, the Committee have made this resolution of the same colourless complexion as the others. "It is desirable" is not an expression that means very much, and we have too much faith in the good sense of the Conjoint Board Committee to suppose that this resolution will be allowed—as it would almost appear it was intended—to throw the whole matter again into the confusion from which it can only be rescued by State interference. The latter part of the scheme, which refers to the appointment of Examiners between the three licensing Corporations, and the division of the fees, is referred to the Conjoint Board for reconsideration, although on what point does not appear. We may, however, assure the Council of the Royal College of Surgeons that it is not likely the other bodies will assent to a larger share of the proceeds of examinations going to the College, than a share proportionate to that obtained by the grant of its diploma of Membership during the last five years. On the whole, the resolutions of the Council are so very vague, that we can hardly suppose they will be allowed by the Conjoint Board Committee to destroy the work which they have done. Individually, we are certain that a majority of the Council would disavow such an intention; but their resolutions, if allowed their full effect, would either prevent any reform of Medical examinations at all, or throw us on the necessity of relinquishing our liberty as a great and free Profession, and make us dependent on "the wisdom of Parliament" or the caprice of a Minister for a Medical Examination Act.

Dr. George H. Kidd, President of the Obstetrical Society of Dublin, has been nominated one of the honorary members of the London Obstetrical Society, in succession, we believe, to the late Sir James Y. Simpson, Bart.

A well-known Indian Medical officer, Mr. Atchison, who signs himself "Surgeon-Major," has written a series of letters to the *Times* on the subject of small-pox encampment. His plan is, no doubt, a good one, provided the exigencies of our climate could be taken into consideration, and the prejudices of our population against anything novel could be overcome. Mr. Atchison writes—

> "Instead of the *costly*, injurious, and *tardy* system of congregating the sick in Hospitals, asylums, or improvised lazarettos, in a hitherto uninfected neighbourhood, why not apply the simple remedy we at once resort to in India—viz., pitch tents in some high and airy situation, quarantine the encampment, and on the subsidence of the disease disinfect or burn the camp?
>
> "At the dreadful epidemic of cholera at Mecan Meer in 1861, and again at Umrijee in 1863—at both of which I was deputed on special duty—when also small-pox was raging, the moment infection appeared we attacked it *at once* by segregation and camping-out. Here the three great principles of hygiene were enforced—viz., fresh air, non-contact, and speedy action. What was the consequence? The disease was arrested *forthwith*, and quickly disappeared."

In a subsequent letter he explains that, by the term "tent," in this climate, he means—

> "Every appliance for the encampment of the sick—viz., tents, thatched huts, wooden sheds, and any other movable apparatus suitable for the emergency."

He believes that the total expense of forming such an encampment and of burning it afterwards would not be one-fourth of the expense we are now incurring for temporary Hospitals. He adds—

> "And as regards an encampment, be it composed of tents,

huts, sheds, steamer, blockship, they could easily be furnished to suit the necessities of the case, be they for the needy, the middle-class, or the opulent. They would form a summer Wimbledon or a winter Aldershot (in miniature) *outside* our cities and towns, and protect our population. They would be under proper discipline, and in charge of experienced officers, subordinates, and nurses; and be a mighty saving in health and pocket to the metropolis. What I contend for is the *urgency*, the *practicability*, and the *certainty* of success."

Mr. W. McCormac, who has just been elected Assistant-Surgeon to St. Thomas's Hospital on resigning the office of Surgeon to the Belfast General Hospital, has had the honorary appointment of Consulting Surgeon to that institution conferred upon him.

THE WOUNDED AT BERLIN.

The special correspondent of the *Daily News* describes the arrangements for the reception of the wounded at Berlin as having been most efficient. Fifty huts, on the model adopted by the Federals during the civil war in America, were erected on the drill-ground of the Berlin garrison soon after the war commenced. Each hut is 72 feet long, 20 wide, and 16 high, and contains cots for thirty patients. The ventilation is effected by ridge openings along the roof, and by large windows so placed as to admit air freely without causing a direct draught. The roof projects as a verandah over a narrow wooden stage, flush with the flooring, railed round, and wider at the ends where the doors are. The huts are raised on piles several feet above the ground. During summer the sides were of canvas nailed on framing, and in winter of a double layer of planks, with space between them for the circulation of air. In winter also stoves were employed.

The huts form three separate triangles, the Administration huts being at the bases, and the other two sides formed by huts ranged in echelon, so that no hut overlaps another, and free circulation of air is obtained. Water is plentiful everywhere, conveyed all over the ground in pipes. The fall of the ground is not sufficient to give a quick outflow to the sewage, which is therefore conveyed to a tank, deodorised, and pumped by steam over the brow of the hill into the Spree.

The Administration is under the personal superintendence of Major von Ressel, who acts also as general military commandant. Dr. Steinberg oversees everything of a Professional character within the enclosure, and has a large and efficient staff of Medical officers, among whom are eight American Surgeons. Dr. Runkin, of New York, has particularly distinguished himself by his zeal and energy, and hut No. 21, for which he is responsible, is said to be the beau-ideal of cleanliness and thoughtful arrangement, and to have attracted the particular attention of the Empress and Crown Princess.

There is a special hut set apart for such of the French wounded as prefer the society of their own countrymen; the others are treated in the general huts; and all gratefully appreciate the impartial kindness shown to them.

A good deal of typhus has occurred, causing a mortality of about 15 per cent. in the winter, but now of about 7 only. Gangrene showed itself with some frequency; but this is considered to have been attributable to the length of the journey from the front—in no case shorter than six days, during which dressings, etc., were necessarily imperfect. Pyæmia was rather frequent during the winter; but this has now altogether disappeared.

The Crown Princess and many ladies of all ranks take the greatest interest in the Hospital; rich bankers and merchants act as directors, and contribute generously in both funds and stores. The correspondent of the *Daily News* expresses some regret at not having seen an English Surgeon doing duty on the Kreuzberg, and remarks that, if a competent observer had been sent by our Government, he would not only have learned much individually, but would have been able to place at the service of our authorities much information as to matters of arrangement and detail which could not have failed to be of service to us in case of any necessity.

GULSTONIAN LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS, BY DR. GEE.—LECTURE II.

Having discussed the ways and means by which the healthy body gains and loses heat, the lecturer proceeded to the balance struck between those two processes—namely, the temperature of the body. The fact that the mean temperature of the same person, under the same circumstances, scarcely varies from day to day more than a quarter of a degree, was especially dwelt upon. This question was next discussed: How the body behaves under the two conditions of great addition to, and of great abstraction from, its heat by external means. Exposure to an external temperature equal to, or higher than, the body-heat, raises the body-heat; and when the latter reaches 107° Fahr., serious symptoms referable to the nervous system ensue, particularly unconsciousness. Sunstroke—or, rather, heat-stroke—is essentially due to great elevation of the body-heat. External cold likewise raises the temperature for a short time; this elevation really indicates increased generation of heat (as proved by coincident increased exhalation of carbonic acid), and not merely diminished loss of heat. But the power of the body to counteract abstraction of heat from the surface is very limited. The subject of pyrexia, or elevated temperature of the body, was next taken up. And, first of all, the opinion that pyrexia is a mere equalisation, or levelling, of the external and internal temperatures, was alluded to. But, even in small animals, such as dogs, the temperature of the liver in health never exceeds 104° Fahr.; therefore, there is such a condition as a temperature unnaturally high, and this is called pyrexia. Pyrexia, obviously, is due to an increased generation of heat, or a diminished loss of heat, or a combination of these factors. First of all, the proofs that there is an increased generation of heat in pyrexia were considered. The proofs were of three kinds. The calorimeter shows that there is an increased loss of heat from the surface in all stages of fever, excepting the cold stage, and even then the loss is not diminished. At the same time, the temperature is pyrectic; therefore the production of heat is increased. Next, the products of combustion are increased. This was shown to be true of the carbonic acid, and the urea, representing the consumed carbonised and nitrogenous structures of the body. Lastly, the consumption of the combustible—that is, of the body—is increased. These facts being so, the other hypothesis, of pyrexia being due to diminished loss of heat, is refuted by way of anticipation; although it cannot be denied that the rapid rise of temperature during the cold stage of fever must be aided by the fact that the loss of heat is not greater than natural during that period.

BABY-FARMING.

The Bill for the Better Protection of Infant Life proposes that every person having charge of a child shall take out a licence, and any failure to do so is to be treated as a misdemeanour. All legal responsibility, in fact, is shifted from the parents, and fastened upon the nurse. The Bill is very severe on the offence of its own creation—that of nursing "without a licence"; but "guilty neglect," which is the real essence of the evil to be dealt with, "is not punishable except by withdrawal of the licence." The Medical officer of every district is to keep a register of all children out at nurse, and to personally inspect them once a month. The notion of making Professional men the supreme arbiters of the nursery arrangements of the poor has some claim to novelty; but it must be confessed that its absurdity is still more palpable—a power few Medical gentlemen would care to have. Children, the most carefully nurtured, as we all know, are liable to sickness; but the mere fact of a nurse-child being unwell places it in the Doctor's power "to suspend or revoke the licence."

LIGATURE OF SUBCLAVIAN ARTERY.

This vessel has been tied three or four times in London lately. We have seen Mr. Maunder ligature it in the third part of its course on two occasions; once, about three years ago, simultaneously with ligature of the common carotid of the same side, for the relief of suspected innominate aneurism. The patient was well nourished. The veins of the neck were enormously gorged with blood, and all the soft parts were loaded and glued together by solid œdema. During the operation none of the normal guides to the artery could be either seen or felt, but the vessel was at length found and ligatured at the bottom of a deep cavity, the operation occupying twenty minutes. On Saturday last, March 18, Mr. Mauuder's patient had a less forbidding aspect from a Surgical point of view. He was the subject of an axillary aneurism, and happily there was neither venous congestion nor œdema to contend with. The vessel was reached through a single straight incision with ease, the operation lasting ten minutes. A catgut ligature was used, and the wound was dressed antiseptically. Mr. Maunder stated that some three years ago he tied the left common carotid low down, also antiseptically; the wound healed over the ligature in seven days, and the thread is still in the patient. It should be stated that this occurred in private practice. We observed that the operator did not use a director to guide the knife. He deems it of little use, because the position of the external jugular vein prevents any free section of parts, and the point of a director might readily injure veins. He also, having cut through the layer of deep cervical fascia perforated by the above vein, laid aside the knife, and with two pairs of dissecting-forceps tunnelled down to the artery through the areolar tissue and fat of the region. In this way wounding of veins was avoided.

LAW AND LUNACY.

Nothing is more conflicting occasionally than the Medical evidence given with respect to lunacy. That Doctors differ we all know, but a case has just been finally settled by the Master of the Rolls, which illustrates the difficulties arising from our present system of having distinct courts of coordinate jurisdiction, and from decisions in one court not being binding on another. The case of Banks *v.* Goodfellow commenced in November, 1867. It came before the Master of the Rolls, and he directed that it should be tried at common law. It accordingly was tried at Carlisle; then it came before the full Court of Queen's Bench, on a point of law; then it went back to the Rolls, with reference to costs. So much for the case as before the courts. Now, let us look at the law. The question was as to the mental capacity of a testator who had two constant delusions. Lord Penzance had held that as the mind was one and indivisible, and though other faculties might be sound, if a delusion arose from disorder of any one or more of the faculties, the testator could not be regarded as capable in law of disposing of his property. This dictum was over-ruled by the Queen's Bench, which, in a very able judgment, ruled that a testator may have insane delusions, but the judge might leave it to the jury to determine whether those delusions did or did not affect the disposal of property. Which is right?

MEDICAL INSPECTION OF SCHOOLS.

It is not, of course, contended that all careless boys have defective vision, or stupid boys defective hearing, or that all idle boys are strumous and suffering from some form of chronic disease; but these various forms of disease are too often present in the existing schools, and may be expected to be still more so in the new schools. Some form of protection should be extended to them, and they should not be left to the tender mercies of the schoolmaster. Probably the day may come when schoolmasters will be taught how to detect these various forms of disease, but till then the scholars should have the benefit of proper Medical inspection.

PAYMENT OF WITNESSES.

A case came before the Liverpool County Court, last week, showing the importance of a clear understanding as to who is to pay witnesses when they are subpœnaed. A dentist and a Medical Practitioner summoned a solicitor for payment for giving evidence in favour of a client of his, who was himself, it appeared, unable to pay. There had evidently been some misunderstanding as to conversations which took place between the plaintiffs and defendant. However, the verdict in each case was for the defendant. It may be remarked here, that a Medical witness, like any other, can, if he makes application for payment before being sworn, refuse to give evidence unless his just demand be previously satisfied. When any doubt exists, this is the proper plan to pursue.

COMPULSORY REMOVAL OF THE SICK AND DISINFECTION OF PREMISES.

Dr. Ballard, in his Report on the Sanitary Condition of St. Mary, Islington, for February, 1871, says that—

> "Of 123 cases of small-pox, only 68 were removed to Hospital, the others being treated at home, where they cannot fail to spread the contagion. It is true that under certain circumstances there are powers of compulsory removal, but for all practical purposes the provisions for this form of public protection have broken down under the stress of the epidemic pressure. After the removal of all who are willing to be removed, foci enough of contagion yet remain to keep up the disease among our crowded population.
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> "The plan," says Dr. Ballard, "we are now adopting to get disinfections performed in infected houses, under the directions of the Sanitary Committee, is working tolerably. We serve the owners of premises with forty-eight or twenty-four hours' notice to disinfect premises, and supply disinfectants for use where articles of clothing are worth preservation and there are facilities for washing and boiling. Where the owners have not commenced at the expiry of the notice, we employ workmen to perform the disinfections, charging the expense on the owners. Our inspectors look after the work as well as their time will permit. In many instances we have destroyed, by burning, bedding and clothing which could not be conveniently disinfected, or which were so old and filthy as not to be worth the trouble of preservation. From the commencement of December to the present date I have a record of 318 houses which have become infected. Under the plan adopted, 172 have, with their contents, been more or less satisfactorily disinfected, leaving 146 yet to be dealt with."

THE MELBOURNE HOSPITAL AND ITS MANAGEMENT.

We regret to learn from the *Argus* of January 18 that erysipelas still continues, notwithstanding the various attempts that have been made to check it, to spread with undiminished vigour. Dr. D. J. Thomas, who is unquestionably one of the highest Surgical authorities in Australia, complains with (we think) great justice of the unwarrantable and injurious interference of the lay committee. In a letter addressed to the above-named newspaper he writes as follows:—

> "I may state that the prevalence of erysipelas in the Surgical wards has caused me much anxiety, and I have on more than one occasion brought it before the Profession; and upwards of six months ago I wrote to the committee of the Hospital, recommending that a detached building should be constructed in the grounds. I received no reply, so I determined to request an interview with the committee. This was granted, and the result was, that the matter was referred to the honorary staff. They at once agreed as to the necessity of such a building, but quite disagreed as to the materials of construction."

Since then, he adds, he has attended numerous meetings, at which there was not a sufficient number of members to form a quorum; and that at length (on Jan. 2) a special meeting was held at an unusual hour at which he could not attend, when "a reversible wooden building" was recommended by a Mr. Hart, on the plan suggested by Captain Galton in his address on the Construction of Hospitals. Dr. Thomas very naturally wrote to the committee, requesting that his protest might be entered in the minute-book "against the adoption of a wooden building for the reception of erysipelatous cases, as it was his firm conviction that the mode recommended would be wrong, and he would not like his name to be associated with the *receptaculum mortis*." With the courtesy that seems to characterise the lay committee of the Melbourne Hospital in their dealings with the honorary Medical staff, they came to the resolution "that the request of Dr. Thomas could not be complied with."

Dr. Thomas very sensibly observes that such wooden buildings, to be healthy, should not be fixed, but should be frequently moved, as the very ground on which they are erected soon becomes impregnated with deleterious emanations; that the Hospital ground that could be appropriated to such buildings is far too limited, and that if they are moved over it, from spot to spot, the disease, instead of being got rid of, will be perpetuated.

The unhealthy state of the Hospital does not, however, seem to be any check to the number of operations, as those performed on January 19 were—complete restoration of the nose, by Dr. Thomas; excision of the elbow-joint, by Mr. Rudall; and amputation of the leg, by Mr. Fitzgerald. Why is not the cottage system adopted, that the Hospital can be thoroughly purified?

SNAKE POISON IN AUSTRALIA.

Professor Halford sends a letter to the *Melbourne Argus*, in which he strongly urges the immediate and repeated use of the ammonia injection. He first gives the following case from Dr. James Jackson, M.D. Lond., of Mount Gambier:—"'I beg to furnish you with the following brief notes of a case of snake-bite which was treated by me at McDonnell Bay on December 23 last. I had just driven into the yard of Locke's Hotel when I was summoned to see the servant, who, while hanging out clothes among the rushes near the sea beach, was bitten by a snake on the back of the hand about ten minutes before. I found the woman in a state of extreme agitation, declaring she had been bitten by a snake about four feet long; and on carefully examining the back of the hand I found a wound such as would be produced by the bite of a snake. I immediately excised the bitten portion, including a piece of skin about the size of a sixpence. I sucked the wound, and then washed it with a strong solution of ammonia. The patient was then placed in a recumbent position, and still remained very much agitated, though to this time there were no special symptoms of snake-poisoning. I determined, therefore, to wait for symptoms. In about twenty minutes nausea was complained of, with a feeling of intense distress in the epigastrium, followed by violent and persistent retching. I now considered my patient under the influence of the poison, and determined to lose no time in injecting the ammonia. I accordingly opened the median cephalic vein, and injected fifteen minims of the ammoniacal solution. The vomiting ceased immediately, and the woman expressed herself as feeling much relieved. In about half an hour the retching returned as violent and persistent as before. Another fifteen minims were injected, which again gave immediate relief. For three-quarters of an hour the patient lay on the sofa quite comfortable, at the end of which time the vomiting again returned. For the third time I injected fifteen minims of ammonia, when the vomiting ceased as suddenly as before. I remained with the patient for half an hour after the third injection, and was then obliged to embark for Adelaide. I left the patient in the hands of Dr. Cotter, of McDonnell Bay, who throughout gave me valuable assistance. This gentleman found it necessary to repeat the ammoniacal injection twice more, after which the woman gradually recovered, and is now in the enjoyment of perfect health.' I may add that with robust people the quantity of ammonia may be increased without danger to thirty minims. Let me (says Professor Halford) contrast this case with one which occurred lately at Hamilton. A man in perfect health was bitten at 3 p.m., and soon after he was very sick, and vomited frequently. The part was cut out, and brandy and ammonia given by the mouth, and the vapour of ammonia by the nostrils. The man was much better by 11 p.m., but by 3 a.m. a great change had occurred; the eyes were getting fixed and dilated, the tongue was swollen, he was faint and weak. Ammonia was injected into the vein of the right elbow. In a few minutes a decided improvement took place. The pulse became less frequent, and increased in volume. He could articulate better. His expression became much more natural, and generally he was much improved. But it was too late; twelve hours after the bite the bad symptoms returned. More ammonia was injected, with less but still good effect; but ultimately he died, twenty-four hours after having been bitten. Who can say what might have happened in this case if ammonia had been injected when the first symptoms of sickness came on, or in Dr. Jackson's case if ammonia had not been injected at once? None of us can say. But let us trust our remedy, and apply it directly symptoms of poisoning appear, how slight soever they may be. Those who have opposed this mode of treatment, explaining its seeming successes by saying that our snakes are not venomous, and that brandy and ammonia by the mouth are all-sufficient for the cure of any bite, will perhaps be shocked when they hear that, in the neighbourhood of Sandhurst, a healthy young fellow of 26 was bitten at a quarter to 12 a.m., and died at half-past 2 p.m. of the same day (Jan. 10); that no injection of ammonia was used; that he was walked about; and that brandy and ammonia were poured down his throat till he was dead. Granted that snake poison only kills by entering the blood, and that you rely on ammonia as a good remedy, why don't you put the ammonia into the patient's blood, instead of burning his throat with it, or suffocating him with its vapour?"

FROM ABROAD.—PROF. BILLROTH'S LETTERS FROM THE SEAT OF WAR—DR. MÜLLER ON WASTE OF VACCINE LYMPH IN REVACCINATION.

In his thirteenth letter, Professor Billroth treats of the cases of septicæmia and pyæmia which he met with. From septicæmia six of the wounded died between the sixth and twenty-first day, and there were thirty-five deaths from pyæmia. This is, however, by stretching the denomination to the utmost, so as to embrace all the cases in which the patients died, having profuse suppuration, accompanied by intense remittent or intermittent fever, with or without shivering, and with or without metastatic abscesses. He thinks it of importance to insist upon how broad is the sphere embraced by pyæmia, and that we should be made aware of the fact that in many cases in which, *e.g.*, secondary hæmorrhage hastens death, or in which empyema may have at an early period paralysed respiration, still it is the aborption of pus which has been the most essential feature in the death of the wounded. Among all his wounded patients he is able to indicate only six who died from other causes than septicæmia or pyæmia. Four of these were cases of acute hæmorrhage, one of peritonitis, and one of typhus. One may readily be deceived by the fact that other causes have contributed to the fatal result. Thus, eight instances of secondary hæmorrhage might be put down as causing death from loss of blood, and in five gunshot wounds of the thorax the patients might be stated as dying of gradual suffocation and exhaustion from suppuration. In this way we should diminish the number of cases of pyæmia by thirteen, and the number would be still further lessened if we designated the deaths of those who exhibited neither shivering or metastatic abscess as "deaths from exhaustion." The English would bring under the head "shock" some of the cases which, having undergone amputation or excision in the pyæmic stage, die soon after the operation; and as those who suffered from severe and partly bloody diarrhœa might be designated as instances of dysentery or commencing typhus, we might at last come to the conclusion that very few of the wounded had been lost from pyæmia. Professor Billroth is glad to be able to say that he has met with no attempts at self-deception in this matter. The Surgeons with whom he came into contact were under no doubt as to the excessive ravages caused by pyæmia in certain classes of wounds, while they felt greatly concerned that the immense improvements which have been made in the care of the sick and wounded and the construction of Hospitals, have not had that influence upon the worst kinds of injuries that might have been anticipated.

Among the 35 deaths from pyæmia, autopsies were performed in 21. In 15 of these, abscesses of the lungs were found, and in 1 a large abscess of the liver; but no other form of metastatic abscess was met with. In 6 cases it was expressly noted that no suppuration was detected. Of the 35 cases, 28 occurred in gunshot wounds of the pelvis, thigh, knee, and chest, wounds of other parts of the body only being 7. For the right understanding of the question of pyæmic intoxication, it is of especial importance to observe that the affection in a preponderating number of cases appears at certain stages only of bad injuries of the bones and joints. As the exact period of its commencement, and still more of the transition from the slight to the severe form, is of very difficult determination, we can only indicate with certainty the periods after the injury at which death took place. According to the table given of these 35 cases, 3 died during the second week, 12 in the third, 11 in the fourth, and the remaining 9 from the fifth to the ninth week—confirming the fact already made out by Professor Billroth (*Archiv für Klin. Chir.*, B. ix., p. 100), that death especially occurs during the third and fouth weeks. In this paper, also, he proves statistically that the disease occurs in certain conditions of the wound which are essentially connected with the nature of the injury and the part of the body which it implicates. While an outbreak of pyæmia is thus connected with certain recognisable circumstances, and its occurrence independent of such is quite exceptional, hospital gangrene, diphtheria, erysipelas, and trismus are entirely exempt from any such relationship, gaining access to the body as they almost do from without, the poisonous *materies* being capable of infecting any wound and in any stage. Septicæmia usually occurs during the first days after bad injuries, prior to the formation of pus in the wound; but yet, at a later period, under the operation of external causes, or, more rarely, through spontaneous accidents (as hæmorrhage, decomposition of foreign bodies in the wound, etc.), septicæmia or septo-pyæmia may also be produced. Professor Billroth has never yet seen a case of pyæmia in which either on the living or dead subject the origin of the infection could not be traced to the existence of a collection of purulent or putrefactive (*Jauche*) discharge.

He thinks it necessary to reiterate his views concerning this disease,(a) because many Surgeons still hold the opinion that pyæmic poison, like that of typhus, may be inhaled or swallowed. The wounded patient, however, is always rendered pyæmic by means of his wound, or of a source of purulent discharge. The infecting *materies* is forced through abnormal conditions of compression into the lymphatic and venous circulation, or, originating in thrombi of these vessels, it becomes detached by movements, and thus directly introduced. For the most part, acute inflammation of the wound, whether this be primary or relapsing, gives rise to the formation or retention of an especially poisonous pus, the walls of the cavities containing it being well disposed for its absorption. A small amount of increased compression suffices to force the poison into the circulation. The character of the wounds, the parts they occupy, the conditions of the compression of the blood in their vicinity, their position under compressing muscles and fascia, and the like, greatly influence the occurrence of pyæmia. Next are those circumstances which may exert an injurious modifying influence on wounds which seemed disposed to pursue a favourable course—mechanical injuries, artificial bleeding, great fluxionary discharges, or the accidental impregnation of the wound with poisonous organic matter derived from the wounds of others, through the medium of attendants, dressings, or instruments—all these are points to which our attention should be directed. Yet, in any Surgical wards, managed according to modern hygienic principles, they can exert little effect in their etiological relation to pyæmia. The occurrence of so many cases in the third and fourth week at Weissenburg might be regarded by some as an epidemic; but Professor Billroth's prior experience at Zurich, extended over several years, has demonstrated that certain kinds of bad wounds are alway endangered at this period of their course. Hospital gangrene, erysipelas, and trismus may be spread epidemically, but he has never witnessed such an occurrence in pyæmia, and strongly doubts its possibility. Pyæmia cannot be prevented by isolation, nor by the most scrupulous cleanliness, the best nursing, or the purest air. By all these means we can only secure that no infection shall be carried from bad wounds, furnishing more or less poisonous pus to others of a simpler nature, and that the patients may better support the intense inflammatory action, and more powerfully resist the secondary fever. Professor Billroth believes that quite enough, and, perhaps, too much, has been conceded to the influence of hygienic and dietetic influences in relation to pyæmia. Such was his opinion when he set out on his late mission, and he has returned with it still more confirmed. At Weissenburg, he had every reason to be content with the ventilation, the care of those who were in charge of the sick, and the diligence of his Surgical assistants. At Mannheim, the wounded were treated almost in the open air, and had the advantage of most excellent and devoted Professional aid; but in the same class of wounds, and at the same period of their course, the mortality was just as great as at Weissenburg.

Dr. E. Müller, the Director of Vaccination at Berlin, in a recent communication, observes that last year he drew the attention of the Profession to the danger of small pox being imported by the French prisoners, and to the necessity of a general revaccination. And, in fact, in many localities in Prussia the disease has been so transported; while everywhere there are complaints made as to the deficiency of lymph for revaccination, notwithstanding that this is sent daily from the establishments into the provinces. The reason of this is that the majority of Practitioners employ it in revaccination, without, at the same time, vaccinating children with it. Of course it is easier to have this lymph sent for the revaccinations, but manufactures of lymph as yet are not in existence; and what establishment can possibly supply it in sufficient quantity when the revaccinations are numbered by hundreds of thousands? Practitioners are urgent in their demands for large supplies of lymph; and as this, when they get it, is only employed for revaccination, the need remains as great as ever. Had they vaccinated children with it—who, indeed, require it still more than adults—more than enough for the most general revaccination would have been procurable. But it is said that the public will not consent to wait for revaccination, and therein it may be right enough in the presence of small-pox; but the Practitioner who has neglected furnishing himself with a good supply of lymph, by timely vaccination of children, has no right to call upon the vaccine establishment to repair his error. With the best wish even to do so, it is quite unable, where soldiers, whether at home or in the French provinces, and prisoners of war, all require to be revaccinated. Even the large supplies of glycerined lymph which Dr. Müller has accumulated in his establishment will at last become exhausted. The military Surgeons, it will be readily seen, must have large quantities of this sent for revaccination, inasmuch as they have not the power of multiplying the supplies through the agency of children. But in Germany itself the Practitioners alone are able to help themselves; and upon them alone should blame rest if in places visited by the small-pox there is not abundance of lymph. Where small-pox prevails, there can be no want of children. The lymph furnished by the establishments should be employed in vaccinating them, and maintaining a supply, instead of this being let to die out through revaccination. In relation to the increase and preservation of a supply of lymph, Dr. Müller again recommends in the most urgent manner the use of glycerined lymph.(b) The fact that in the present emergency his own establishment can go on supplying lymph, while other establishments have quite exhausted their means, is solely due to this invaluable resource of sanitary police.

(a) For an able analysis of these, see Mr. Winsor's Report in the Year-Book of the Sydenham Society for 1862.

ABSTRACT OF THE CROONIAN LECTURES,

DELIVERED AT

THE COLLEGE OF PHYSICIANS BY DR. PARKES.

The subject of the Croonian Lectures was the Elimination of Nitrogen. After some remarks to show the importance of nitrogen for the growth and nutrition of animal and vegetable life, three questions were proposed:—1st, as to the mode in which nitrogen entered the human body; 2nd, as to the mode in which it passed out; and, 3rd, as to the combinations it formed and the parts it played between the two points of entrance and of exit. The first lecture was occupied with the answers to the first two questions, the replies being that the nitrogen used in nutrition entered entirely with the food, and in the form of the substances conveniently called albuminates, and that its efficient channels of exit were through the kidneys and the bowels. This last point was discussed at some length as being fundamental to the whole inquiry, since, if the channel of exit could vary and be at one time chiefly by the kidneys, and at another in great measure by the skin, as has been alleged, or by the lungs, the difficulties of experimental inquiry would be enormously increased. The lecturer adduced a good deal of evidence on this point, and finally ranged himself on the side of those who look on the discharge of nitrogen through the skin and lungs in health, except in respect of the small portion which passes away in the cast off epidermal structures, as most unlikely. As to the passage of nitrogen through those channels in cases of disease, the lecturer did not express himself so confidently, but, while he admitted that he could not refuse the evidence that urea has been detected in the sweat, and ammonia in the breath (as an exhalation from the blood), he evidently considered the matter as requiring far more experimental evidence than had yet been adduced.

The importance of settling the exact channels of discharge of nitrogen became evident in the second and third lectures, when the whole course of the argument proceeded on the view that the discharge of nitrogen in the urine and fæces represented the nitrogenous substances which had become effete in the processes of nutrition. The relative quantities of nitrogen discharged by the urine and fæces in healthy men whose food was perfectly digested were next given; the average daily discharge in five men on the same diet being stated to be 26 grains in the fæces, and the proportions of fæcal to the total eliminated nitrogen being 9·5 per cent. A discussion of the method of determining the nitrogen in the excreta finished the first lecture.

In the second lecture the third question was answered, as far as it can be at present. The lecturer commenced with what he stated to be a cardinal fact—viz., that the exit of nitrogen was influenced in a marvellous way by the entrance, and was, within certain limits, absolutely governed, so to speak, by the entrance. This fact, made certain by the elaborate experiments of Pettenkofer and Voit, was tested and confirmed by experiments of his own, in which men were kept on diet containing varying quantities of nitrogen, and it was shown how, at will, the amount of nitrogen in the urine could be made to vary.

Starting, then, from this fact, the lecturer used it as a clue to unravel the place of the formation of urea. He first discussed the old doctrine of unprofitable or *luxus* consumption, or that a certain amount of nitrogenous food is always surplusage, and is got rid of by immediate oxidation in the blood, without taking part in what may be termed the vital acts in the body. Having adduced what he conceived to be very strong arguments against this doctrine of *luxus* consumption, he concluded that the intimate dependence of the amount of urea on the amount of nitrogen in the food in health could not be explained by immediate oxidation, but must depend on an influence exerted on the albuminates by the action of some organ or tissue in the body—or, in other words, that the formation of urea was not an inanimate oxidation, so to speak, but the result of the action of some living parts.

He then inquired what structures in the body could thus continuously and at once transform albumen into urea, so as to account for the fact that the exit of nitrogen in health so constantly and exactly balances the entrance. He first looked to the actions of the muscular system, but concluded that the experiments on exercise clearly showed that during great muscular exertion the changes in the elimination of nitrogen are quite inconsiderable. He so far accorded with the views of Edward Smith and Voit, although he differed with the latter in believing that there was an increase, though a slight one, in nitrogenous excretion after exercise, indicating the destruction of some, though doubtless a small part, of the structure of the muscle. But this increase was quite insufficient to account for the phenomena in question. Moreover, he had kept men on different amounts of nitrogenous food, and under varying conditions of rest and exercise, and still found the exit of nitrogen follow the entrance, no matter what the condition of the muscles might have been.

He then turned to the nervous system, but decided that here, also, the evidence of nitrogenous elimination immediately consequent on nerve-work of any kind showed that no alteration in nervous work could be produced by the varying entrance of nitrogen—which would explain why, if an increase in nitrogenous food was made, that increase was accurately reflected in a few hours by an increase in urea.

The only other structures in the body whose action seemed at all likely thus to change albumen into urea were the gland cells, and to these he now turned. He considered that he had been led to them by a fair negative argument, but he now inquired what positive evidence was available that urea was found in them. First, as to the liver: that urea was found in the liver seemed certain, both from physiological and pathological evidence. To take the latter first, he alluded (with an apology for mentioning his own name) to his observations on the diminution of urea in hepatic abscess, published more than a quarter of a century ago; and to the absence of urea in the acute yellow atrophy of the liver, as shown by Frerichs and Murchison, when the destruction of hepatic cells is attended with the non-formation of urea. Turning to physiology, he quoted Stokvis, Heynsius, Meissner, Bullard, and Perls, as showing the detection of urea in the liver, and then noticed E. Cyon's experiments, who, by analysis of the blood before and after traversing the liver, seems to have proved that urea is actually formed in the liver. The formation of uric acid in the liver was also referred to, and the probable formation of urea, and especially of uric acid in the spleen, and, perhaps, other gland cells, was noticed.

The result of the discussion was to the effect that the appearance of urea in such strict relation to the amount of nitrogenous food was to be accounted for by the action of the gland cells, and especially of the liver cells, on the albumen of the blood. The mode of action he did not pretend to explain, but referred it to the so-called osmotic force of Graham, causing a splitting up of the particle of albumen into urea and, probably, a carbo-hydrate of some kind.

The lecturer then summed up the general formula of the facts he had brought together in the words of Voit, which he accepted as correct. Voit draws a broad distinction between the albumen of the organs, which is fixed, and comparatively stable, and changes slowly, and the circulating or store albumen, which, moving with the blood, is undergoing continual metamorphosis in the gland cells, and is being transformed into other substances, of which urea forms one. The lecturer put his own interpretation on this doctrine as follows:—Taking a muscle, for example; he believed that a voluntary muscle, excited by the will, could perform work by the aid of fats and starches, and he adduced an experiment in which, on the fourth day after nitrogen had been cut off from the food, a man did an extremely hard day's work. In doing this work, a certain, but only a very small part of the nitrogenous structure of the muscle would lose its adaptability for contraction; it would then be removed, not transformed into urea in the muscle, but, passing into the blood, would become the food of the gland cells, and be there transformed into urea. The muscle, thus losing a small part of its substance, would attract from the store of albumen brought to the blood what it wanted, and this attraction would take place either during the contraction (*i.e.*, in the relaxations perhaps between the contractions) or in the subsequent period of rest. The nervous action was similar. The amount of change in either case would be small, but would no doubt depend directly on the amount of work done. Then the gland cells, on the other hand, gifted, so to speak, with a sort of independent life, would take the nitrogenous substance brought to them, whether this came at once from the food, or from the action of the muscles or nerves or other organs, and would act upon it, and thus cause the increase in the urea noted after food, or the much more slight, and indeed insignificant, increase which occurs after muscular or nervous exercise.

(b) For Dr. Müller's testimony as to the value of glycerined lymph (very important to ourselves just now), see *Medical Times and Gazette*, May 19, 1866, p. 529; July 27, 1867, p. 97; and April 18, 1868, p. 425.

If this view be accepted, Dr. Parkes argued that it must have a great influence on the dietetic treatment of disease. The possibility of starving the liver cells, as far as nitrogen is concerned, was pointed out, and it was suggested whether even rapidly growing malignant tumours might not be stunted in their growth if the amount of circulating nitrogen from which they derive their supply could be reduced. Feeding with fats and starches, from which muscular and nervous force could be evolved, and deprivation of nitrogen which is necessary for growth, seemed to be the principles indicated by the physiological view which had been brought forward.

Having gone into these points at some length, the lecturer stated that in the third lecture he should inquire how far the view he had brought forward would explain the phenomena of disease.

THE AUTUMN TOUR OF A DRESSER, 1870.

"Aid to the Sick and Wounded in War.

"At a meeting held on Monday, at 8, St. Martin's-place, Trafalgar-square—present, Lieut.-Colonel Loyd-Lindsay, V.C., M.P., in the chair; the Duke of Manchester, F.M.; Sir J. Burgoyne, Bart.; Lieut.-Colonel Hon. C. Lindsay, M.P.; Capt. Douglas Galton; Dr. A. J. Pollock; Captain Henry Brackenbury, and Lord Elliot—the following resolutions were passed: 1. That Dr. A. J. Pollock, Mr. Prescott Hewett, and Surgeon-Major Bostock, form a sub-committee for the purpose of selecting six Surgeons or dressers in every way qualified to serve as a detachment from this Society with the French and Prussian National Societies for Aid to the Sick and Wounded in War, etc."

A paragraph which appeared in the *Times* in the beginning of August, of which the above is a literal copy, attracted my attention. The session was just over. I was strongly interested in the great event of 1870—the war. Here, then, was an excellent opportunity of enlarging my Professional experience, and of being an eye-witness of the stirring events about to occur. No sooner did I conceive the idea than I acted upon it. Accordingly, through the influence of Mr. Prescott Hewett, my application to the National Society for Aid to the Sick and Wounded was accepted. I was instructed to proceed in twenty-four hours' time to Berlin in the capacity of dresser attached to three Surgeons, who were to start at the same time; and I was informed that for my travelling expenses, etc., I should be allowed £30 a month, and that I should be furnished, on my arrival at Berlin, with the badge and accompanying documents as decreed by the Geneva Convention, and that we should have to report ourselves to the authorities of the central "Hulfsverein Comité."

My pay for the first month was at once placed in my hands, and I was directed to proceed to the Foreign Office to obtain my passport, which was supplied free of charge.

Everything being thus in readiness, I started the same evening in company with the gentlemen with whom I was associated. We proceeded *en route* for Berlin. On our way we had but two stoppages. The first was at Aix-la-Chapelle, where the carriages were searched by Prussian officials, in consequence of a telegram which had been sent down the line from the frontier town of Heberstlial, to the effect that a French spy was in the train, who must be arrested at once. The obnoxious individual turned out to be in our carriage, whence he was promptly dragged forth, despite his indignant oaths and protestations in bad German that he was utterly innocent of what was imputed to him. However, as we came across him the same night at our hotel in Cologne, it is to be presumed that he was a victim of suspicion and of police officiousness, which is quite as rife in Germany as it is nearer home. The second delay was at Cologne, the city of a thousand-and-one smells (mostly bad), owing to the line being blocked up by trains in the service of the German army. This was the night of Friday, August 12. We found we could not proceed on our journey before the morning of Sunday. However, none of us regretted this, as it was here we had our first practical experience of the war. The railway-station at Cologne can boast waiting-rooms which might serve as models to our railway companies in England, so completely are they fitted up with regard to the comfort of the passengers. Here the second- and third-class waiting-room, which is one large hall, was fitted up as a temporary Hospital, and contained both French and German wounded, which had recently arrived in hundreds from the battle-fields of Wörth and Weissenburg. The cases we chiefly attended to were gunshot wounds of the extremities. There were none of a nature which called for any special remark. Of course, there were a number of German military Surgeons in the room, attending, with unremitting kindness and assiduity, on French and Germans alike.

It was here, too, that we saw, for the first time, the Prussian Landwehr, who had just been called out, and who were marching through the town in thousands on their way to the front. Though certainly a fine and perfectly-drilled body of men, it has since struck me that the Landwehr have been much overrated as regards their *physique* by newspaper correspondents. Taking regiment for regiment, they do not come up to the average of the troops of the line in England; they are very much the same kind of men in general appearance, but decidedly wanting in the squareness of shoulders and depth of chest which is the characteristic of the British infantry soldier.

Before quitting the subject I may remark that we were put to some inconvenience by the scarcity of attendants in Cologne, owing to the great number of the natives that were called out to serve in the Landwehr regiments.

On the Sunday we ascertained, through the kindness of the Etappen-Commandant, that we could be provided with free passes on to Berlin, on showing our credentials from the National Society, of which we accordingly availed ourselves. We arrived the same evening at Berlin, after another stoppage on the road, occasioned by one of the carriages attached to our train running off the line. However, as the only occupant of this carriage was a Prussian officer who was slain at Saarbrucken, and who was being conveyed to be interred in Berlin, no harm was done. On our arrival we put up at the Hôtel du Nord, which I can recommend to all as offering the best of accommodation at a very economical figure, and as having the reputation of possessing about the best *table d'hôte* in Germany.

Following our instructions, we applied the following morning in Berlin at the Medical Department of the War Office, and had an interview with Dr. Grum, Inspector-General of Hospitals, who quietly, but courteously, remarked that he feared our knowledge of the German language was so deficient, that it might prove a hindrance in a great measure to our work. On taking our departure, he gave us an introduction to Count Maltzon, who is the right hand of Prince Pless, the recognised head with the army of the Red-cross Society in Prussia. The Count received us with great urbanity, and demonstrated clearly and simply the arrangements of the different war Hospitals on the frontier, and in reserve at Forbach, Wörms, Darmstadt, Coblentz, etc. In addition, he afterwards provided us with the Red-cross badge and two cards, respectively green and yellow in hue, and each bearing the stamp of the red cross, and Prince Pless's signature in lithograph impressed on it. One of these cards, we were given to understand, was a free government railway pass to Wörms, and the presentation of the other was sufficient to provide us with board and lodging while attached to the Medical service of the army. However, as we subsequently ascertained, on making use of the last-mentioned card, that both provisions and lodging supplied to us through its agency were of a very inferior quality, we were not long in dispensing with its use altogether. The Count then directed us to hold ourselves in readiness to proceed at a moment's notice from the War Office to the front, and after thanking him for his courtesy, we withdrew.

The next day, Tuesday, August 16, the necessary instructions not having arrived, we occupied ourselves in visiting the chief places of interest, amongst others the "Feld-Lazareth" (temporary field Hospital), constructed after the American fashion in echelon (or V-shaped) with the administrative department in the centre; the flanks of the V being a series of wooden barracks containing all the necessary appurtenances of a field Hospital. The barracks were admirably adapted for their purpose, being plentifully supplied with light and ventilation. Later in the day we visited the Hospital of La Charité, the largest in Berlin; it contained about 150 wounded soldiers, all seemingly light cases, 1300 others, and a few maternity cases.

Next day, still finding time heavy on our hands, we visited the Uhlans' barracks, a tremendous stone building, some two miles from the city, which was converted into a Hospital under the superintendence of Professor Virchow, who was kind enough to introduce us to Dr. Thompson, an Edinburgh Surgeon, who had also volunteered his service to the Prussian army. The latter took us over the wards; but here again we saw very few severe cases, one or two penetrating wounds of the chest, but mostly gunshot wounds of a light character. It was in this Hospital I first saw the much-dreaded Turcos—"the apostles of the Napoleonic civilisation," as the German caricaturists called them—who had, as we ascertained, only taken a fortnight on their journey from Algeria to Berlin *viâ* Saarbruck; one of these gentlemen had a very narrow escape, a shot just grazing and taking off part of his upper lip at the root of his nose.

On the previous Saturday, the Hospital had the honour of a visit from the Queen, Princess Frederick Charles, and our own Princess Royal, who spoke to every patient, and gave each of them (French and German) a small bouquet of flowers.

Thence we proceeded to the Augusta Hospital, erected by the voluntary contributions of the ladies of Berlin in connexion with the Red-cross Society after the war of 1866, a model of perfect construction, administration, and decoration, the religious as well as the physical element being well looked after. Some few wounded soldiers; all of them, especially the French, wonderfully lively. One colonel of the French army, wounded in the left arm and leg, seemed to enjoy his clay pipe immensely. On our return to our hotel, we found a barrel painted white, with the inevitable red cross on it, placed outside the steps, with the following inscription in German:—"Please give a good Havanah to a wounded soldier!" This seemed to touch the German heart immensely, for, in the course of the day, no less than 1000 "weeds" were dropped in, and 2500 more on the following day.

The long-expected orders came at last, and we left Berlin on Saturday morning, August 20, leaving the town in a great state of excitement, owing to the news of the victories before Metz, which had arrived the previous evening. Our original instructions were to go to Worms; but the Crown Princess, in compliance with the request of her sister, the Princess Alice, to have English Surgeons attached to the Hessian division, changed our destination, and directed us to go to Darmstadt. After putting up for the night at Frankfort, we started in the morning for Darmstadt. Here we had the honour of being presented to the Princess, who expressed great delight at seeing us, having, as she said, quite given us up. Her Royal Highness, I regret to say, was looking very worn and delicate, having just heard of the fearful slaughter of the Hessian troops at Gravelotte. Her Royal Highness has earned golden opinions of all with whom she has been brought in contact during this war. She has been constant in her attendance on the wounded in the Hospitals, and many a poor private has opened his eyes with wonder to think that a Princess of the blood Royal of England should have tended him with greater attention than he might have expected from an ordinary nurse. The Princess introduced our chief to Herr Weber, the head of the Hessian "Hulfsverein für Verwundete Soldaten," who informed us that he would send us on to join Prince Louis of Hesse (General of a division of the 9th Army Corps) the next day, before Metz; and, accordingly, the same evening we started in accompany with a Sanitäts corps which was bound to the same destination.

My further experiences of the journey, and our work around Metz with the army, I purpose giving in my next paper.

THE SANITARY COMMISSIONER OF THE PUNJAUB ON THE CONTAGIOUS DISEASES ACT IN INDIA.

SURGEON DE RENZY, Sanitary Commissioner for the Punjaub, in his annual report on the sanitary administration of that province for 1869, publishes an extract from a letter addressed by him in June last to the Secretary of the Punjaub Government relating to the prevention of venereal diseases. This letter has been hailed as supplying a fresh weapon for another blow at the Contagious Diseases Act as at present in force in this country. On perusal we find that Mr. De Renzy disclaims all sympathy with the objections which have been raised against this Act on the score of its tendency to promote immorality, its being unjust to women, and so forth; for he does not believe that such charges can be established.

The recent expression of the personal opinion of the Premier, that it is by the ascertained moral tendency of this exceptional legislation that it ought ultimately to be judged, justifies us in stating that Mr. De Renzy should not be classed among the opponents of the Act. He considers its success doubtful, but regards its operation in England with great interest as a most important experiment, and expresses his opinion that, if the Act prove successful in England, it will be the duty of the Indian authorities to profit by English experience, and apply the system in that country *when they have removed the most serious of their sanitary defects*. He justly considers that while cholera, diarrhœa, dysentery, fever, and hepatitis continue uncontrolled, the prevention of venereal diseases as a source of inefficiency, mortality, and invaliding of European soldiers, sinks into comparative insignificance. On purely financial grounds, he objects to the experiment being tried in India just at present—particularly as it is proposed to extend the operation of the Act from military cantonments to the civil population at the cost of municipal funds—as he doubts whether, in the present sanitary state of the country, measures for the prevention of venereal discasse are the best investment available for the scanty portion of the public income that can be spared for works of sanitary improvement.

With reference to certain statements made by Dr. Duncan Macpherson, Inspector-General of Hospitals, and accepted by the Sanitary Commission of India in 1864, that fully two-thirds of the soldiers who imbibe venereal are invalided within five years, and sent out of the service with a loathsome poison circulating in their veins, which passes down to their posterity, Mr. De Renzy, using Dr. Bryden's tables for the five years from 1864 till 1868, shows that Dr. Macpherson's estimate of the amount of invaliding of European soldiers on account of venereal diseases is immensely greater than the figures prove to have been its real extent. He shows that the percentage of syphilitic admissions to total admissions from all causes is 1·84, of syphilitic to total deaths is 0·77, and of syphilitic to total invalids sent home to England, 6·38.

Having in our preceding number published a table showing the rate of invaliding among troops in the United Kingdom from enthetic diseases, the following, compiled from the same source, supplies similar information as to European troops in India, and shows a rate of loss from such causes exactly identical with that observed during the same period in the United Kingdom, and a somewhat higher proportion to the total number finally discharged from the service, of men disabled by enthetic diseases. Any argument, therefore, in favour of the Contagious Diseases Act in this country as a means of avoiding such a considerable source of loss to the strength of the army, applies with equal force to India. From the two tables, the important fact is elicited, that of the armies in the United Kingdom and India, we are losing the services of a battalion 950 strong every five years, by invaliding alone, of men disabled by enthetic diseases.

Year.	Annual mean strength.	Total number discharged from the service at Netley.	Total number discharged from the service disabled by enthetic diseases.	Proportion per 1000 of annual mean strength of men disabled by enthetic diseases.	Proportion per 1000 discharged from the service of men disabled by enthetic diseases.
1864 ..	59,795	1105	84	1·4	76
1865 ..	62,589	1285	135	2·1	105
1866 ..	58,901	1295	107	1·8	82
1867 ..	56,896	1145	70	1·2	61
1868 ..	52,887	1097	58	1·1	53
Total ..	291,068	5927	454	1·5	76

Mr. De Renzy, having employed Dr. Bryden's figures for the subversion of Dr. Duncan Macpherson's loose estimate as to the influence of venereal diseases as a cause of invaliding of European soldiers, objects to these figures themselves that they convey an altogether exaggerated idea of the prevalence of venereal among the troops, as the same man may have been admitted twice, thrice, or oftener within the year, and for the same or for different infections; and that a man suffering from relapses of gonorrhœa, for instance, may represent half-a-dozen admissions for what is practically the same disease. But in raising this objection, Mr. De Renzy appears to us to have lost sight of the fact that the total inefficiency of a regiment from venereal diseases is represented by the number of days spent in Hospital by men suffering from such affections, and that a hundred days so spent by one man in five periods of twenty days each is as great a loss to the service, and as great an increase to the duties of men not in Hospital, as would result from twenty days being spent in Hospital by each of five men; so that, although the number of admissions does not absolutely represent the number of fresh cases of venereal infection, it affords an indication as to the inefficiency produced by such causes.

The annual reports of the Army Medical Department generally contain tables showing the loss of service of the whole Army in the United Kingdom from enthetic diseases, but do not supply the same information concerning the Army in India. On reference to the reports from 1864 till 1868, we have constructed the following table, which, taking the loss of service in the United Kingdom as a standard, will enable us to form an approximation to what that loss in Bengal must be:—

Year.	Proportion per 1000 soldiers of admissions from enthetic diseases in the United Kingdom.	Loss of service of the whole army in the United Kidgdom from enthetic diseases.	Proportion per 1000 soldiers of admissions from enthetic diseases in the Bengal Presidency.
1864 ..	290·7	6·98 days	241·5
1865 ..	282·8	6·59 ,,	216·9
1866 ..	258·5	5·91 ,,	206·9
1867 ..	291·5	6·25 ,,	*163·9
1868 ..	282·2	Not given.	†188·8

A considerable reduction in the rate of admissions from venereal diseases has thus occurred in Bengal, and assuming that a relation between the rate of admissions and the loss of service, similar to that observed in the United Kingdom, prevails in Bengal, we may fairly conclude that a corresponding reduction of inefficiency from the same cause would have been evident during the years 1867 and 1868 if the means of comparison had been at our disposal. The results of the measures taken during the last four or five years for the prevention of venereal diseases in the Bengal Presidency thus appear to afford more ground for congratulation than Mr. De Renzy accords to them. It is also particularly worthy of remark that the reduction in 1867, as stated in the note to the table, was most remarked in cases of syphilis, and the increase in the following year was chiefly in the comparatively harmless affection, gonorrhœa.

Another objection raised by Mr. De Renzy to the extension of the Contagious Diseases Act in India is based on his opinion that the Act has not as yet furnished results of a decisive character in England. On this point, however, the tables arranged by Dr. Balfour, F.R.S., head of the statistical branch of the Army Medical Department, and quoted in a condensed form by Mr. Berkeley Hill as table No. III., in his recent paper on the Statistical Results of the Contagious Diseases Act, will give Mr. De Renzy some information of later date than any available to him at that on which his letter was addressed to the Secretary of the Punjaub Government, and will probably cause him to alter his opinion as to the limited results of the Act in England. This table shows that, while in military stations under the operation of the Contagious Diseases Act the admissions of soldiers into Hospital for primary venereal sore steadily fell from 100 to 59 per 1000 of mean strength during the six years from 1864 till 1869, in stations not under the Act, or where it was only just lately put in force, the admissions from that cause have remained almost stationary—namely, 119 per 1000 in 1864, and 111 per 1000 in 1869. In both classes of stations, admissions from gonorrhœa remain almost without alteration; it is hence apparent that, as regards the most serious forms of enthetic disease, the Contagious Diseases Act has so far exerted a very beneficial influence in this country.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 28.

George Burrows, M.D., F.R.S., President, in the Chair.

A Paper, by Dr. **Julius Althaus**, was read

ON NEURITIS OF THE BRACHIAL PLEXUS.

In this paper the author has given a detailed description of a case of peripheral paralysis and anæsthesia affecting the whole of the right upper extremity, not a single motor or sentient nerve-fibre of the same having been spared. After excluding cerebral, spinal, and sympathetic paralysis, the influence of lead, of hysteria, and other causes, the author traces the affection to a rheumatic inflammation of the brachial plexus before its entrance into the axilla. The case was at first treated with various medicines and faradisation, but without any beneficial influence. The patient, however, recovered completely by a judicious use of the continuous galvanic current. Dr. Althaus then analyses the mode of therapeutic action of the continuous current in this case, tracing it partly to its power in causing the paralysed muscles, which did not respond to faradisation, to contract, and thereby preventing their atrophy; and partly to a catalytic influence in effecting a proper relation of the bloodvessels of the affected parts, so as to enable these to take up, and remove into the general circulation, pathological effusions which compressed the nervous matter, and thereby impeded the conveyance of the nervous influence to the distal parts of the nervous territory.

Mr. **Brudenell Carter** inquired whether the continuous current had been so applied in the case described as to include the brachial plexus in its circuit, and also whether Dr. Althaus had seen a curative effect from this current in other cases of neuritis. Neuritis of the optic nerve was so common a cause of blindness that any addition to the present means of encountering it would be a great boon to ophthalmic Surgeons. It was manifestly impossible, however, to include the optic nerve within the circuit; and hence the bearing of his question whether or not that had been done in the present instance. He asked, also, whether the irritability of the muscles to the induced current was restored.

Dr. **Powell** thought it probable that the curative influence had in reality been that of the prior treatment, and that after the removal of some effusion, the muscles were left paralysed by disuse, and required some strong stimulant to set them in action.

Dr. **Buzzard** thought the case possibly hysterical; and related the particulars of one of a somewhat similar kind, in which the patient had been cured by the application of a powerful faradic current.

Dr. **W. Ogle** inquired whether there were any cases on record in which paralysis of a superior extremity had been produced by disease of the cervical sympathetic.

Mr. **Thomas Smith** withheld his consent from the diagnosis. There was no history of tenderness, which he thought would certainly have been present if there had been neuritis.

Mr. **Savory** could not accept the author's explanation. He asked whether effusion takes place in nerves, and of what? If it took place would it produce paralysis? He thought probably not, when the absence of paralysis in cases where nerves were pressed upon by tumours was considered. He asked, also, what the electric current would do in such a case; how it would dilate bloodvessels, and why dilated bloodvessels should take up effusion?

Dr. **Althaus** replied that the current was applied by placing the positive pole over the brachial plexus above the clavicle, and the negative pole over all the paralysed muscles in succession. The irritability of the muscles to the induced current was restored, at first very slowly, but afterwards with a rush. Dr. Powell's view was untenable, because muscles paralysed by disease never lost their irritability to the induced current. Dr. Ogle would find several cases of paralysis of an arm from disease of the cervical sympathetic in Meyer's "Treatise on Electric Therapeutics." Such cases as those mentioned by

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* Reduction from preceding year most marked in cases of syphilis, and considered to be probably attributable to the preventive measures introduced during 1866.

† Increase over preceding year, chiefly from gonorrhœa.

Dr. Buzzard were very rare; and his own patient had been subjected to careful faradisation for a month. Mr. Thomas Smith's objection was met by saying that the paralysis had already existed for four months when the patient came under observation; and there was a history of tenderness during the first ten days. Mr. Savory must have seen many cases in which the growth of tumours had produced paralysis, when they pressed upon nerves so situated as to be unable to elude the pressure. Many such cases were recorded by Benedikt and others. He could not explain how the galvanic current produced dilatation of bloodvessels; but he knew the fact, and the dilatation might be seen to take place under the positive pole.

A paper, by Dr. C. Hilton Fagge, was read

ON SPORADIC CRETINISM OCCURRING IN ENGLAND.

After a brief reference to the occurrence of endemic cretinism in Somerstshire (as described by Dr. Hugh Norris, of South Petherton), the author passes on to the consideration of a disease of which a few scattered examples have been recorded, and which has been termed cretinism, but which differs in certain important respects from the endemic form of the disease. The features in which this "sporadic cretinism" resembles ordinary "endemic cretinism" are the following:—The body is exceedingly stunted; the hands and feet are short and broad; the face is broad; the eyes are widely separated by the flat root of the nose; the alæ nasi are thick; the nostrils are rounded; the mouth is very large, and generally widely open; the lips are thick. When "sporadic cretinism" is congenital, it is also attended with deficiency in the mental powers, varying in degree, but of a character very like that which belongs to the "endemic" form of the disease. The child is quite free from the mischievous tendencies of the ordinary idiot. It is good-tempered, and appears to be pervaded with a placid contentment. It often sits for hours perfectly quiet, wherever it may be left, and it is disinclined to move of its own accord. Sometimes it walks only with the assistance of a chair, even when it has passed the age of puberty. It is not rarely deaf and dumb. The resemblance between endemic cretinism and the disease now under consideration was pointed out to the author by Dr. Gull. In certain important respects, however, this disease differs from ordinary cretinism. In the first place, it is sporadic. It does not arise by the intensification of a local morbid influence, of which the earlier manifestations are evident in the parents of those affected with it. It springs up, generally without apparent cause, in the offspring of a healthy father and mother. Again, it is not necessarily congenital. In a case exhibited to the Society at its meeting, this morbid change commenced at the age of 8 years. Up to that time the patient, the daughter of people in comfortable circumstances, had been well developed. She had an illness, which was believed to be measles, after which she ceased to grow, and her bodily configuration underwent a complete change. Now, true endemic cretinism is said always to commence before the end of the fourth year. Goître is never present in "sporadic cretinism"; indeed, in the only two post-mortem examinations which have as yet been made in such cases, and which were performed by Mr. Curling, no trace whatever of the thyroid body could be discovered. So far as can be ascertained, it appears probable that the thyroid body is likewise absent in the four cases which have recently come under Dr. Fagge's observation, and of which an account is given in the paper. On the other hand, in all these four cases, and in the few examples of a similar kind that have been placed on record by other observers, there have been invariably present certain soft symmetrical tumours, lying one on each side of the neck, just outside the sterno-mastoid muscle. One writer has described these tumours as venous, and they have sometimes been supposed to contain the apices of the lungs, since a distinct respiratory murmur has been heard on auscultation over them. But Mr. Curling showed that they consisted simply of fat, which was not enclosed in any distinct capsule. Of the four patients who have recently been under the author's observation, one (the girl in whom the disease began at 8 years of age) is now 17 years old, and is 4 ft. 1 in. in height; another, a boy, is 8 years old, and is 2 ft. 7¾ in. high; a third, about 20 years old, is 2 ft. 4 in. high (this is a boy or man); the remaining patient, a girl, is 12 years old, and 3 ft. 10½ in. in height. The author is disposed to adopt Mr. Curling's opinion that the atrophy of the thyroid body (if this should turn out to be a constant feature in sporadic cretinism) is the cause of other phenomena of the disease; and in the concluding part of the paper an hypothesis is advanced which may, perhaps, explain the apparent contradiction which is involved in the association of this affection with wasting of the thyroid body, while the other form of cretinism is connected with goître. At the same time it is thought that this hypothesis affords an explanation of certain peculiarities in the relations between endemic cretinism and goître which have hitherto appeared to be difficult of comprehension. Goître is endemic in many parts of England where cretinism is unknown. Goître is the earlier effect of the endemic influence; cretinism shows itself when that influence has been intensified by operating on more than one generation. Hence it might be inferred that the worst cretins would invariably have very large goîtres. Such, however, is not the case; they have often no enlargement of the thyroid body. These considerations have led some observers to think that the association of endemic goître with endemic cretinism is a mere accident. They rather appear to prove that there is a certain antagonism between the two phenomena. A large goître may possibly have the power of protecting the individual against the more severe effects of the endemic influence. The most careful investigation has failed to show, either in the air, the water, or the soil of Alpine valleys, the presence of any element which is absent where cretinism does not prevail. Hence, if one could discover any counteracting tendency, it would not be improbable that the cause of cretinism prevails much more widely than the disease itself, although, doubtless, with an intensity varying in different localities. The author thinks that to counteract this cause in its slighter degrees may be one of the functions of the healthy thyroid body, which may thus be supposed to perform under ordinary circumstances the same office which the organ hypertrophied to form a goître is imagined by him to carry out in those districts where cretinism is endemic. If this be so, one can see why wasting of the thyroid body should, in England, produce a form of cretinism.

Dr. Langdon Down had been very much interested by the paper; and had at present twelve cases of the class referred to under his care. In none of them was there goîtrous ancestry, and when not congenital, he connected the disease with the period of second dentition, rather than with measles, or any other ailment. In some of his patients there was presumptive evidence of parental intoxication at the time of procreation. No distinction could be drawn between sporadic cretinism and idiocy on the ground of quietness, because there existed a large class of quiescent idiots, chiefly those whom he had described as being of the "Mongolian" type.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, March 18.

Dr. Druitt, President, in the Chair.

Mr. Cooper gave an explanation of his patent system of sanitary road-watering. Its advantages were, that it diminished the water-cart nuisance, completely laid the dust, deodorised street refuse, and absorbed ammonia. He used forty pounds of the chlorides of calcium and sodium to 250 gallons of water; evaporation of the water was retarded, and moisture abstracted from the atmosphere; hence a great diminution of the quantity of water required. The expense is considerably less than that of mere water. The patent has been in operation in various places. The whole district of the Westminster Board of Works was watered on this principle last summer.

Mr. Liddle called attention to the new Building Act, which contained several important improvements, but was ambiguously worded. One provision of the highest importance was that the rooms should be ventilated from the outside; another, that there should be an open space in the rear of each house of 100 square feet. Mr. Liddle contended, however, that the words "in common with others" were objectionable, and ought to be "exclusively belonging to each house." The words "at all times" would, he hoped, prevent persons from afterwards building over these spaces, an abuse that had long existed. Rooms were to be eight feet in height, instead of seven.

Dr. Gibbon said that in his district the back yards were continually being built over. The surveyor thought it legal to build over yards up to the first-floor.

Mr. Ross condemned the use of underground rooms as sleeping-rooms.

The President said that at the West-end the servants' offices were nearly all underground, and the men-servants mostly sleep downstairs.

Mr. Liddle moved, and Mr. Lord seconded, "That a committee of the whole Association be appointed to consider the new Building Bill."

The President read a paper entitled "The Report of the Royal Sanitary Commission as affecting Medical Officers of Health." It was satisfactory to find in the report that none of the defects shown to exist are traceable to failure on the part of Medical Officers of Health. The present law was condemned as incomplete, confused, and contradictory. The local authorities were found to be too numerous and too apathetic, and the existing central authorities under-manned and under-armed. To remedy these evils it was proposed that all conflicting jurisdictions should be abolished, and that there should be one, and only one, sanitary authority in each place. That in places where there was either a town council, improvement commissioners, or local boards, such boards should be the authority; in all other places the board of guardians. That the boards of guardians should themselves undergo such modification as would insure their efficiency, thus securing at the same time a better system of poor-law relief, which the report acknowledged was closely connected with the subject in question. Such were the authorities the Medical Officers of Health were to have over them. Next, as to whom it was proposed to employ as Medical Officers of Health, the report recommended the Poor-law Medical Officers as specially fitted for the office. In large towns, however, and in other places where the guardians were not to be the sanitary authority, the report recommends that the appointments of Medical Officers of Health should be distinct from those of the unions, and that in these cases the mutual relation of the Medical Officers of Health and the Poor-law Medical Officers should be arranged by the local authorities with the approval of the central authority; that Medical Officers of Health should not be removable without the sanction of the central authority. The chief innovation in respect of the duties was that the Officer of Health should report to the central, as well as to the local, authority; and that he should inquire into the cause of death in all cases not otherwise Medically certified. Many coroners' inquests would probably be thereby rendered unnecessary. The Commissioners proposed that forms of returns relating to health should be sent out from the central authority, to be filled up by the Medical Officer of Health, such officer being empowered to call for returns from the registrar of births and deaths, from nuisance inspectors and others, in order to make his report as complete as possible. The importance of a registration of sickness was acknowledged, and it was recommended that, at first, all existing returns should be fully utilised by being forwarded to the central authority, and by being worked up by them. The Commissioners advised that inducements should be held out to encourage the study of State Medicine in all its aspects. The President said the paper he had read was a fair abstract of the report, made by a barrister possessing great knowledge of sanitary matters. If he might criticise, he said he wished that the Poor-law officials, from the top to the bottom, would, with the proposed new organisation, take a new name, such as department of "Public Health, Assistance, and Statistics." The name "Poor-law" stunk in the nostrils. The Poor-law Medical officers should have another name—as "Civil Surgeons," "District Physicians," or the like—so as to induce the best men to seek the office. In the next place, he hoped the new arrangements would give scope for the employment, not merely of inspectors radiating from a central authority, but of the best and most energetic provincial Practitioners, many of whom had already done good work in sanitary reform.

Mr. Michael traced the history of the Sanitary Commission from the time it was pressed upon the Government by the British Medical Association and the Social Science Association, and considered the report unsatisfactory, because the whole scope of the Commission had been changed, the metropolis had been excluded, and the men who urged the appointment of the Commission had not been asked for their information. He considered the appointment of boards of guardians as the sanitary authority quite a retrograde step. The Medical Officer of Health ought to have a district and a salary large enough to make him independent of private practice. He ought also to have such powers given him as to be able to order the carrying out of improvements, undeterred by the small cottage proprietors who sat on these boards and were the chief obstructors of all sanitary improvements.

The President asked the opinion of Dr. Hardwick (deputy coroner for West Middlesex) as to whether the suggestions of the Commissioners would not diminish the necessity for a great number of coroners' inquests.

Dr. Hardwick considered that improvements might be made in the Coroner's Court by which many inquests now held might be avoided.

MEDICAL SOCIETY OF LONDON.

Monday, March 6.

John Gay, Esq., F.R.C.S., President, in the Chair.

Mr. W. F. Teevan read a paper entitled

REMARKS ON THE PATHOLOGY AND TREATMENT OF STRICTURE.

Mr. Teevan commenced by defining stricture to be "any diminution of the natural calibre of the urethra, the result of the contraction of organised lymph." This, therefore, embraced all the stages of the complaint, and recognised and treated its earliest incipiency years before it was usually detected in this country. Most Surgeons would say that, if in a given case a No. 10 catheter could be passed into the bladder, there could be no stricture; hence this serious pathological fact was presented to our notice—that the urethra could dwindle down to one-third its natural calibre without so important a change being even suspected. The first symptom of stricture was the presence of a gleet of six months' duration. If in such a case the bougie à boule were used, it would detect contraction. Strictures might be divided into subpubic, penile, and orificial. The division of the subpubic form into membranous and bulbous was not warranted by any facts. Of a given number of strictures, 80 per cent. were subpubic, 18 per cent. penile, and 2 per cent. orificial. Regarding the physical conformation of strictures, they might be divided, according to the sensations they imparted to the bougie à boule, into tunnel and ring strictures. All means of treatment which had not for their end the restoration of the calibre of the urethra to its natural diameter, would fail to effect a permanent cure. All operative procedures had usually to be preceded, and always followed, by gradual dilatation. It thus appeared that no urethrotome or dilator could dispense with the bougie, but the bougie could do without them. Gradual dilatation by means of the French flexible bougie was undoubtedly the best treatment for the majority of strictures, as it was applicable to all cases, and was never attended with the slightest danger or annoyance. If any operation were required, it ought to be a cutting and not a tearing operation, as greater contraction followed the latter than the former. Those strictures which contracted rapidly after dilatation, or could only be dilated to a certain point, were best treated by subcutaneous division on a grooved staff. If no instrument whatsoever could be passed through a stricture, such a case ought to be treated by external urethrotomy without any guide.

Mr. MacCormac considered that most strictures were best treated by gradual dilatation. If the Profession effected the diagnosis of stricture in its earliest stage, as indicated by Mr. Teevan, operative interference would be abolished.

Mr. Gant treated strictures by gradual dilatation, reserving exceptional cases for the use of the dilator.

Mr. Davy looked upon the bougie à boule as a most valuable instrument, and considered it ought to be used in every case of gleet, to see if there were any stricture. He thought strictures were best treated by forcible rupture.

Mr. J. D. Hill treated stricture by forcible rupture. He had, however, had two deaths after its use.

Mr. Henry Smith was strongly opposed to the forcible rupture of strictures, on account of the number of deaths which had followed that procedure. After forcible rupture the strictures always contracted again as badly as ever. He thought there was no treatment like that by gradual dilatation, because it could effect all and more than a dilator could do, and that without the slightest risk to life.

Wattle-gum Poison.—A singular death occurred between Tuesday and Friday last to a boy, about 10 years old, who lived near Queenstown, Victoria. On Tuesday evening he left a mine at the Caledonia diggings, saying he must go home; but he was never seen alive again, and on Wednesday his dead body was found about three-quarters of a mile from his father's hut. He had evidently been vomiting gum, and had then rolled down the slope by some means, and dislocated his neck. There were no signs of a struggle where the body was found, nor any wattle-trees, though he must have been eating the wattle-gum which he had vomited. Children are accustomed to eat this wattle-gum, which is something like gum arabic. At an inquest held on Friday, the jury found that the boy had died from fracture and dislocation of the neck, but that there was nothing to show how the injuries were caused.—*Melbourne Paper.*

OBITUARY.

DR. PATRICK ANDERSON.

It is our melancholy duty to record to-day the death of Dr. Anderson, which occurred suddenly, on the 6th inst., at Castle Douglas. Dr. Anderson was well known as an eminently successful Medical Practitioner in Castle Douglas and surrounding district. His great Professional talent and personal worth caused him to be much honoured, respected, and sought after by all classes of the community, by whom he will be long remembered and regretted as a kind and valued friend and adviser. He was also most favourably known to, and on friendly terms with, those in the highest ranks of his Profession in Edinburgh, as well as with his brethren at home. For some years his health has been far from good, and the fatigue and anxiety attending his Professional labours and studies have, without doubt, been too much for his age and strength, although he was able to carry on his extensive practice until quite recently. Three weeks before his death he was seized with a fainting fit, from the effects of which he never rallied, and on Monday morning, March 6, he expired, without any apparent suffering, after a most useful Professional career of over fifty years.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 16, 1871:—

Hill, Charles Hamor, Teddington.
Robey, Peter John, Newcastle-under-Lyne.
Stamford, William, Swindon, Wilts.

The following gentleman also on the same day passed his First Professional Examination:—

Chilcot, James, University College.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Dobson, Nelson C., F.R.C.S.E.—Surgeon to the Children's Hospital, Bristol, *vice* T. G. Baretti, resigned.

Dukes, Clement, M.B., B.S. Lond., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A.—Medical Officer to Rugby School, *vice* Robert Farquharson, M.D. Edin., resigned.

Royds, Wm. A. S., L.R.C.P.—Medical Officer to the Reading Dispensary, *vice* T. L. Walford, M.R.C.S., resigned.

MILITARY APPOINTMENTS.

88th Foot.—Surgeon Archibald Henry Fraser, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

Medical Department.—Assistant-Surgeon Richard Turner, M.D., from 103rd Foot, to be Staff Assistant-Surgeon, *vice* Walter John, deceased.

BIRTHS.

Beaumont.—On February 1, at Judore, India, the wife of T. Beaumont, M.D., F.R.C.S.I., of a son.

Gourlay.—On March 15, at Weston-super-Mare, the wife of Frederick Gourlay, M.D., of a son.

Iles.—On March 18, at Watford, Herts, the wife of Wilson Iles, M.D., of a son.

Lovejoy.—On March 17, at 8, Portman-street, Portman-square, W, the wife of W. H. Lovejoy, M.D., M.R.C.S. Eng., of a son.

Lynes.—On March 17, at 9, Priory-row, Coventry, the wife of Edward Lynes, M.D., of a daughter.

Martyn.—On March 21, at Clifton, the wife of Dr. Martyn, of a daughter.

Sargent.—On January 27, at Lingasoogoor, Deccan, the wife of J. Forbes Sargent, Assistant-Surgeon Madras Army and 5th Infantry Hyderabad Contingent, of a son.

Smith.—On March 16, at Islip, Oxon, the wife of Walter Wyke Smith, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

Davoren—Wright.—On March 14, at St. Paul's, Upper Norwood, John Lucius Davoren, B.A., M.B., T.C.D., of Wandsworth, son of the late Rev. A. Davoren, rector of Miltown, Mall Bay, county Clare, to Marianne Havard, elder daughter of the late Samuel Wright, M.D., Professor of Materia Medica, Queen's College, Birmingham.

Dyer—Macpherson.—On March 15, at St. Andrews Cathedral, Inverness, N.B., Henry Julian Dyer, Esq., late of Blackheath, to Anna Denoon, daughter of the late Donald Macpherson, Surgeon 64th Regiment.

Gallagher—Canaval.—On January 25, at Lima, Peru, Juan P. Gallagher, eldest son of John Gallagher, M.D., of Lima, to Petrouila, youngest daughter of the late Don José Mansueto Canaval.

Handcock—Oliver.—On March 16, at Rothwell Church, by the Rev. Robt. Handcock, assisted by the Rev. Wm. Handcock, and Rev. Chas. Handcock, all brothers of the bridegroom, George Handcock, M.R.C.S.E., of Leeds, to Elizabeth, only daughter of Thos. Oliver, Esq., of Haigh House, Rothwell, near Leeds.

Shaw—Gale.—On March 18, at the Church of St. Philip and St. James, Leckhampton, Henry Sissmore Shaw, M.R.C.S.E., etc., of Louth, Lincolnshire, eldest surviving son of Dalrymple Shaw, Esq., of Calcutta, attorney-at-law, to Emily Catherine Septima, youngest daughter of John Gale, Esq., of Oakfield, The Park, Cheltenham.

DEATHS.

Austin, W., M.D., Inspector-General of Hospitals, and formerly of the 97th Regiment, at Sherbrooke, Canada, on February 24, aged 81.

Beaumont.—On February 3, at Judore, India, the infant son of T. Beaumont, M.D., F.R.C.S.I.

Colthurst, Isabella, Sarah, wife of James Bunter Colthurst, M.R.C.S.E., at Tyr Phil, Glamorganshire, on March 17, aged 33.

Davidson, Janet Prentice, widow of the late Thomas Davidson, Surgeon H.E.I.C.S., at 15, Norfolk-square, on March 18.

Dixon, Margaret Christian, the wife of Edward Dixon, Surgeon-Major H.M. Madras 4th Light Cavalry, on March 17.

England, Alan, infant son of Dr. England, Winchester, on March 14, aged 3 days.

Fox, Conrad, son of the late Robert Fox, Surgeon, Godmanchester, at the Victoria Hotel, Euston-square, on March 14, in the 45th year of his age.

Grantham, John Thomas, M.R.C.S., at Crayford, Kent, on March 15, aged 43.

Haynes, Hotchkin, M.D., late of Applecross, and J.P. for the county of Ross, youngest son of the late Henry Haynes, Esq., Grove House, Whittlesey, Cambridgeshire, at Woodend Cottage, Hazelhead, Aberdeen, on March 15, aged 49.

Learmouth, John Livingstone, at 11, Gloucester-gardens, Hyde-park, W., on March 16, aged 59.

M'Clatchie, Archibald, Surgeon, Royal Navy, at Bruges, Belgium, on March 13, aged 53.

Millar, Sarah, widow of Samuel Millar, M.D., late of Guilford-street, on March 19.

Morgan, William J., M.R.C.S.E. and L.S.A. (of 17, Edgware-road, London, W.), at North Parade, Bath, of phthisis, aged 27. He had been apparently at the commencement of a prosperous career, but was both resigned and prepared for the fatal result.

Royston-Pigott, Anne, the deeply-lamented wife of George West Royston-Pigott, M.A., M.D., of Clare House, Halifax, and 2, Lansdowne-crescent, Kensington-park, W., on March 15, after a short illness.

Weld, William Henry, second son of William Walter Weld, Surgeon-Major, h.p. Army Medical Staff, at his father's residence, Rochester, on March 13, aged 23.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Aysgarth Union.—Medical Officer and Public Vaccinator for Askrigg District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Geo. Winn, Esq., Junior Clerk to the Guardians, on or before April 17.

Birmingham General Dispensary.—Resident Physician and Secretary; must have a Medical qualification, and be registered. Applications and testimonials to Dr. G. F. de la Cour, on or before March 30.

Lincoln County Hospital.—House-Surgeon and Apothecary; must be M.R.C.S.E. and L.S.A. Applications and testimonials to the Secretary, or or before April 10.

Lincoln General Dispensary.—House-Surgeon; must be M.R.C.S. Eng., and be also either L.S.A. or L.R.C.P.L. Applications and testimonials to the Secretary, on or before April 10. Election on the 15th.

Liverpool Dispensaries.—Two Assistant Resident House-Surgeons are wanted. Candidates must be duly qualified and registered. Applications and testimonials to the Secretary, at the Dispensaries Office, Leith Offices, Liverpool, on or before March 28.

Liverpool Ladies' Charity and Lying-in Hospital.—House-Surgeon; must be duly qualified. Applications and testimonials to the Hon. Sec., at the Hospital, Myrtle-street, Liverpool, on or before March 31.

Ormskirk Union.—Medical Officer for the Fourth District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. W. Parr, Clerk, Ormskirk, on or before April 5.

Parish of St. Mary Abbotts, Kensington, W.—Medical Officer of Health. Applications and testimonials to the Clerk of the Vestry, on or before April 3.

Queen's College, Birmingham.—Medical Tutor; must be a Member of the College of Surgeons of England, Ireland, or Scotland, or a Graduate of a University in Great Britain or Ireland. Applications and testimonials to Mr. Henry Harris, Secretary, Queen's College, on or before March 31.

Rochdale Infirmary and Dispensary.—Resident Medical Officer; must be duly qualified and registered. Applications and testimonials to the Hon. Sec., from whom any further information may be obtained.

Royal London Ophthalmic Hospital.—Curator and Librarian; must be a good dissector and microscopist. Further particulars may be obtained from the Secretary, at the Institution, Moorfields, E.C.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

Royal United Hospital, Bath.—Honorary Physician; must be a Graduate of a British University, and be a Fellow or Member of a College of Physicians. Applications and testimonials to the Committee, on or before April 10.

Scarborough Dispensary and Accident Hospital.—House-Surgeon and Secretary; must be duly qualified and registered. Applications and testimonials to the House-Surgeon, under cover to the Medical staff, on or before April 4.

Seamen's Hospital (late "Dreadnought"), Greenwich. — House-Physician. Applications and testimonials to Mr. Kemball Cook, House-Governor and Secretary.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

Victoria Hospital for Sick Children, Gough House, Queen's-road West, Chelsea.—Honorary Assistant-Physician; must be a graduate in Medicine of a British University, and not practising pharmacy. Applications and testimonials to the Secretary, on or before the 29th inst.

West London Hospital.—Junior Surgeon; must be a Fellow of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Secretary, on or before April 12.

West Norfolk and Lynn Hospital.—House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the Chairman of the Weekly Board, on or before March 25. Election on April 11.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Crediton Union.—Mr. Samuel Staniland has resigned the Bow District area 8630; population 1940; salary £36 15s. per annum. And the Colebrooke District; area 4200; population 802; salary £15 per annum.

Plomesgate Union.—The Framlingham District is vacant; area 10,565; population 3614; salary £65 per annum.

Woburn Union.—Mr. T. H. Barnes has resigned the Toddington District; area 11,791; population 4687; salary £85 per annum.

APPOINTMENTS.

Barnstaple Union.—Charles Johnston, M.R.C.S. Eng., L.S.A., to the Fifth District.

Islington Parish.—Philip Cowen, M.R.C.S.E., L.S.A., Assistant Resident Medical Officer for the Workhouse.

Neath Union.—David E. Griffiths, L.R.C.P. Edin., L.F.P. and S. Glasg., L.M., to the Britonferry District.

Norwich Union.—Henry Ward, M.R.C.S. Eng., L.S.A., to the Second District.

Strand Union.—Sidney E. Clarke, M.R.C.S.E., L.S.A., to the St. Martin's District.

The Levée.—At the levée, held on Wednesday at St. James's Palace by his Royal Highness the Prince of Wales, on behalf of her Majesty, the following presentations were made:—Surgeon-Major A. G. Elkington, by the Field-Marshal Commanding-in-Chief. Deputy Inspector-General of Hospitals Dr. C. A. Gordon, C.B., on return from special service, by the Director-General of the Army Medical Department. Assistant-Surgeon C. E. M. Shaw, on return from the Red River Expedition, by the Director-General of the Army Medical Depôt. Mr. Henry Wakefield, Surgeon, Bombay Army, by the Secretary of State. Sir Thomas Watson, by the Lord Chamberlain. The following gentlemen attended the levée:—Sir William Fergusson, Sir Charles Locock, Sir Henry Thomson. Drs. V. Bell, F. Bonney, Brewer, M.P., Cape, T. K. Chambers, L. Down, Gream, Day-Goss, Hooker, C.B., W. Pole, F.R.S., G. O. Rees, R. Read, and Staff-Surgeon L. Kidd; Mr. D. Dalrymple, Mr. W. H. Propert.

Amongst the guests who were invited to witness the marriage of the Princess Louise with the Marquis of Lorne, were Sir William Jenner, and Dr. Wilson Fox, who was, unfortunately, unable to be present. Dr. Hoffmeister, Dr. Fairbank, Dr. Ellison, Dr. Marshall, and Dr. Robertson, also ad seats in the Queen's Gallery.

Professor Lister, F.R.S., has been elected an Honorary Member of the Royal Medical Society, Edinburgh.

The Swiss Government has introduced into the Grand Council of the Canton-de-Vaud a Bill making it unlawful for "any persons" under 14 years of age to smoke tobacco.

The Marylebone Guardians have adopted the plan of offering to vaccinate all casuals, and, although no compulsion is used, the step has been attended with such success that other parishes are following the example.

The *Oswestry Advertiser* says, "We are glad to learn that the small-pox is abating at Llanfyllin; there are but very few cases now, and those of a very mild form."

A Coroner's Jury at Wisbeach, on Friday week, found a verdict of manslaughter against a publican who had continued to supply rum to a drunken man, thereby causing his death.

It has been decided, on the suggestion of Dr. Playfair, to extend the provisions of Mr. Charley's Bill against baby-farming to Scotland.

Cattle fairs in the provinces of Hainault, Western Flanders, and Namur have been prohibited, in consequence of the cattle plague.

At the London Hospital the patients are again allowed to receive their friends. All now in the Hospital have been vaccinated, and those subsequently admitted will for the present be vaccinated day by day.

At the last meeting of a Board of Guardians, says the *Worcestershire Chronicle*, a resolution was passed to mix with the port wine intended for the patients one ounce of bark to one gallon of wine. The reason for this was because it was found that the wine ordered for the patients never reached them, and the mixture of the bark would make the wine unpalatable. A strange mode of meeting an evil!

Mr H. Denny, for forty-five years the Curator of the Leeds Philosophical Society, died on the 7th inst., at the age of 68. Mr. Denny's remarkable book on "The Parasites Infesting the Bodies of Animals and Birds," and his genial and ever earnest desire to serve the cause of science in delicate attention shown to men of science, who have visited the Museum of the Leeds Philosophical Society, demand a passing tribute.

It was stated, at the Artisans' and Labourers' Dwellings Company's annual meeting, that during the year 100 houses of such excellent drainage and ventilation had been erected in the metropolis that the inmates have enjoyed perfect immunity from small-pox. The houses are fitted with the patent dry ash closets—a system which is being adopted in various parts of the country with complete success.

The experiment of public-houses without the drink will shortly be tried in Bradford. Many similar institutions, bearing the name of "British Workman Public-houses," are now established in Leeds, where they are prospering and rapidly increasing in numbers and importance. The object is to supply working-men with the opportunity of passing their evenings in a social and comfortable way without the ruinous influence of drink and the temptations to which it too commonly leads. Sir Titus Salt, Bart., and other gentlemen, have already promised their support to the movement.

A Worcester paper relates the following:—"A Doctor recently possessed a pet magpie, which constantly hearing his master's advice-gratis patients repeat, in answer to the solicitous inquiries of a valet, 'Ah, Henry, I'm very ill!' learned the phrase so as to speak it with surprising distinctness. The magpie escaped to the neighbouring rural district, and was shot by a peasant. The latter ran to pick up his prize; the dying bird opened his eyes, and said, looking up dolefully, 'Ah, Henry, I'm very ill!' The peasant's name was Henry."

Naval Medical Service.—Three of the candidates who passed the test at the recent examination of the Army Medical Service have been allowed to enter the navy without undergoing further examination, and will proceed to Netley Hospital for a course of study.

The Career of American Dentists.—A dentist in Philadelphia has traced out the career of 1000 dentists, with these results:—163 died before they reached middle life, 643 attained fair success, 57 made fortunes, 27 died from intemperance, 96 failed entirely, and 3 committed suicide.—*Boston Medical and Surgical Journal*, February.

Paris Registration Returns.—The return of deaths in Paris for the week ending March 17 gives 2576 as the total number of deaths, 399 of these occurring among the troops of the line and Garde Mobile. Small-pox had diminished to 98 cases, and there were 229 deaths from typhoid fever.

Conviction for Criminal Abortion in New York.—An account is given in the *New York Medical Record*, February 15, of the conviction of one Michael Wolff, a noted abortionist. The judge, in sentencing the prisoner, stated—"The people may rest assured that the District Attorney, the Recorder, and myself, will give, on all proper occasions, every assistance to crush out this monstrous crime, and to banish from our midst these traffickers in human life. In one word, the authorities have declared war to the bitter end against the fraternity which you to-day so guiltily represent. Let every professional abortionist, male or female, rich or poor, in this city take warning; for, on conviction, their fate shall be the same as yours—namely, confinement in the State prison for seven years—the longest term allowed under the statute." "Thus endeth," says the *Record*, "the first case of conviction for many a long year; and may we not hope, in the interests of future generations of innocents, that it may be the commencement of a rule of terror with the numberless abortion-who have heretofore carried on their trade with a boldness that has only been equalled by its wickedness." A Bill is about to be introduced into the Legislature for the more adequate suppression and punishment of the crime.

Mr. Clay has been elected Assistant-Dispenser at the General Hospital, Birmingham.

The Ramsgate people are protecting themselves, and driving off small-pox patients, by what they call *Precautional* Notices.

Miss Berryman, of Stoke, Devon, who died a few days since, has, says the *Western News*, bequeathed upwards of £30,000 to public institutions in Devonshire.

The Brighton Railway and Infectious Diseases.—An order has been issued to the station masters and guards of the Brighton Railway, by direction of the manager, to take every precaution to prevent persons with small-pox and other contagious diseases from travelling in the trains; and station masters are to give notice to the cab proprietors at their stations that they, in like manner, must not allow their cabs to be used.

Guy's Hospital.—The Annual Concert (in aid of the Samaritan Fund), under the patronage of the Treasurer and the Governors, will be given on Wednesday and Thursday, March 29 and 30, in the Governors' Court-room. The following gentlemen will take part:—A. Buchanan, A. Carter, F. H. Clarke, W. Eager, W. P. Mallam, W. G. Nash, H. G. Peacock, J. Rees, H. N. Smith, T. H. Stephens, C. S. Ticehurst, E. Tipple, and A. F. Trenerry.

Death from an Overdose of Opium.—At Salford, an inquest was held last week touching the death of William Barlow, 17 days old, the child of John Barlow, labourer, 25, Cleminson-street. On Sunday, the infant became unwell, and continued so until Monday, when his mother administered three drops of laudanum. For a time he appeared to be benefited, but subsequently relapsed, and died the same night. Verdict—"Died from the effects of an overdose of laudanum."

Sewage at Woking.—The Government Inspector's attention ought to be called to a state of things in the village of Woking. The drainage from the convict prison there, and from the gasworks, is allowed to flow into an open meadow. Fever has been prevalent in the neighbourhood for the last two years, and small-pox is now added. At the neighbouring village of Horsell, a school of 200 children has been closed in consequence. As usual, it seems impossible to fix on anyone the responsibility for abating the nuisance.

A Constant Water-supply.—The Government Bill, just brought into the House of Commons, will compel a constant supply of water from the London companies, on the application of local authorities, or by order of a Secretary of State. The change will, most likely, be gradually introduced, but there are some energetic local authorities in the metropolis who wish to have it instantly made, and they will be supported by most Professional men. We have good reason to believe the Government will pass the Bill at the earliest possible opportunity.

Baby-farming at Manchester.—At a further investigation into this case, on Monday, at the City Police-court, the Medical evidence showed that traces of opium were discovered in the stomach of the child whose body was found in the house occupied by the prisoners, Frances Rogers and Edward James, and that the surviving children were, when the case was brought to light, suffering from the effects of want of food. Among the witnesses examined were two young mothers, who had entrusted their children to the keeping of the female prisoner. As no case was made out against James, he was discharged, but Rogers was remanded.

An Amende Honorable.—The Medical Society of New York, at its sixty-fifth anniversary meeting, passed the following resolution:—"Whereas, there appears in the published *Transactions* of this Society for 1868 an article, entitled, 'Effects of the Meteorological Influences on Health,' by Dr. Thoms; and whereas this article is in large part copied, word for word, from Parkes' 'Manual of Hygiene,' second edition, without credit given or marks of quotation used, and is therefore a plagiarism—Be it resolved, That this Society owes it to Dr. Parkes, as well as to itself, to apologise for this appropriation of his labour and language without credit. That a copy of this preamble and resolution, authenticated by the signatures of the President and Secretaries of the Society, be forwarded to Dr. Parkes." The *Medical Record* (February 15), strongly approving of the resolution, comments upon the poor excuse offered by the appropriator, that a preface, giving full credit to Dr. Parkes, was inadvertently omitted. The Society, it says, "passed a vote, accepting the excuse of Dr. Thoms as to intention of wrong, more for the sake of charity to him than of justice to the spirit of the resolution."

West Kent Medico-Chirurgical Society.—At the meeting on Friday, March 10 (Dr. Clapton, F.R.C.P., President, in the chair), Dr. H. Charlton Bastian, F.R.S., read a paper on "The Mode of Origin of Bacteria, and on the Bearings of this Question on the Science of Medicine." After alluding to our imperfect knowledge concerning the mode of origin of many of the lowest kinds of organisms, he discussed the various views which are at present held concerning the nature and origin of bacteria. Their modes of reproduction and origin were spoken of under the following heads:—1. Homogenesis—*a*, Direct; *b*, Indirect (Hallier). 2. Heterogenesis. 3. Archebiosis. The question of their origin *de novo* (archebiosis) was intimately associated with another problem—as to the cause of fermentation and putrefaction. The evidence on this subject was very decisive. The author then alluded to the bearings of the facts concerning the heterogenetic origin of bacteria upon many problems in Medicine, and briefly indicated how much what he considered the untenable "germ theory" of disease was dependent upon doctrines of fermentation, such as had been advocated by Pasteur.

St. Pancras Board of Guardians.—Coroners' Inquests.—At the Board meeting, last week, Mr. Harvey Lewis, M.P., forwarded a letter, stating that the number of inquests held in St. Pancras, as compared with all other metropolitan workhouses, was incredible, and that the subject demanded an inquiry. Mr. Homan called attention to the fact that a public notice had been posted at the workhouse gates announcing that the coroner's officer was not to be permitted to enter the house, and expressed an opinion that the coroner could order the gates to be broken down if he thought proper in order that his officer might enter for the purpose of obtaining information for an inquest. The Clerk to the Board, in explanation, said that the notice had been posted in consequence of the resolution of the Board prohibiting the coroner's beadle from entering the house. He had arranged with Dr. Lankester to give his officer a pass when required. Mr. Parson moved—"That the Poor-law Board be requested to remove Drs. Ellis and Hill from their situations as Medical Officers of the Workhouse, on the ground of their incapacity to determine the causes of death of a large number of their patients, as is evidenced by the return of coroners' inquests laid before the Board, and other matters." The Rev. Mr. Arrowsmith seconded the motion. The motion was lost by a majority of nine to six.

Quekett Microscopical Club.—The annual *conversazione* of this Club took place at University College on Friday evening, and was very largely attended, as it usually is. The objects provided by the Club for the entertainment of its guests comprised all the optical novelties of the year, and the members as well as the leading opticians did all in their power to exhibit objects worthy of the position the Club holds in the encouragement of microscopical science. Photography was on this, as at the last annual *soirée*, well represented. A large and interesting series of photographs of Indian temples and scenery was kindly lent by the India Office; also frames of photographs were lent by Mr. J. Van Voorst, Mr. John Foster, Mr. E. Kiddle, and Mr. A. Shapcott. Mr. Apps exhibited at frequent intervals the marvellous electrical effects produced by means of his well-known induction coil. In the midst of so many attractions it is difficult to single out for especial mention any one feature of interest, but that which seemed possessed, at this time, of surpassed interest was an exhibition on the screen by the oxy-hydrogen light of a series of transparent photographs illustrative of the scenery of the late lamentable Franco-Prussian war, contributed by the London Stereoscopic Company, with an explanatory lecture by Mr. James Martin, which commanded crowded audiences all the evening.

A New Danger.—The researches of Dr. Spencer Cobbold on the entozoa that arise from sewage irrigation are calculated to throw us into still deeper perplexity as to the course which we should adopt in dealing with the sewage question. At present, irrigation seems to be the most profitable and the most practicable; but a new danger, according to Dr. Cobbold, threatens us from this question—viz., the introduction into the human system of countless parasites and entozoa through the medium of cattle fed upon sewage irrigation grass. The worst of it is that cattle which thus acts as "bearers" of these abominable interlopers seldom show signs of the disease in themselves, as they appear to have the capability of resisting the effects of the presence of the parasite, except when the sufferers are young, as in the case of calves. Again, so little outward sign of disease does the meat show, that butchers are perfectly unconscious of it; but Dr. Cobbold has microscopically demonstrated the presence of thousands of entozoa in pork which to the eye appeared perfectly healthy. It is his deliberate opinion that there are now in this country thousands of cattle which are thoroughly measled, and which cannot be said to be safe as food for man. It may be remarked, as a rule, that pigs do not feed on the product of fields which have been irrigated by sewage.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The review of Dr. Tibbits's translation of Duchenne is in the press, and will be published shortly.

Dr. J. Foster Jenkins.—Your letter, with enclosure, received, with thanks.

Cocoa and Milk.—Messrs. Dunn and Hewett, of Pentonville, have sent us a sample of their admirable compound of cocoa with preserved milk, which comes as near perfection as possible. It will be most useful for travellers, tourists, men at chambers, and the sick-room generally.

A.—Inquire at any good Medical library for the pamphlets of Dr. Rowley. It was asserted that not only did vaccinated people bellow like bulls, and have patches of cow's-hair on their backs, but that their cheek-bones assumed an ox-like shape. The fact was, that one vaccinated scrofulous child had enlargement of one upper jaw-bone.

G. B.—There is a world of humbug in the phrase "electricity is life." No doubt life is accompanied with the evolution of a certain quantity of electricity, as it is of heat, motion, and other manifestations of force; but to say that heat, or electricity, or movement *is* life, is ridiculous. Some heat artificially applied, and some electricity artificially applied, may, in some cases, foster the actions of life and do good; but when the vital forces and power of growth are decayed, they can no more be restored by heat and electricity than they can by Medea's kettle. What is true of life and health, as a whole, is true of every function, including that important one which gives *G. B.* so much anxiety. Any well-informed Physician or Surgeon would help *G. B.* to recover health, spirits, and blood and vigour; without these, galvanic apparatus are a mere quackery and sham, and *G. B.* (if his brain is not so feeble as some other parts are alleged to be) will not let his pocket be drained on the faith of plausible advertisements.

REVACCINATION FOR ADULTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have just seen in the *Medical Times and Gazette* of the 11th inst. a letter referring to vaccination from the arms of revaccinated adults. I was vaccinated in infancy, and have on my arm two good marks, but about a month ago I was vaccinated in two places from the arm of an infant; two good vesicles formed, and from them ten adults were revaccinated, eight of whom had good vesicles. One of the eight tried to vaccinate three adults from his arm, but none of the places took. I am, &c., STUDENS.

The Messrs. Letts have favoured us with samples of a capital ink-holding pen, by means of which a large surface of paper can be covered with writing without the necessity of a fresh dip. But it is a singular fact, that with people who write much, the dipping the pen into the inkstand becomes an involuntary automatic act, occurring at rhythmical periods, or during certain pauses in the train of thought, without any relation to the necessity for more ink. Thus, in beginning a new sentence, or in working out a train of thought, one man will bite his nails, another scratch his head, and a third dip his pen repeatedly and mechanically, so that unless the inkstand be covered up, the full benefit of the Messrs. Letts's invention will not be felt. It will be a good thing for persons writing under great pressure of time. We have to thank the same firm for a lithographed *fac-simile* of a balloon letter from Paris, which our readers should give to their children as a memento of the late war. The Messrs. Letts's publishing office is at 8, Royal Exchange.

Joseph E.—We can only say that Pulvermacher's chains are good samples of constant current batteries. Whether they will do good in your case is open to question. We know nothing of the individual to whom you refer, except that he advertises much.

M.R.C.S., etc.—Medical attendances "is a necessary," and, therefore, though under age, he is liable.

PUBLIC HEALTH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am anxious to gather up all the materials I can which will facilitate the preparation of a series of tracts and handbills relating to the promotion of public health in the very widest sense of the word. Such publications should, I think, be circulated by local boards of health with a liberal hand, especially just now. I shall, therefore, feel greatly indebted to any of your readers (especially such as may happen to be Medical Officers of Health) who would favour me with copies of handbills, etc., which are in circulation in their localities, and are likely to be useful elsewhere in the thankless task of persuading people to take precautions against infection, and to be careful about drinking polluted water or inhaling impure air. Suggestions about the detection of adulterations in food, and regulations about baths and washhouses, and overcrowding, are also within my scope. Copies of by-laws about buildings and nuisances would also be acceptable.

I am, &c., G. F. CHAMBERS,
Bromley, Kent, March 17. Chairman of the Bromley Local Board.

T. B., Barnet.—The charge appears to us to be perfectly reasonable.

Inquirer.—Akenside was a Doctor of Medicine.

Beta.—In the *Philosophical Transactions.*

Lex.—In Weightman's "Laws Regulating the Medical Profession."

A. N.—The deed should be registered.

Mr. C. L., Furnival's-inn.—The case is recorded in Mr. Samuel Cooper's "Surgical Dictionary."

Vaccinator.—The case came before Mr. Aspinal, the borough coroner for Liverpool. The precise verdict was—"Died from pyæmia, consequent upon being vaccinated whilst suffering from diabetes."

M. D., Stockwell.—Messrs. Wilde applied to Mr. Knox, at Marlborough-street, on Thursday, and obtained a summons against the notorious quack you mention, for distributing his obscene bills, styling himself a Member of the Royal College of Surgeons of England. The other person in your neighbourhood will shortly receive similar attentions from Messrs. Wilde.

VACCINATION IN SCOTLAND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Towards the beginning of last week, a circular, issued by the Board of Supervision in Edinburgh, was forwarded by the parish authorities to their respective Medical officers, a copy of which I enclose, that I may have your opinion on one point, as the Doctor of the parish who received the printed circular and I (his assistant) differed as to its meaning.

Here the charge for vaccinating an infant is 1s. 6d.; the amount is paid by the parents, if they are not on the parish. The people of the village consist principally of workmen (colliers and puddlers), with a few others of independent means, or what is termed sometimes "decent folk." According to law, infants must be vaccinated within six months, the parents or the parish defraying expenses.

What I wish to know is, whether, since the enclosed circular was sent out, the children of parents who are not supported by the parish are to be vaccinated at the expense of the local authority. I believe that they are intended to receive that benefit; but I must acknowledge that there is no manner of forcing the local authority to pay expenses, as they state that they will "defray the cost of vaccinating all such persons as to them may seem expedient."

Your giving a reply in the next number of your valuable journal will oblige I am, &c., LOYAL A LA MORT.

March 20.

P.S.—I shall leave it to your discretion to publish the circular, as it shows what precautions the Scotch are adopting to ward off an epidemic of small-pox.

[Copy.]

"PUBLIC HEALTH (SCOTLAND) ACT, 1867.—NO. 1, 1871.

"VACCINATION.

"Board of Supervision, Edinburgh, February 23, 1871.

"SIR,—I am directed by the Board of Supervision to call the special attention of the local authority to the 57th Section of the Public Health Act.

"By that enactment the local authority are authorised to defray the cost of vaccinating all such persons as to them may seem expedient, other than paupers, or the children of paupers, or defaulters under Section 18 of the Vaccination Act. The obligation to vaccinate paupers, children of paupers, and defaulters rests upon the parochial Board; but that Board cannot legally defray out of the poor-rates the cost of vaccinating any other persons. The local authority, under the Public Health Act, however, are empowered to defray out of the assessment levied in terms of that Act the cost of vaccinating all persons, except those whom the parochial Board are bound to vaccinate, to whom it may seem expedient to the local authority to apply the provisions of the enactment referred to.

"The existence, for some time past, of small-pox in London and elsewhere in England, and the recent occurrence of cases of that disease in Glasgow, Greenock, and Edinburgh, render it very advisable that the local authority should lose no time in ascertaining whether, in the district within their jurisdiction, there are persons who are either unvaccinated or imperfectly protected by vaccination, and in whose cases the provisions of the 57th Section of the Act should be acted upon.

"The Board are not of opinion that any cause at present exists for panic or serious alarm with regard to small-pox in Scotland; but it appears to them that it would be unwise to neglect any precautionary or preventive measure which might tend to check the spread of the disease, and ensure the public health.

"Dr. Husband, the Superintendent of the Central Vaccine Institution for Scotland, has made the following suggestions, in which the Board concur:—

"1. In the first place, that everyone should make sure that he is not mistaken in supposing himself to have been well vaccinated in infancy.

"2. That the unvaccinated should be searched for, especially among the unsettled and migratory portion of the population, among whom chiefly the disease is likely to appear in the first instance.

"3. That those who desire absolute security should get themselves revaccinated.

"4. That infants should be vaccinated a few weeks, or even months, earlier than usual.

With regard to vaccination in infancy, and the revaccination of adults, Mr. Simon, the Medical Officer of the Privy Council, makes the following remarks:—

"'By vaccination in infancy, if thoroughly well performed and successful, most people are completely insured, for their whole lifetime, against an attack of small-pox, and in the proportionately few cases where the protection is less complete, small-pox, if it be caught, will, in consequence of the vaccination, generally be so mild a disease as not to threaten death or disfigurement. If, however, the vaccination in early life have been but imperfectly performed, or have from any other cause been but imperfectly successful, the protection against small-pox is much less satisfactory, neither lasting so long, nor, while it lasts, being nearly so complete, as the protection which first-rate vaccination gives. . . .

"'Revaccination, once properly and successfully performed, does not appear ever to require repetition. The nurses and other servants of the Small-pox Hospital, when they enter the service, are invariably submitted to vaccination, which in their case generally is revaccination, and is never afterwards repeated; and so perfect is the protection, that though the nurses live in the closest and most constant attendance on small-pox patients, and also, although the other servants are in various ways exposed to special chances of infection, the Resident Surgeon of the Hospital, during his thirty-four years of office there, has never known small-pox affect any one of the nurses or servants.'

"The Board would suggest that local authorities should employ the Medical Officers or other Medical Practitioners in their districts to make the necessary inquiries, to perform such vaccinations or revaccinations as may be expedient, and to keep a record of the persons so vaccinated or revaccinated. If it should be found necessary, local authorities may obtain for a period of six weeks from this date a limited supply of vaccine lymph for the purposes above mentioned, at 6d. per tube, by applying to Dr. Husband, Central Vaccine Institution for Scotland, 28, Clarence-street, Edinburgh.

"I am, Sir,
"Your obedient Servant,
"(Signed) John Skelton, Secretary.
"To the Sanitary Inspector."

⁂ The Surgeon should have written instructions from the local authority, otherwise he may be assured he will get no pay.

COMMUNICATIONS have been received from—

Mr. Lawson Tait; Mr. J. P. Purvis; Mr. W. H. Lidderdale; Studens; Messrs. Letts, Son, and Co.; Mr. R. A. Warwick; Mr. C. Handcock; Dr. C. F. Moore; Mr. W. H. Aldersey; Mr. S. Mackenzie; Dr. T. Beaumont; Mr. C. Dukes; Dr. G. Beaman; Mr. Henston; Mr. J. W. Burman; Mr. C. F. Maunder; Mr. G. F. Chambers; Dr. Gee; Mr. J. Ellerbeck; Mr. N. C. Dobson; Mr. H. Arnott; Unsworth and Co.; Mr. J. C. Davys; Dr. Phillips; Mr. Royds; Mr. J. Skelton; Mr. Balmanno Squire; Dr. J. Burdon-Sanderson; Mr. J. Chatto; Mr. T. Spencer Wells; Dr. Parkes; Dr. Willoughby Ardino; Mr. Metcalfe Johnson.

BOOKS RECEIVED—

Letters on Vaccination, by Dr. W. Woodward, Worcester—A Sketch of the History of Small-pox and Vaccination, by Dr. W. H. Barlow—Meadow's Manual of Midwifery—Husband's Medical and Surgical Examination Questions—Report of University College, London—Report of the Sussex County Lunatic Asylum—The Laws of Life—Barton's Practical Remarks upon the Treatment of Syphilitic Disease—Sewage Irrigation; a Lecture by W. Hope, Esq., V.C.—Statistical Abstract of the Health of the Navy, July 1, 1869, to June 30, 1870—A Chapter on Criticism, Practical Chemists, and Therapeutical Critics—Report of the Richmond Infirmary—Report of the State Board of Health of Massachusetts.

PERIODICALS AND NEWSPAPERS RECEIVED—

Aberdeen Free Press—Medical Press and Circular—New York Medical Journal—American Journal of Obstetrics—Medical Freedom, No. 7—Nature—Pharmaceutical Journal—Gazette Hebdomadaire—The Melbourne Argus—Aris's Birmingham Gazette—Croydon Advertiser.

APPOINTMENTS FOR THE WEEK.

March 25. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Mr. O'Neill, "Spirit of the Age."

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Dr. Andrew Clark will narrate "Some Cases of Perityphlitis," and also exhibit "A Case of Peribronchial Fibrosis." Dr. Simms, "On a Case of Epilepsy during the Passage of a Pin through the Intestines." Mr. John Daniell Hill, "On a Case of Excision of the Elbow-joint, showing the amount of Movement that may be attained after the Operation."

28. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. Dr. Foster, "Nutrition of Animals."

Royal Medical and Chirurgical Society, 8½ p.m. Deputy Inspector-General Longmore, "On the Classification and Tabulation of Injuries and Surgical Operations in Time of War."

29. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal College of Physicians, 5 p.m. Lumleian Lectures—Dr. West, "On some Disorders of the Nervous System in Childhood."

Society of Arts, 8 p.m. Meeting.

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Dr. Odling, "Davy's Discoveries."

31. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal College of Physicians, 5 p.m. Lumleian Lectures—Dr. West, "On some Disorders of the Nervous System in Childhood."

Royal Institution, 9 p.m. Prof. Max Müller, "Solar Myths."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 18, 1870.

BIRTHS.

Births of Boys, 1150; Girls, 1147; Total, 2297.
Average of 10 corresponding weeks, 1860-69, 2146·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	835	741	1576
Average of the ten years 1860-69	753·6	742·0	1495·6
Average corrected to increased population	...	...	1646
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	20	4	11	1	15	...	1	...	1
North ...	618210	56	2	4	2	12	3	8	1	3
Central ...	383321	6	...	1	...	4	...	1	4	...
East	571158	51	1	7	...	15	1	2	3	1
South	773175	52	6	10	...	9	6	4	9	4
Total	2803989	185	13	33	3	55	10	16	17	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·745 in.
Mean temperature	41·7°
Highest point of thermometer	59·4°
Lowest point of thermometer	28·9°
Mean dew-point temperature	36·4°
General direction of wind	Variable.
Whole amount of rain in the week	0·58 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 18, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Mar. 18.	Deaths Registered during the week ending Mar. 18.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2297	1576	59·4	28·9	41·7	5·39	0·58	1·47
Portsmouth ...	125464	13·2	94	41	59·4	29·0	43·6	6·44	0·57	1·45
Norwich	81787	10·9	57	36	55·0	28·5	41·0	5·00	0·47	1·19
Bristol	173364	37·0	123	81	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	58	33	55·5	27·4	39·5	4·17	0·35	0·89
Birmingham ...	378574	48·3	301	152	55·0	29·0	39·7	4·28	0·63	1·60
Leicester	101367	31·7	74	50	57·5	25·5	40·2	4·55	0·65	1·65
Nottingham ...	90480	45·3	76	35	58·3	25·1	41·0	5·00	0·71	1·80
Liverpool	526225	103·0	348	376	55·3	31·0	41·1	5·06	0·50	1·27
Manchester ...	379140	84·5	286	174	...	...	...	...	...	...
Salford	123851	23·9	94	46	57·5	19·9	37·9	3·28	0·48	1·22
Bradford	148030	22·5	82	66	54·0	26·6	39·4	4·11	0·36	0·91
Leeds	266108	12·3	201	124	55·0	28·0	40·6	4·77	0·43	1·09
Sheffield	255247	11·2	164	102	56·0	27·0	41·4	5·22	0·59	1·50
Hull	135195	38·0	101	39	57·0	23·0	39·4	4·11	0·45	1·14
Sunderland ...	103037	31·2	64	54	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	96	73	55·0	24·0	37·7	3·17	0·48	1·22
Edinburgh	179944	40·6	141	103	50·7	32·0	42·3	5·73	0·30	0·76
Glasgow	477627	94·3	356	286	51·5	24·7	38·6	3·66	0·91	2·31
Dublin (City, etc.†)	322321	33·1	177	159	62·1	26·2	42·4	5·78	0·92	2·34
Total of 20 Towns in United Kingd'm	7336941	34·4	5190	3606	62·1	19·9	40·4	4·69	0·55	1·40
Paris—Week ending Mar. 17	1889842	98	...	2576	...	...	...	...	...	...
Berlin—Week ending Mar. 11 ...	800000	52	...	...	...	...	...	...	...	...
Vienna—Week ending Mar. 11 ...	622087	68	...	532	...	...	47·2	8·43	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·75 in. The highest was 30·14 in. on Saturday at noon, and the lowest was 29·10 in. on Thursday morning.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

ON THE INFLUENCE OF THE NERVOUS SYSTEM ON DISEASES OF THE ORGANS AND TISSUES.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

LECTURE II.

SPECIAL TISSUE-CHANGES IN RELATION TO DIAGNOSIS AND THERAPEUTICS.

I SHALL now consider, with a view to diagnosis and therapeutics, what special tissues are affected in morbid states of the nervous system, and with what results. Let me remind you, however, of the therapeutical facts we have ascertained. 1. We have learnt the important fact that various tissues, whether vegetal, animal, or nervous, are affected by neurotic drugs. 2. That the changes they undergo, whether normally or therapeutically, are chemical, and that the chemical affinities therein operative are of the kind peculiar to living tissues which I have termed evolutional. 3. That the common characteristic of these changes is that they are regulated to ends, and that this regulation is also the special characteristic of life. 4. That there are two kinds of evolutional regulative energy in the nervous system—the one executive or motor, and correlative with vital energy; the other more especially regulative or sensory, and correlative, in that respect, with what is termed soul, mind, etc.

Now, all these energies are vital in the sense of being peculiar to living tissues; but there are other kinds of energy, known as the physical and molecular, which are equally essential to vital changes, yet not peculiar to living tissues. These may be named conditioning energies or forces, because they supply those conditions of vital matter without which there is no manifestation of vital activity.

These physical or molecular forces must, therefore, be of great therapeutical importance generally; and since the nervous system regulates their production and distribution, their therapeutical applications cannot be understood without a knowledge of these neurotic relations. These forces are light, heat, electricity, and chemical affinity. Of chemical affinity I shall say nothing now, being too large a subject; light, produced by lower animals, is of primary importance to healthy activity; in man, as well as plants, electricity is largely accumulated in nerves and in all motor tissues; but of all these molecular forces or energies, heat is the primary and fundamental, as conditioning the production and accumulation of all the other energies, whether physical or vital, in all organisms. It is for this reason that changes in temperature play so important a part in disease, and that a knowledge of the philosophy of "taking cold" includes the study of the most fundamental questions of theory and practice. I shall not now treat of heat specially, but only observe generally that the variations of temperature compatible with healthy vital activity are widely different in both animals and vegetables. In man and warm-blooded animals a certain uniformity is necessary, which is attained by the regulative action of both the nervous system and the tissues themselves, so that there is an increased production or a diminution of heat, as may be needed. The normal temperature of the human body varies in individuals with the time of the day, the age, the constitution, and other circumstances, but only within the limits of about 1° Fahr. The average temperature of adults aged 25 is about 98°, and aged 40 from 98·5° to 99°. When we consider how many external circumstances raise and lower the temperature, this uniformity of warmth of body is an incontrovertible proof of a regulative power. This, as we shall shortly see, has its seat in a distinct portion of the nervous system. The cooling power, I would observe, is quite as remarkable as the warming. Four-fifths of the oxidisable materials of the body are finally expended as heat, and yet in health we are never feverishly hot.

In the healthy and morbid nutrition of tissues the property of contractility (sometimes termed *vis insita*) plays an important part. Whether it be a correlative of electrical attraction and repulsion, or of the physical property of contractility, or a conjoint product of both, I do not stop to inquire, but it is certain that when it is directed to ends it is to be classed with the vital energies. It is thus manifested in many plants, not only in the well-known movements of the leaflets of the sensitive plant, but in numerous other instinctive acts and processes—as, for example, when the petals of the wood-sorrel and daisy close at night or in the absence of the sun, thus protecting the reproductive organs from cold and damp. Contractile tissue enters so largely into the lowly kinds of animals that it constitutes them, chiefly or wholly. The elementary cells of higher animals, including the lymph and blood corpuscles, have like contractile properties, in common with the lymphatics and bloodvessels. This contractility is influenced in both plants and animals by neurotic drugs—*i.e.*, by evolutional chemical affinity—and still more strikingly by heat and electricity. Hence, atmospheric changes as to temperature and electric tension involve of necessity these primary tissues as well as the nervous system. The influence of diminished temperature is well shown in man by the pallor and contraction of the contractile and muscular fibres of the skin and muscles, known as goose-skin and rigors, which follow upon cooling of the body to a certain point. These changes are continuous in "taking cold," and are the signs of disordered innervation in fevers, suppurative inflammations, and certain neuroses of the thermal centres.

The relations of the arterial and lymphatic systems as contractile tissues to the nervous system and to neurotic drugs, and of their contained contractile cells or corpuscles, are of primary therapeutical and clinical importance, being so intimately associated with nutrition of tissues, and with absorption, excretion, and secretion—functions so commonly altered in disease. Transcendental anatomists say that the capillaries are evolved out of the blood corpuscles; the lymphatic and blood glands seem to have important relations to the white and lymph corpuscles. An important question practically is, whether the bloodvessels are palsied when the sympathetic ganglia and spinal cord are injured? but in discussing this question, it is necessary to remember both what are the primary qualities of these contractile tissues, and what their relations to their living contents. The law of evolution shows that the vessels have a rhythmical action, independently of, and anterior to, the heart and nervous system. Hence, whenever vasomotor innervation is defective, the vascular system becomes free to act according to its primary laws. We can understand its morbid condition better if we suppose the iris to be a thin section of a thick artery, and to represent in the antagonism and contractions of its two kinds of fibrils a similar condition of those of the arteries. If, as I stated in a previous lecture, a contracted iris means palsy, then the like state of an artery means palsy too, in so far as the dilator-fibrils are involved. A like condition is seen in muscular contraction with palsy, as in club-hand or club-foot. Now, besides changes in the vis nervosa, various conditions of the blood influence them. A change of temperature excites the iris—so with the vessels; the like result follows from the presence of alteratives, like digitalis, opium, belladonna, ergot, because the contractility of cells is modified by evolutional chemical agents. It is probable, by acting in this way on the cells, that opium paralyses the leaflets of the sensitive plant. In therapeutics the fact is of great practical importance. I have observed that strychnine exercises a rapid curative influence in certain neurotic kinds of emphysema and bronchitis, and I think, by acting on the air cells as well as on the nerve tissue; in like manner it is useful in fatty degeneration of the heart. So, also, opium is dangerous in certain other neurotic disorders of the lungs, by paralysing by direct action the capillary bronchi, and, perhaps, the bronchial ciliæ. It is more than probable that neurotic drugs have a direct influence on blood cells and on compound contractile tissues, as the lymphatics, capillaries, and absorbents, when used in congestions, inflammations, and dropsies. It is in this way that we can understand both the general and local action of sedatives, as antiphlogistics, in painful congestions and inflammations. Of these, opium is the chief, but there is a very numerous group of neurotic drugs, which includes some of our most potent sedatives and antiphlogistics, as aconite, colchicum, veratria, atropia. The most certain local sedatives of the mineral class, such as the salts and oxides of zinc, bismuth, silver, iron, lead, are also valuable neurotic drugs, more especially in diseases of the nerve-centres, like epilepsy, chorea, locomotor ataxy. When I discuss dropsies, I will classify the empirical remedies for you on these principles.

The degenerations of the bloodvessels are for the most part diathetic, of whatever kind they may be. Excessive use precedes arterial degeneration, whether it be local or general.

Hence it is that atheroma is most common in arteries most used, and in those portions of an artery in which the contractility is continually strained by its curves, branchings, or relative position to parts compressing it. The veins, not being contractile, are very rarely the seat of degeneration. The left heart and the arteries may be said to belong to one homogeneous tissue, and are therefore affected by common causes of tissue-changes. There can be no doubt that painful emotional states seriously and often rapidly affect their nutrition, as well as their contractility. Amongst common causes of functional disorder are those states of the nervous system which, without paralysing, diminish contractility, and so induce dynamic cardiac and (so-called) anæmic vascular murmurs. Nervous palpitations and nervous pulsations belong to this class, and precede structural change—as in vascular bronchocele with exophthalmos. Nervous hæmorrhages are also results of these functional defects in vessels. Whatever may be the predisposing or exciting causes of cardiac and arterial degeneration, the nervous system operates differently in the two sexes. Aneurisms, angina pectoris with structural disease, atheromatous and calcific degenerations of the cerebral and coronary arteries, the constitutional tendency to bleed termed hæmophilia, and other morbid states, are all predominately manifested in males, and in females of a masculine build. On the other hand, neuroses (vaso-motor) of the heart and arteries are much more common in females. Differences in diet, habits of life, and the like, do not explain these facts. I may add, the differences involve also differences in the blood of the sexes.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

CASE ILLUSTRATING DIFFICULTIES IN THE DIAGNOSIS OF CEREBRAL HÆMORRHAGE AND DRUNKENNESS.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed.

THE difficulties in the diagnosis of Apoplexy from Drunkenness are often very great, as the following case illustrates. The diagnosis of drunkenness was, however, not made in this case. There was a clear history of the mode of onset of the seizure, but from the symptoms alone it would have been far from easy to have negatived drunkenness. Suppose the patient had been found in the streets, and suppose he had taken a glass of spirits for premonitory symptoms, drunkenness would have been the most likely diagnosis. Strictly, I think, the diagnosis would have been impossible under these circumstances. All persons found in the streets "drunk" should be tenderly treated. I would strongly advise the young Practitioner never to trust to such facts as that the patient became comatose in a public-house, to the smell of drink, or to an "uproarious" condition for the diagnosis of drunkenness. He would mostly be right, but he would occasionally make a most painful blunder. In cases where he *is told* that the patient has been "sucking the monkey"—*i. e.*, sucking raw spirit from a cask—the diagnosis is made for him. The policeman who brings the patient knows as well as the Doctor that the patient is suffering only from drink. He should, as a mental exercise, ignore the history, and see if, from the condition of the patient, he could make a diagnosis. He would have to consider many things, uræmia, cerebral hæmorrhage—especially hæmorrhage into the pons varolii—and most carefully the question of injuries to the head. I have seen several cases in which, after fatal injuries to the head, the patient was "uproarious," and swore a great deal. He must remember that cerebral symptoms may come on some time after an injury to the head, and that the external signs of that injury may be slight. Again, we must bear in mind that a slight blow or fall may cause meningeal hæmorrhage in a drunken man, and that thus drunkenness and apoplexy may coexist.

In future numbers, I hope to place on record other cases of apoplexy; and when a sufficient number have been recorded, I shall try to say what can be said on the question of diagnosis of the several causes. I have already recorded (November 2, 1867), a case of meningitis simulating apoplexy from cerebral hæmorrhage. The word "apoplexy" is here used not as synonymous with effusion of blood, as it so often is, but as the name of a condition which many other things besides cerebral hæmorrhage produce. In strictness, deep intoxication is apoplexy, but it is convenient to give a separate name for it.

Most valuable information on cases of alcoholic coma will be found in papers by my colleague, Dr. Woodman (*Medical Mirror*, July, 1865, and February, 1866), in which the difficulties of diagnosis are very carefully discussed.

For the whole of the life history of this case I am indebted to Mr. Stephen Mackenzie. The report is one of great value, and contains many particulars of interest.

James R., aged 45, cooper, admitted about 4.30 p.m., died at 7.45 p.m. When seen in the receiving-room, he was lying on the couch, partly on his back and partly on his right side. He would at times lie quite still for some minutes, and at others would roll about on the couch. When roused, he made irritable movements, as though to push one away, swore, and turned round on to his right side. At times, when roused, he was quite violent, and made attempts as though he would strike. He could move both arms and legs. He was so irritable when excited that I listened to his chest with a stethoscope with some trepidation, lest he should strike me. All this time he did not speak, except to swear when irritated. Raising his eyelids had the greatest effect in arousing him—more than shaking him had. He always turned over to the right, which was towards the wall, and consequently away from the light. He *never turned to the left*. His swearing generally took the form of "d——ing my —— eyes" or "blasting" me. Pupils equal; normally large. Body, surface cold and clammy; pulse, 51; respiration, 21; temperature in left axilla, 96·2°; no cardiac bruit to be heard; no difference between the two sides of face; lips rather pale.

When lifted on to the stretcher to be carried up-stairs, he rolled on to the right side, and he was able to move so much that he was obliged to be strapped down for fear of his falling off. When he was lifted he swore a great deal. When being carried upstairs, he moved about on the stretcher, and swore several times. By rousing him I could make him put out his tongue, but he would not or could not give his name. His wife says that when he was placed in bed she tried to make him recognise her. He said more than once "Mary Ann," but she does not think he really knew her. She says, further, that he sat up in bed, and looked round him, and several times put his hands up to his head, one front and the other back. He said "John" and "Jack," and also "I am dying," several times, and "What be going to do." Both she and the patients in the ward say that he got out of bed without assistance, sat on the edge of the bed, and looked for the chamber utensil beneath. Not finding it on that side of the bed, he stretched right over to the other side, reached it, used it, and then put it down quickly, and threw himself back into bed, turning over to the left side. Afterwards he started up in bed several times, throwing off the bed-clothes, and would then subside after a few minutes. He would then rouse up and "rub his head." Some fellow-workmen who came with him say that the expression he used several times was, "God d—n die," and a patient in the ward says he exclaimed "Christ."

The nurse sent for me about half-past six, because he was much worse. When we arrived his breathing was said to be better than it had been. He was very cold. Mr. Tom Robinson observed that the right eye was directed inwards. Ordered brandy enema. He had a hot bottle to feet. He died at a quarter past seven.

A fellow-workman thus describes his seizure:—He was hard at work, when he turned round to the man who was next to him, and looked him straight in the face, as though he was going to speak to him. He said nothing, however, but gradually slipped down on to the ground. They ran to him, and found him very red in the face, and red all over, but not more so than a man usually is who had been doing the work he had. He then turned white all of a sudden. They got him some brandy, but he could not swallow it. They tried to make him speak, and to show signs of recognition, but failed. One man noticed that the left eye was more opened than the right. This he is quite certain of, as he looked into his eyes to see if he would know him. They got him into a cab to bring him to the Hospital, when he gave utterance for the first time, exclaiming several times "God d—n." He put his left hand up to his head several times. He could not have used his right arm, as he was supported on that side, thus constraining that arm.

His wife gives the following account of his previous health:—He has been a man who has taken a good deal of stimulants, but who did not get drunk. He had been acting as foreman where he was employed for many years, and his post involved some responsibility. He was very subject to pains about him, especially in the head. The pain in the head was generally at the vertex; to relieve it he was in the habit of taking turpentine internally. He has generally vomited or retched the first thing in the morning for some time past, and never felt well until he had taken something hot—either tea or, better still, a little hot rum-and-water. The pain in the head has been severe, and would sometimes keep him awake at night. This, however, was the exception, for, for some time past, he had been much more sleepy than he used to be. Lately he had been very sleepy. For some years past he has started in his sleep, and talked a good deal. There is a history of a stricture of urethra, and lately he has had nocturnal micturition. He has been subject to going off in a faint at fright. When his wife told him, a short time back, that she was very ill, she thought he would have fainted. He was subject to cold feet, and he was often "very low." When he was like this, on his wife speaking to him, he would ask to be let alone, saying "he would sleep it off." On March 15 he came home rather late from work, and said "he had been queer in his head, but was better now." He said "something seemed to have struck in his head when at work." The following morning he was very sleepy, and when his wife called him, he asked to be allowed "to have his nap out." When he went to work she thinks he felt ill, but not worse than on other mornings.

Mr. Mackenzie adds to his report the following remarks:—The difficulty in forming a diagnosis in this case was very great. Here was a man in collapse, rolling about on a couch as if in pain, able to move all his limbs, who could put out his tongue, but could not or would not answer questions. The condition of his eyes and face threw no light on the subject. The history of his seizure was that he had slidden on to the ground without any warning, and had remained almost, if not quite unconscious, only swearing when disturbed. All that could be elicited *at the time* of his previous condition was that he had had pains about his body and head for years, and that he had been subject to morning vomiting.

Autopsy.—There was most extensive meningeal hæmorrhage. The blood lay in great bulk at the base, extended into all the fissures, and irregularly to the upper surface. It was as near as could be estimated quite like that of a case of rupture of an aneurism of the posterior communicating artery, on the table at the same time. But in James R.'s case a most careful search disclosed no aneurism. There were no bruises of the head, no fracture of the base, and no bruises of the brain. Probably a small aneurism was overlooked, although an hour was spent in the search for one. Both lungs were very bulky, very œdematous, soft, and marbled dark and white. In a few parts were black, not well-margined patches, but no distinct apoplexies. Heart: Left ventricle firmly contracted, and its walls thicker than natural. No valvular disease except a patch of atheroma on the aortic segment of the mitral valve. Vegetations were carefully looked for. The muscular structure of the heart was broken down rather readily, but to the naked eye looked healthy. Aorta: Extensively atheromatous. Liver much congested; spleen very small. Kidneys: Capsules somewhat adherent, and the surface beneath faintly granular; cortical substance not diminished; medullary cones and pelvis intensely congested. Stellate veins prominent.

ON FUNCTIONAL REGURGITANT BRUIT.

By ALEXANDER SILVER, M.A., M.D.,
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Hæmic intracardiac murmur—*i.e.*, one depending on change in the blood itself—"is (says Walshe), as far as I have observed, invariably basic in seat and systolic in time." This assertion, so bold and so sweeping, would seem to have impressed itself so vividly on the minds of most men that they are altogether unwilling to admit the possibility of a regurgitant murmur being essentially hæmic in its origin. Nevertheless, it must have come within the experience of many men engaged in practice, that a murmur, systolic as to time, and ultimately disappearing with the use of remedies, is sometimes best heard on the left side of the body, about halfway between the nipple and the sternum, or even lower, distinctly below the origin of either the aorta or pulmonary artery. In some cases, indeed, such bruits may be clearly heard at the apex of the heart. These bruits must depend on one or other of two things—alteration in the blood, or alteration in the heart itself. That temporary bruits depending on the latter cause may occur, Dr. Walshe seems fairly to admit.

But it seems to me that auriculo-ventricular regurgitant bruits may be produced in at least two ways, neither implying any permanent change in the heart's substance.

1. Many men have noted that under the influence of excitement a temporary systolic bruit may be produced at the apex of the heart, and in many cases of chorea an apical systolic bruit may be heard to diminish *pari passu* with the general disease. The explanation which has been given of the latter phenomenon may be applied to the former also. In chorea, defective innervation induces irregular movements in the muscular system generally; and seeing that certain of the motor nerves of the heart are transmitted from the great motor centres by means of the lower cervical and upper dorsal spinal nerves, there is no reason to deny that the heart may be affected in like manner with other muscles. In this wise, therefore, irregular or spasmodic contraction of the papillary muscles being brought about, complete and simultaneous closure of the auriculo-ventricular valves would become impossible, and regurgitation with bruit would result. If in the former instance—viz., that depending on excitement—we read nervous agitation lasting but a moment, and most likely depending on dread of the ordeal of examination, for the defective innervation of chorea, we have at once an explanation of what at first sight seems inexplicable. This temporary condition of the papillary muscles may also be, however, permanent, and in their improper or insufficient action we have an explanation of certain abnormal sounds, which after death are not accounted for by any important material lesion of the valves. Thus, in the dilatation, with hypertrophy, which commonly results from aortic regurgitation, when the apex beats on a level with the sixth rib, and outside the nipple, it is plain that the apex is further removed from the base than in the normal condition—that is to say, the chordæ tendineæ must be stretched, or the musculi papillares elongated, or, these both remaining normal, the valves must close imperfectly, so that regurgitation follows. That the last result is not uncommon, seems indisputable. A similar explanation has been invented for bruits evidently anæmic, and yet regurgitant. Flaccidity of the tissues is universal in anæmia; being so, of course the heart is liable to be affected as are the other organs, and in very bad cases of anæmia dilatation of the heart has been noted as one of the post-mortem phenomena. But there are cases of inorganic bruit where there is no reason to suppose that this has taken place. Dr. Stokes, in his usual careful fashion, has noticed the existence of mitral bruit during convalescence from typhus, and that with returning health the bruit has disappeared. The relaxed condition of the muscular system after typhus would seem to afford a ready means of accounting for such a sound, in accordance with the above views. Interference, then, with the functions of the musculi papillares may without any permanent lesion produce a functional bruit, systolic as to time and apical as to seat.

2. But it is of the next variety of sounds that there is most doubt, and which, nevertheless, seem to be the most common. All sound is the product of vibration, however induced. In the blood stream this vibration must take place, either in the blood itself or in the walls of the vessels containing it. In the formation of regurgitant as of obstructive bruits, but more, perhaps, in the latter than in the former, vibration of the blood itself must have a considerable share. If we take the simplest illustration—say that of a pile driven into the bed of a rapidly flowing stream—it is the water which produces the noise, not the pile; and so in many instances of the blood current. It is universally admitted that in anæmia a bruit without material lesion may occur at the entrance both of the aorta and of the pulmonary artery. This bruit, depending on blood changes, implies either greater vibration, or, with the same vibration, increased resonance of the blood, or of its including vessels. The former seems the true explanation of the phenomenon, so that with the ordinary amount of obstruction encountered at the pulmonary and aortic orifices a new sound is produced; and not only so, but should any other obstruction be encountered, there also a bruit will be heard. Of this kind is the bruit produced in young people, especially girls suffering from anæmia, by pressing down the stethoscope into the second left intercostal space, and causing them to expire deeply. Such a bruit is purely artificial, and may ordinarily, with much less trouble, be elicited in the subclavian, just below the clavicle, near where it is attached to the scapula.

The next point in my argument is this. Normally—that is to say, without any material disease—the tricuspid valve acts imperfectly; with the slightest extra pressure or without any pressure at all, if the parts are flaccid, regurgitation results. Under ordinary circumstances, this regurgitation produces no important sound, or, if it does, it is usually drowned, even in those cases where we encounter pulsating jugulars. But with the blood of anæmia it is different; regurgitation, not necessarily implying any organic lesion, takes place, and a bruit results from the condition of the blood. From the above considerations, it would also follow that bruits actually depending on organic lesions may have their characters essentially modified by changes in the condition of the blood. This is doubtless the case in rheumatic fever, one of whose essential characteristics is the production of anæmia, and in whose course towards convalescence the alteration of tone or the total disappearance of an endocardial murmur is by no means unfrequently observed; in short, functions ordinarily performed noiselessly may, in anæmia, produce sound, and those giving rise to sound normally may, under similar conditions, have these so modified as to become what we call bruits.

It has been objected to these views that, were they correct, functional tricuspid regurgitant murmur would be more commonly recognised. The answer is, I think, that tricuspid regurgitant murmur would be more frequently detected if more sought for. Habitually, men listen at certain points of the chest, and if a murmur is heard there well and good; they do not always or even often trace it to its point of maximum intensity. Were an apical bruit, for instance, followed up from the apex to the sternum, it would not unfrequently be heard loudest over the tricuspid valves, and so of those best heard at mid-sternum; whereas mitral bruits are not unfrequently best heard behind—that is to say, to the left of the apex beat.

Two things seem to me clear: that functional regurgitant bruit is not rare, and that, when due to anæmia, it is most frequently tricuspid. If so, it is clearly of importance that the fact should be generally recognised. It may be roundly stated that obstructive bruit is not of such evil omen as is regurgitant, and that, when accompanied by anæmia, its importance is still less. Nevertheless, students, and even some Practitioners, are so much accustomed to attribute evil import to abnormal bruits of any kind (and I have known of lives broken in this way by a rash prognosis), that facts like these cannot be too forcibly impressed upon the mind. Thus, I have again and again had students diagnose aneurism from the subclavian bruit I have above referred to. It is from the constitutional as well as the local symptoms—from the totality of the case, and not from the bruit alone—that both the diagnosis and the prognosis (let it be also said the treatment) of a case of heart disease must be deduced.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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CHARING-CROSS HOSPITAL.

CANCER OF THE PYLORUS—SECONDARY DEPOSITS IN THE LIVER AND MESENTERIC GLANDS.

(Under the care of Dr. POLLOCK.)

R. B., AGED 42, tailor, living at Hounslow, a tall, thin, dyspeptic-looking man, had been seen once or twice by Dr. Pollock as an out-patient. He afterwards came under the care of Dr. Silver, by whom he was treated until his admission. His bowels had been habitually out of order for years, he had suffered much from piles, and was sometimes troubled with indigestion. He was not accustomed to be sick. His urine had generally been pale and plentiful. Between two and three years ago he began to have pain in his stomach, more particularly after food, beginning about half an hour to an hour after meals, especially after dinner, and lasting for hours. The pain usually passed away suddenly with flatulence. The pain was not confined to any one spot, but was most severe across the line of the hypochondria. It was of a griping character, but more severe than ordinary gripes, and was accompanied by swelling. The pain was increased by slight pressure, but relieved by long and continuous pressure. Latterly, the pain increased, but was still not fixed to one spot, and the patient was sometimes sick, but not often, bringing up partially-digested, partially-fermented food. The man came under the care of Dr. Silver on January 31, complaining of this sickness, and obstinate constipation, which had not yielded to ordinary remedies. There was no new symptom up to February 14; but on the 21st he appeared deeply jaundiced. His water was exceedingly dark, containing much bile pigment and an enormous quantity of urea. He said his water had been of a dark colour for nearly a week, and that the yellow colour of the skin had been gradually coming on for the same period. An epigastric tumour had been previously discovered, but no exact note taken of its site and connexions. On the above date it was made out to occupy the epigastrium and a portion of the right hypochondrium, extending upwards to the left rather than to the right, and in shape rounded and nodular. The stomach was distended with wind, and the colon was empty, except in its descending portion.

He was admitted as an in-patient on February 28, in much the same condition as described, but more emaciated and somewhat more deeply jaundiced. The bowels had not acted for some days, and an enema of castor oil and turpentine was ordered. The bowels were freely opened, after which the tumour was more distinctly defined. It was found to occupy the position noted above, was somewhat resonant on percussion, and was separated from the liver by a well-defined line of demarcation. Upwards it could be traced as far as the stomach, downwards it extended nearly to the umbilicus. At this time the margin of the liver was soft and well defined, not much larger than usual; no nodules could be detected on the surface of the liver.

He was ordered one-sixth of a grain of morphia subcutaneously every six hours, the dose to be somewhat increased at bedtime; and this was continued, but in gradually larger doses, up to his death. The bowels were occasionally moved of their own accord; occasionally an enema was necessary; the fæces always contained a trace of bile. There was little change in the symptoms from the time of his admission up to that of his death, beyond gradual but rapid emaciation and rapid growth of the tumour. By-and-bye a nodule gave evidence that the liver was affected. He died, utterly worn out, on March 23.

Remarks.—The interest of this case lay in the diagnosis. As to the nature of the disease there could be no doubt; its site constituted the difficulty. The two organs most frequently affected by cancer in this situation are the liver and pylorus. Primary cancer of the liver is rare (it does occur), and here there was no evidence of cancerous disease except in the epigastric region. Besides, there was a distinct space, resonant on percussion, between the tumour and the liver. The hepatic origin of the mass, therefore, was put on one side. The long-standing history of the case (two or three years), the occasional sickness, the pain half an hour to an hour after food, lasting for a good many hours, pointed rather to the pylorus as the seat of the mischief. But it was plain that a tumour, reaching down to the umbilicus and, as was also judged, implicating the bile duct, and so producing jaundice, could hardly arise directly from the pylorus. The opinion was therefore entertained that the duodenum or the glands in its vicinity were the subjects of secondary cancer, and that probably the liver was also implicated. The rapid and regular growth of the tumour towards the termination of life led to the belief that the abdominal glands had become affected to a large extent.

Post-mortem.—The post-mortem examination substantially confirmed the diagnosis, except that the liver was involved to a much greater extent than was anticipated, constituting a typical specimen of secondary hepatic cancer. A mass of cancerous glands situated in the transverse fissure of the liver pressed upon and obstructed the common bile-duct; but not, apparently, the cystic duct, for the gall-bladder was enormously distended. In this way, doubtless, the jaundice had been produced; but the imperfect closure of the duct allowed a small portion of bile to pass and stain the fæces. The pylorus was converted into a scirrhous mass of cartilaginous hardness, but neither the duodenum nor the stomach away from the pylorus were affected. The great bulk of the cancerous mass was made up of enlarged glands, the softness of which was in marked contrast to the excessive hardness of the pylorus. The mesenteric, lumbar, and mediastinal glands were all secondarily attacked. The posterior wall of the aorta, where it came in contact with the cancerous glands at the back of the chest, was also affected externally. There was a small quantity of bile-stained fluid in the cavity of the peritoneum, probably resulting from the pressure of the cancerous glands upon the vena porta in the transverse fissure. All the tissues of the body were deeply stained with bile.

Two things especially were worthy of notice in connexion with this case. The first, that the pylorus being the primary seat of the disease, the mesenteric and lumbar glands became secondarily affected. *Query*. By what means was the infection carried backwards along the lymphatics of the jejunum and ileum? Secondly, the great value of opium administered hypodermically in such cases. The constant vomiting would have prevented its effectual exhibition by the mouth; whereas, by this means, the patient was, during his whole stay in the Hospital, kept in a state of comparative comfort, and almost free from pain.

THE MIDDLESEX HOSPITAL.

ANEURISM AT THE BEND OF THE ELBOW—FAILURE OF FLEXION AND COMPRESSION—DELIGATION—CURE.

(Under the care of Mr. HULKE.)

A WOMAN, aged 30, while lifting a heavy saucepan from the fire, felt a sharp pain in the right elbow, and noticed the next day a swelling in this part. Six weeks later, at which time she was admitted into the Middlesex Hospital, it had become an oval, expanding, pulsating tumour, of the size of a pigeon's egg, situated just below the bend of the elbow, where the brachial artery usually divides into the radial and ulnar. The ulnar artery was subcutaneous from the wrist upwards throughout its whole course in the forearm, passing over, instead of beneath, the superficial flexor muscles, ascending in front of the inner condyle of the humerus, a little above which it inclined outwards, and, closely approaching the radial continuation of the brachial artery, was traceable parallel to this vessel to rather above the middle of the arm. In size and in its course, the radial vessel was the direct continuation of the brachial. It was traceable to the aneurism, but not discoverable between this and the wrist, which indicated that the blood probably left the sac posteriorly through an interosseous artery. The aneurism ceased to pulsate when pressure was made on the radial artery above the elbow, and then slight compression sufficed to completely empty the sac of blood.

The patient had had three attacks of rheumatic fever. She had mitral and aortic valvular disease, and she often fainted. Her urine contained a little albumen; her legs were slightly swollen, and speckled with a few small purpuric spots.

Her condition being eminently unfavourable for any Surgical operation, flexion and compression were thoroughly tried; but these failing, and the aneurism enlarging, Mr. Hulke tied with a fine carbolised hempen thread the radial artery in the arm, at a point midway btween the bifurcation of the brachial artery and the tumour, which immediately arrested its pulsation. The wound was dressed with a slip of lint dipped in carbolised oil, covered with gutta-percha.

Next day a feeble pulsation was felt in the tumour; but it ceased on the day following, and did not return. The wound closed almost by first intention, scarcely yielding a drop of pus, and the tumour consolidated and shrank. The ligature separated on the twenty-first day.

The above account of the case is condensed from the notes of the dresser, Mr. Lycett.

STRANGULATED FEMORAL HERNIA — HERNIOTOMY—SAC OPENED — OBSTINATE REMOVAL FROM HOSPITAL AFTER OPERATION—DEATH.

(Under the care of Mr. HULKE.)

Robert P., aged 68, was admitted into Clayton Ward, under Mr. Hulke's care, on the evening of February 7, 1871, with a tense oval swelling the size of a hen's egg below Poupart's ligament, over the sapheneous opening, giving no impulse on coughing, and having a smaller lump attached to its outer side resembling an enlarged gland. The skin over the swelling was red and tender, the tongue was clean and moist, and there was no vomiting; but the pulse was quick, small, and weak, and there was much pain in the belly.

The patient was a feeble, deaf old man, and it was with difficulty ascertained that he had been ruptured and had worn a truss for some years. A fortnight back a new and imperfectly fitting truss had failed him, and for some days before admission the bowel had been down, but the exact time could not be ascertained. He had vomited, had had no stool for some days, and unavailing attempts at taxis had been already made.

At 8 o'clock in the evening chloroform was administered, and Mr. Hulke, fearing to repeat the taxis, at once cut down upon the neck of the hernia. The sac was very thin, and contained chiefly omentum, and a couple of ounces of bloody serum escaped on its being opened. The omentum was very congested, and a rather denser piece of it, lying in a diverticulum prolonged outwards along Poupart's ligament, formed the harder mass, slightly isolable from the general swelling, which had simulated a lymphatic gland. The wound was closed with fine carbolised sutures, having been first washed with a solution of carbolic acid, and lint soaked in carbolic oil was laid over all under a pad. Ordered pil. opii, gr. j., 4tis hôris.

Next day the man's condition was greatly improved. He had passed a good night, was feeling quite easy, had a clean moist tongue, and complained of being very hungry. On the following day, however, he thought that he had dropped a shilling, became exceedingly restless, insisted on rising to search for it, and would not be pacified. This disturbance produced a serious change. Next morning he was delirious, refused all medicines; the belly was hard and tympanitic, scanty bloody fluid oozing from the wound; the pulse became small and weak, and the hands dusky. A large linseed poultice sprinkled with laudanum was placed over the abdomen, as it was clear that the man had peritonitis, and he was ordered to be kept very quiet; but on the same evening his friends came and removed him from the Hospital, disregarding the urgent representations of the House-Surgeon, and it was ascertained that he died at home two days later, the woman nursing him being drunk.

STRANGULATED OBLIQUE INGUINAL HERNIA—HERNIOTOMY—SAC OPENED—WOUND DRESSED ON LISTER'S PLAN—IMMEDIATE AND SOUND CICATRISATION WITHOUT SUPPURATION.

(Under the care of Mr. HULKE.)

J. S., a labourer, aged 59, was admitted into the male accident ward at 4.30 p.m., on January 5, 1871, with a hernia in the left side of the scrotum, the size of a fœtal head, very hard and tense, giving no impulse on coughing, tympanitic above, but dull over its lower half, and causing intense suffering. He had generally worn a truss during twenty years, and had only once had difficulty in reducing his rupture. On that occasion, five months ago, he had been admitted into this Hospital, and the hernia was reduced by taxis under chloroform, after the continued application of ice. For some weeks the truss had been worn out, and to-day, whilst walking, the bowel came down, could not be returned by the patient's own efforts, and he forthwith came on to the Hospital. No relief being given by the ice-bag, hot bath, and ordinary taxis, Mr. Hulke was sent for, eight hours after the commencement of the symptoms. The man was by this time shivering, tossing restlessly about in great pain, vomiting bilious fluid, and with a small and quick pulse. The rupture was very hard, and already larger than on admission. Chloroform was now at once given, and taxis having been again tried without avail, an incision was made over the external abdominal ring, where a deep furrow seemed to indicate the seat of strangulation. The ring was cut, and some fibres outside the sac divided; and as the contents were still irreducible, the sac was opened, after which several feet of gut, with some omentum, were returned without difficulty. The wound was dressed antiseptically after Lister's method, and a pill containing a grain of opium ordered to be taken every three hours.

On January 10, five days later, the dressings were removed, the man having had no bad symptom, and the two outer sutures, causing some redness and suppuration, were taken out. Two days afterwards, the other sutures were removed, and the man made an uninterrupted recovery, leaving the Hospital convalescent, and fitted with a double truss (for a second hernia existed on the opposite side), on January 22.

STRANGULATED FEMORAL HERNIA—HERNIOTOMY—SAC OPENED—RECOVERY.

(Under the care of Mr. HULKE.)

Helen C., aged 60, was admitted into Bird Ward on the evening of February 17, 1871, with a swelling the size of an orange in the position of a direct inguinal hernia on the right side, a cord-like continuation being felt extending to the saphenous opening. The skin covering the tumour was red and inflamed, and the patient was much prostrated.

For fourteen years she had had a swelling in the right groin, but she never wore a truss, nor applied for Surgical advice. Three days before admission symptoms of strangulation appeared. The bowels had not acted since; there had been much vomiting, and many unsuccessful attempts at taxis had been made. Mr. Hulke was at once sent for, chloroform administered, and the operation proceeded with. The inflammatory agglutination of the tissues not permitting the skin to be transfixed in the usual way, an incision was made over the prolongation to the saphenous opening. The sac was thin, and contained no serum, and on a pellet of omentum being drawn down, and the opening in the sac enlarged, it was found that the mass of the hernia was omental, and placed above Poupart's ligament; but behind the omentum was a knuckle of purplish-black gut, which adhered to the sac, and rendered it difficult to reach Gimbernat's ligament with finger or director without risking perforation of the bowel. A director was carefully inserted and the necessary incision made, and then the tightly distended bowel being emptied by slight compression, the adhesions were separated, and the intestine and omentum returned into the abdomen. The wound was dressed with carbolic oil, and a pill of opium, gr. j., ordered for every four hours. Next day the patient was still very prostrate, and not quite coherent in her conversation. The wound subsequently sloughed, and required constant disinfectant dressings, but beyond some tympanitis for the first few days, the woman had no unfavourable symptoms, and under free stimulation she gradually regained strength, and by March 20 the wound, which had for more than a fortnight been granulating healthily, was considerably retracted and fast healing.

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Medical Times and Gazette.

SATURDAY, APRIL 1, 1871.

STATE INTERFERENCE IN MEDICINE.

"A free Church in a free State" is the watchword of a growing party of ecclesiastical reformers amongst ourselves, and embodies a principle which has been one of the most powerful of the causes that are now convulsing the fabric of European civilisation. Without touching on the merits of the question of religious establishments, we would only observe it is a curious phenomenon, that whilst a large section of the profession of divinity are seeking to free themselves from the trammels of State interference, there should be found amongst ourselves in the Profession of Medicine a party who proclaim themselves desirous of placing the Profession more directly under the rule and governance of the Ministry of the day, of introducing the principle of State interference in our examinations, and of indirectly, but surely, sweeping away the ancient Professional institutions of the country by exchanging their diplomas and degrees for a State licence. Watching as we do the signs of the times, and noting the democratic tendencies of the age, we cannot but regard the policy of the introduction of State interference in Medical affairs as one that must prove most injurious to our interests, whether scientific or social. There is great danger that State Medical examinations would mean the degradation of the standard of Medical acquirements, the malversation of the funds derived from examination to State purposes, and the starvation of those great institutions in the three kingdoms which for centuries have constituted the Profession in the eyes of the public, which are the monuments of that *esprit de corps* which has been a ruling principle in the lives of the greatest followers of Medicine—institutions which are the guardians of their labours, and the memorials of their fame. It seems tolerably clear that any attempt to pass a so-called "Medical Reform Bill" in the present session of Parliament must undoubtedly fail, and, for ourselves, we hope that the good sense and mutual forbearance of the Medical Authorities will lead to such amalgamation of examinations as will cut away the only real ground on which legislative interference with the Profession can be advocated. Notwithstanding the delay which has been caused by the discussion of questions of detail, we have yet confidence enough in the wisdom of those who are conducting the negotiations for a Conjoint Board on the part of the three Corporations, to entertain a very strong expectation that this will be the case as regards England. The proceedings in the Council of the Royal College of Surgeons, on which we remarked last week, may lead to some animated discussions in committee, and even to some not unimportant modifications in the scheme as accepted by the Comitia of Fellows of the Royal College of Physicians; but the consolidation of examinations is so clearly the demand of the time, and is so thoroughly supported by the wisest and most far-seeing in the governing bodies of the Corporations, that we have but little fear that a scheme satisfactory to all parties will be ultimately agreed upon. We know that the Committee of the Royal College of Surgeons has already held a sitting on the matter, and we presume that it will not be long before there will be another meeting of the delegates of the three Corporations, to discuss any modifications which may be suggested by the Committee of the College of Surgeons, or which may proceed from either of the other bodies.

In our remarks on what passed in the Committee of the Council of the College of Surgeons last week, we noticed that discussion had arisen in reference to that part of the scheme which referred to the distribution of the moneys derived from examinations after the payment of the examiners and attendant expenses. We have been since informed that a portion of the Council regarded with hesitation that clause of the scheme (Clause IX.) which provides that the mode of the division of the second half of the fees be subject to revision at the end of every three years. Now, considering the great pecuniary responsibilities which are borne by the Council of the College of Surgeons, we think that such hesitation is not unwarranted. The Royal College of Surgeons, independently of the grant of £57,000 from the State for the purchase and housing of Hunter's museum—a grant spread over fifty years—has itself spent no less a sum than £248,000 for museum buildings, the maintenance and enrichment of the museum, and the support of the lectures illustrated by it. The annual cost of the museum to the College is £2800; the annual cost of the library is £750. Now, these enormous outlays have been mainly, if not entirely, furnished from the sums received from candidates for Membership. The College has expended, we believe, in the support of its museum and library not much less than fifteen pounds out of every twenty guineas paid by each Member. It is reasonable, therefore, we must confess, that members of the Council of the College should entertain misgivings as to a pecuniary arrangement which bears anything of a shifting and uncertain character. Not merely the Council of the College of Surgeons, but the whole Profession, are interested in the full maintenance and support of the Hunterian Museum and Library, and we therefore think that any scheme which is finally agreed upon by the contracting Medical Authorities should include a permanent provision for the support of these great works. To partially starve the Museum and Library of the College of Surgeons, or to reduce them to such a standard that they would offer an apology for the designs of an enterprising Radical Minister who might wish to make them a department of the national collection, would be disgraceful to the College and disastrous to the whole Profession.

THE SMALL-POX EPIDEMIC.

The mortality from small-pox in London recorded last week by the Registrar-General is a warning that we are as yet far from being "out of the wood." The registered deaths were 205, an increase of 20 upon those of the preceding week. The fatal cases showed an increase in all the groups of districts except the East, where the number had declined. There is reason to fear that, as the first alarm is passing away, and people are becoming accustomed to the presence of the enemy at their gates, they are feeling a security which is ill-grounded, and finding that the epidemic has lasted thus long without touching them are beginning to fancy that they were not far wrong, after all, in avoiding the temporary inconvenience of submitting to revaccination. Certainly the rush to the vaccinating stations is subsiding, although it is equally certain that there are still many thousands in London whose protection is nominal rather than actual. We tell such persons as are now disposed to chuckle over their escape, and to laugh at others who prudently renewed their vaccination some weeks ago, that their time may come yet. It is from such as them that the destroyer will gather his victims in the weeks yet to come, and nothing will keep the epidemic from spreading but a continued extension, to those whose vaccination has not been repeated since infancy, of the only protective measure that can be relied upon. They should bear in mind two things—the one is that the contagium of small-pox is broadly sown throughout the metropolis—we should be tolerably safe in affirming that there is scarcely a street in London where it has not been deposited lately; and that from such foci it is diffused by channels that they are little aware of, and through which it may reach them without the possibility of avoidance. We will indicate one—namely, the articles sent out from the houses of laundresses and manglers, where persons are lying ill with the disease, or where clothing, etc., are received from small-pox patients to be washed or "got up." There are some, whose bliss lies in their ignorance, who would be astonished were they told of the proportion of domestic invasions observed in the public practice in London which have occurred in the dwellings of laundresses. If we placed it at one in every fifteen or twenty we should be stating a fact which, judging from the experience of at least one large district, there would probably be little difficulty in substantiating. The other thing to be borne in mind is that experience of former epidemic seasons is altogether opposed to any anticipation of even a comparative cessation of the epidemic until the month of May is well advanced; and even this will depend very much upon the sort of weather that may be in store for us towards the close of the spring quarter. Let it be well recollected that isolation, as carried out among the poor, who furnish full half the cases of small-pox, is a myth and a deception; that only a fraction of these cases are removed to the small-pox Hospitals, while the remainder are retained at home, their attendants pursuing their ordinary avocations out of doors, or in other people's houses, in workshops, etc.; while the patients themselves, as soon as they are well enough to go out, carry the contagion on their persons and clothing in all directions to their associates, fellow-workpeople, playmates, and others. Universal vaccination and revaccination are the only protection on which any dependence whatever can practically be placed.

We are sorry to notice that there is an indication of an epidemic of small-pox at Newcastle.

The small-pox has spread to St. Petersburgh, and everybody is being revaccinated.

DR. DALRYMPLE'S BILL CONTRASTED WITH THE AMERICAN LAW.

Dr. Dalrymple's Bill to Amend the Law of Lunacy and to Provide for the Management of Habitual Drunkards appears defective in an important respect. It only provides for the commitment by magistrates of habitual drunkards as defined by Section 1, to a reformatory, sanitarium, or refuge, if *unable to pay for their maintenance* in any other reformatory, sanitarium, or refuge. The persons described in Section 1 are such as "by reason of frequent, excessive, or constant use of intoxicating liquors are incapable of self-control, or dangerous to themselves or others, or incapable of proper attention to and care of their affairs and family." Now, many such are to be found among the classes perfectly capable of maintaining themselves in a reformatory, sanitarium, or refuge, but who may nevertheless decline to avail themselves of the privilege of admission to such institutions at their own request, as provided by the fifth clause of the Bill, and no such request may be preferred "by a near relation, friend, or guardian," under the power given by the sixth clause. Such persons, under such circumstances, could not be dealt with by this Bill unless they brought themselves within its penal enactments through having been "*convicted* of drunkenness or a breach of the peace while drunk three times within six calendar months," in which case they might be committed in the same way as their less opulent neighbours.

The American law makes no such invidious distinction, but directs the overseers of the parish to proceed against all alike. Class-legislation will not do in the present day on this or any other subject. Vice is vice, in rich and poor alike. Incapacity, like love, levels all distinctions. Any evil example is worse among the rich than among the poor, because it is more contagious. Upon what principle a wealthy drunkard should be permitted to roam at large until he has been convicted of drunkenness or a breach of the peace while drunk three times within six months, and a drunkard less amply endowed should be more summarily dealt with, it is difficult to discover.

Friends will not always interfere, as by so doing they may make themselves obnoxious to a rich relative.

A noble earl died not long since, at a fashionable hotel in London, of delirium tremens. He was wealthy, but no relative interfered to place him under restraint, or even to oppose any moral check to his vicious habits.

The noble lord, by a stroke of his pen in his sober moments, could have alienated his vast estates. It is no answer to say that in the present state of the law interference in such cases would be useless. Sometimes ladies, we are told, contract this sad habit, and so far from interfering, the members of the family naturally try to screen them. Family respectability and the social position will never voluntarily endure a public exposure by taking the initiative. There must not, however, from any feeling of delicacy, be one law for the rich and another for the poor. The power given by the Bill to relatives and guardians need not be curtailed by clothing public officers with a like power in the event of the former neglecting their duty, but all classes should be placed on an equal footing.

It should also be borne in mind by the framers of the Bill that the jurisdiction conferred is of a civil rather than of a criminal character; in fact, an extension of the guardianship now vested in the Lord Chancellor relating to persons of unsound mind, and it would scarcely be wise to intrust its administration to unpaid, and, therefore, in a measure irresponsible, country gentlemen. The following is the American law on the subject:—

"*Revised Statutes of New York.—Title II. Of the Custody and Disposition of the Estates of Idiots, Lunatics, Persons of Unsound Mind, and Drunkards.*

"Section II. Whenever the overseers of the poor of any city or town in this State discover any person resident therein to be an habitual drunkard, having property to the amount of 250 dollars, which may be endangered by means of such drunkenness, it shall be their duty to make application to the Court of Chancery for the exercise of its powers and jurisdiction.

"Section III. If such drunkard have property to an amount less than 250 dollars, the overseers may make such application to the Court of Common Pleas of the county, which is hereby vested with the same powers in relation to the person and real and personal estate of such drunkard as are by this Title conferred on the Court of Chancery, and shall in all respects proceed in like manner, subject to an appeal to the Court of Chancery."

This latter section, of course, embraces persons unable to pay for their maintenance in an asylum, and by substituting *County Court* for *Court of Common Pleas*, and giving a right of appeal to any vice-chancellor, a much more satisfactory tribunal would be established than that of the unpaid magistracy without appeal, or even with appeal, especially if, as suggested by Dr. Dalrymple's Bill, their jurisdiction is to be of a partial character. The county courts, having already equity jurisdiction in all matters to the amount of £500, might be left to deal with all cases where the drunkard has property to that amount or under, or none, leaving the cases of wealthier inebriates to the Court of Chancery; but, whatever the tribunal, the law should be set in motion by public officers, if relatives and friends will not move, irrespective of the station of the parties. The only reason for conferring upon the courts of common pleas of the county, in America, jurisdiction in the cases of persons of small or no means, is to save unnecessary expense, and our county courts afford an admirable means of effecting that object without doing any violence to principle, or creating any obnoxious distinction.

INSANITY IN INDIA.(a)

If the subject of insanity in this country be difficult; if we have men, apparently of equal skill and authority, flatly contradicting each other in the witness-box; if innate brutality is commonly confounded with imbecility; if a murderer need only commit his crime coolly enough and openly enough to be accounted insane—surely the difficulties in the way of arriving at a sound decision as to the insanity of a criminal are tenfold intensified in India. There the Medical inquirer has to deal with a strange people, speaking a language in which an accent may totally alter meaning; a people of peculiar customs and cruel rites, whose religious belief may at any moment start forth as savage fanaticism. It may be well, therefore, to point out some of the obstacles to be encountered, that, at least, the Indian Medical officer may be aware of them, and for the instruction of those in this country who imagine that insanity is a matter of which any plain man may judge.

Persons of weak intellect are not peculiar to either hemisphere, and are found in India as in this Western land; and if we have madness produced by ardent spirits, they have it as the result of gunjah. Of this we have already spoken, but not of one of its concomitants—*running a mok*. This practice is most common in Malay countries, although not by any means confined to these. The action is generally induced by some wrong, fancied or real, over which the victim broods until he can bear it no longer, when, after priming himself with bhang or opium, he first slays the object of his hatred, if at hand (for it is not always done), then, rushing into the streets, acts like a mad dog, killing or maiming every one he meets, until he, too, is cut down. Sometimes, also, a man sitting quietly among his friends will suddenly start up, seize the nearest weapon, and slay all he can until captured or put to death. Afterwards he avows contrition, and states that he was seized with a sudden frenzy. Nevertheless, even these last are not looked on with eyes of mercy in an Indian court; they are usually put to death. Dr. Chevers is of opinion that a good many of the cases of murder by hacking to death are committed under the stimulus of intoxicating agents, although insanity may have existed beforehand. In Bengal, the practice of *running a mok* would seem to be almost as common as farther east. An up-countryman at Howrah, near Calcutta, in May, 1869, excited by jealousy, started off, and, before being stopped, cut down eleven persons. Sometimes the persons so acting are really insane, and have taken no stimulant.

A matter of some considerable importance, not only in India, but also in this country, is the effect of liquor on a weakened brain. Thus, in India, it is frequently urged by European soldiers when tried by court-martial for drunkenness, that a previous sunstroke or brain fever had rendered them unusually susceptible to the influence of wine or spirits; and so in this country a similar plea is often raised by those who have served in the East. Many strict officers ignore this plea; but, in the opinion of Dr. Chevers, it should not always be overlooked, inasmuch as such maladies not unfrequently leave behind them a morbid craving for stimulants; and he cites two cases which occurred in his practice as examples in point, one being a military man, the other a civil engineer, both between 30 and 40; both had suffered from the head, and both were attacked with cerebral symptoms in consequence of exposure to the sun, and in both the most troublesome symptom was an incessant demand for beer; both had been moderate men. They were sent to England, and one returned quite recovered.

One of the most difficult class of cases to deal with is that of religious monomania. In this country, it ordinarily assumes a melancholic form, not unfrequently with a tendency to suicide; in India it may develope itself in outrageous acts, and it is not always easy to say which are those of a monomaniac, which those of a fanatic with all his senses. One of the most horrible sects, which should, we suppose, belong to the latter division, are the Aghorpunts, who, professing to take everything alike, feed on what they first encounter: cooked food, ordure, or dead human flesh. For this last they seem, indeed, to have a certain partiality; but it is not certain that they ever commit murder for the sake of satisfying their appetites. Among this class the Thugs (worshippers of the goddess Kallee) ought to be included. All their murders were committed, so they said, under divine inspiration, insomuch that, when they began to exercise their craft, they had no care to remove the body—Kallee did so herself. But certain inquisitive Phansagars, anxious to see the goddess, waited until she should remove the body they had just slaughtered; but the goddess came no more, and ever after the Thugs had to secure their safety by disposing of their own victims.(b)

Feigned insanity is not by any means peculiar to India, and, allowance being made for the habits and customs of the natives, like means apply to its detection as in England.

THE WEEK.

TOPICS OF THE DAY.

At a general meeting of the governors of the Westminster Hospital, on Friday, March 24, Mr. Francis Mason was unanimously elected Surgeon to the Hospital. Mr. Mason's election to the Surgeoncy of the Westminster is a fitting reward for good and earnest Professional work as Assistant-Surgeon, first during four years at King's College Hospital, and afterwards during four years and a half at the Westminster. At the same meeting of the governors, Mr. Richard Davy was elected Assistant-Surgeon to the Hospital.

We are glad to notice that the pupils of the Ecole de Médecine at Paris, last week ranged themselves on the side of order against the Central Committee. They placed their services at the disposal of the Maires or of Admiral Saisset, who was appointed to the chief command of the National Guards.

(a) "A Manual of Medical Jurisprudence for India, including the Outline of a History of Crime against the Person in India." By Norman Chevers, M.D., Surgeon-Major H.M. Bengal Army; Principal of the Calcutta Medical College; Professor of Medicine, and Senior Physician, in the College Hospital, etc. Calcutta: Thacker, Spink, and Co. Pp. 861.

(b) Many very curious facts relating to Thuggee are contained in Captain Taylor's "Confessions of a Thug," a book now long out of print, and a copy of which we have failed to secure.

The papers have again been full of arguments and assertions as to the mental and moral equality of woman with man in reference to the woman's suffrage question. That question we do not profess ourselves to be politicians or courtiers enough to discuss; we would only remark on the general question of woman's equality that it is a curious fact that, even in the callings which specially belong to women, few, if any, attain the highest degree of excellence. Stitching and shaping form one of the degrading employments to which custom has condemned women, say our enthusiastic reformers. But would any of these gentlemen consent to have his coat cut and made by a woman? How is it that men cooks are universally acknowledged to be the best? For every boy who is taught music, probably six girls are; but what woman has ever composed? And so we might go through the round of female employments and accomplishments. The fact is, there are certain things that women cannot do at all, and those things that she as well as man can do she does not excel in; but there are certain things which man cannot do at all, and which only women can do. But these are matters which require that combination of tender heart qualities with those of brain and hand which make woman the incomparable being she is. Still there are fields of exertion in which woman has a perfect right, and where she will meet nothing that will spoil or sully her higher nature. In these fields men will feel honoured by her presence and, we may add, her rivalry. We can thoroughly endorse Lord Elcho's remarks in his recent address at the delivery of prizes in the Female School of Art:—

> "It was a comfort to him that, in relation to the 'woman's question,' this was a school of art, and not the operative theatre of Guy's or St. Thomas's; for whatever might be his strong opinions with regard to woman's entry into other fields, he considered art was a field to which a woman had a fair right, and no man would dispute a woman's right to this field for the exercise of her talent and taste. In this profession she could show her imagination, her tender feeling, and could give her delicate rendering of the true and beautiful. This profession offered a fair, unrestricted field, and the works which he had seen as the result of woman's cultivation of art proved to him that those of the sex who were following art studies had acquired for themselves a good position in art ranks, and every one anxiously wished to see art cultivated by ladies who could do so much for it. It had been a great pleasure to him to go over the school in Queen-square, and to see the students under the admirable teaching of ladies who were well qualified to instruct, and to see as well the beautiful works produced by the students. It had also been his lot, as one of the jury for the International Exhibition, to see many works of female artists, and, though he could not mention the names of any exhibitors, he could at all events say that the coming exhibition would raise the name of women as artists."

Mr. J. Norman Lockyer, F.R.S., is appointed Reade's Lecturer in the University of Cambridge this year. Mr. Lockyer will deliver his lecture in Easter term.

We regret to notice the death of Mr. R. Meldola, a Surgeon practising at Victoria-park, from an overdose of chloral hydrate. Mr. Meldola is said to have been suffering from diseased heart. The death of another Surgeon, Mr. E. C. Smallman, from an accidental overdose of chloral hydrate, is also published. The fact is that chloral hydrate has been taken and administered too indiscriminately. In overdoses it is evidently capable of producing fatal results, and when its use is continued for a long time some good observers suspect that it may determine the occurrence of degenerative changes in some of the internal organs—*e.g.*, the kidneys.

The Privy Council, whatever the meat trade may say to the contrary, are quite right in putting restrictions on the importation of dead meat from countries where cattle plague is raging. Cattle plague, we believe, was introduced into the Zoological Gardens during our English epizootic by the flesh of diseased animals. There is abundant other evidence that the disease may be disseminated by hoofs and skins, and it is at least tolerably certain that the meat of animals affected with rinderpest cannot be carried about and consumed without danger to man or beast.

FRIENDLY VISITS.

What are friendly visits as regards a Medical Practitioner? Strictly speaking, all his visits ought to be regarded as friendly; if not, his patients labour under a grievous mistake. He, of all men, ought to be regarded in a friendly spirit. His object is to relieve pain, combat disease, and, if he can do no more, to smooth the passage to the grave; these, in the strictest sense of the word, are the visits of a friend. Where is the line to be drawn between a strictly Professional and a *quasi* friendly visit? Having faith in the honour and integrity of our brethren, we hesitate not to say, if they err, they err to their own disadvantage. No honourable man amongst us will ever take advantage of his position; it would be contrary to our notions of right and wrong, and, in the end, would tend to our disadvantage. If a patient asks you to dinner for the mere purpose of getting your opinion upon his case, he is bound to treat you Professionally; if he does not, he takes a mean advantage of you. Mr. Liston was once asked by a patient to take part in a hunting excursion with the hounds in a northern county: he complied. His opinion was asked in regard to a certain case: he advised amputation of a limb, performed amputation in his usual masterly manner, and—was reminded, when he claimed his fee, he was regarded "merely as a friend." Liston said to us, "I never again accept an invitation to be mounted 'as a friend.'" Radcliffe tells us that on one occasion a miserly old merchant attempted to steal his opinion with regard to his own case. "What shall I do?" said the patient to him.—"Why, sir, I should advise you to take advice"—a very proper response to the would-be-pauper patient. The lawyers are shrewder than we are in these matters. Mr. Fazarkley was once asked by one of his hunting friends what he would do under certain circumstances. "I think," said he to the inquiry, "I should defend the action." The action was defended, and defendant mulcted in damages and costs. "I lost my cause," said his hunting friend to Mr. Fazarkley, "by acting upon your opinion." "I don't recollect it," said Fazarkley. The vanquished defendant thereupon replied, "You gave me that opinion when we were riding together to meet the Pytchley hounds." "Oh!" said Fazarkley, "that was my *travelling*, not my *professional* opinion." It is scarcely necessary, we think, to draw a moral from these facts. It would be a consolation for us to know that our Professional brethren could draw a determinate line between what may be deemed strictly Professional and friendly visits. We have no doubt, however, that the balance will be in favour of our brethren, and we are glad to announce that, in a late trial in which this question was discussed, the judge gave his dictum in favour of the Medical plaintiffs, and totally ignored the defence of "friendly visits," on the ground that he could not believe that the members of an honourable Profession could ever be induced to make charges to which they were not justly entitled.

A "WRONG"—WHERE IS THE "REMEDY"?

The *Cork Examiner* reports the case of Cogan *v.* Spillane. It was an appeal from the decision of the Chairman of Quarter Sessions, who had awarded the then respondent 3*l.* for injuries she sustained by the falling of a timber shoot from the appellant's house in South Main-street. It transpired in the hearing of the appeal that, in the Court below, Dr. Holmes, who attended the respondent, refused to give evidence unless he got a fee of a guinea. The Chief Baron said the assistant-barrister had power to compel the Doctor to give evidence without a fee, and, if he refused, he should have committed him. He (the Chief Baron) decidedly would under the circumstances. The report does not state whether Dr. Holmes had received a guinea with his subpœna. If he had, then, of course, he could be compelled to give evidence; if not, upon what grounds of law or justice could he be compelled to do so? In England, at all events, he could have successfully refused until the fee had been awarded him. Since writing the above, we have received a copy of the *Cork Examiner* containing a letter from Dr. Holmes, addressed to the editor, which, as it relates to a question of the most vital importance to the Profession, we extract *in extenso*, merely remarking that we agree entirely in the opinions expressed by Dr. Holmes:—

"Sir,—I perceive in your issue of to-day some comments made by the Chief Baron in the appeal case of Cogan *v.* Spillane, with reference to my having refused to give evidence before the Chairman of Quarter Sessions.

"The facts are as follows:—I attended for some time a Mrs. Spillane for an injury which she alleged she received by the falling of a spout. Subsequently I was subpœnaed by her attorney, Dr. Macgennis, and attended court. On my name being called I declined being sworn until my expenses were paid, observing that I was put to great inconvenience and loss of time by my attendance. The Chairman asked plaintiff's attorney if she would pay me a guinea; the reply was that she could not. I then asked the Chairman permission to leave the court, which he at once granted. I was the greater part of the day in court, and in order at four o'clock to get through my work before night expended nine shillings in car-hire.

"Now at that time I was in attendance on some persons about whom I was extremely anxious. There was no person to visit my dispensary patients, and I therefore laid myself open to a charge of neglect, and perhaps dismissal from my office by the Poor-law Commissioners, for which I fancy I would get little satisfaction from any of the parties concerned.

"It therefore appears that a Medical man is compelled to neglect all business, set the lives of his patients at nought, attend court and give evidence in a case which has not for its object the bringing of a criminal to justice but the putting of money into the plaintiff's pocket, or go to jail.

"I have the greatest possible regard for law and order, and believe it is generally admitted that members of my Profession are at all times most willing to assist in furthering the ends of justice; but surely the law as laid down yesterday by one of the most distinguished lawyers that ever adorned his profession, with regard to Medical witnesses in civil cases, requires the earnest consideration, not only of the Medical Profession, but also of members of Parliament with a view to its amelioration.—I am, sir, your obedient servant,

"William H. Holmes,
"Medical Officer of Cork Dispensary."

OPPOSITION TO THE SCHEME OF THE ROYAL SANITARY COMMISSION.

There was a well-attended meeting of the sanitary world, at the rooms of the Social Science Association, on Wednesday evening, March 29, to listen to a paper by Mr. Michael, criticising the scheme for sanitary reform propounded in the Report of the Sanitary Commissioners. The speaker found fault with the Commissioners for not having obtained more evidence, for not having sent commissioners over the country to investigate the question of boundaries, for proposing to employ the Poor-law Surgeons as local Medical Officers of Health, and the guardians as local authorities, for the undue preponderance given to the central authority, and for certain defects in the system of rating. After observations had been made by Dr. Stallard, Dr. Rogers, Dr. Farr, and others, Mr. Powell, M.P., one of the Commissioners, defended and explained their proceedings, and the Earl of Shaftesbury, who occupied the chair, summed up what had been said. His opinion, which was that of a majority of the meeting, was that, though the Commissioners' scheme might not be perfect, yet that it were better to accept an imperfect measure at once than to wait for a perfection which, after all, might be unattainable; that the Report was highly creditable to the zeal and industry of the Commission; and that its defects might soon be removed if there were a friendly conference of those interested in the subject.

GULSTONIAN LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS, BY DR. GEE.—LECTURE III.

Much of the heat of the body, in its healthy state, being due to oxidation processes going on in the blood, it was asked, with reference to the augmented heat of pyrexia, whether there was any reason to believe that these oxidation processes were augmented. The only data for a determination of this point were those afforded by injections of animal liquids into the bloodvessels. Not only pus and the fluids of inflamed tissues, but even an excess of healthy blood, thrown into the vessels, can set up pyrexia. On the other hand, copious venesection elevates the temperature, possibly because producing a rapid absorption of the tissue-juices, which are loaded with the effete products of tissue-change. The lesions which are directly dependent upon pyrexia were next considered. The glandular structures undergo the change which has been named clouded swelling, parenchymatous swelling, or albuminous infiltration. The muscles, both voluntary and involuntary, are similarly affected. The changes of the blood and nervous tissues are much less known; but there seemed to be reason to believe that the state which was named by the ancients putridity is partly a result of pyrexia. The catarrhal condition of the mucous membranes, and the injection of the skin, which attend pyrexia, were next dwelt upon. Both in natural and in preternatural heat of the body, a certain standard of temperature is maintained more or less accurately. The seat of this regulating function is not exactly known, but there are facts which seem to show that it is to be found in the cerebro-spinal centre. The statement of Tscheschichin, that section of the spinal cord is followed by depression of temperature, and section of the upper part of the medulla oblongata by elevation of temperature, has been disproved by Naunyn and Quincke, who have found that, provided the increased loss of heat be prevented, the temperature is raised by section of any part of the medulla spinalis or oblongata. It seems as if the temperature is raised in proportion to the height at which the section of the cord is made. There are, then, in all probability, certain fibres which pass from the brain down the cord, and which exercise some sort of control over the calorific processes of the tissues. When these fibres are divided, and the control thereby destroyed, the chemical changes are free to go on to their utmost in the part of the body affected, and so the temperature rises. In the last place, it was maintained that "fever" is a word of much wider meaning than "pyrexia," and should be defined so as to include the necessary antecedents, concomitants, and consequences of pyrexia. But inasmuch as we are ignorant of many of these things, a definition of fever at once precise and comprehensive is not yet possible. All the theories of fever which have hitherto been brought forward, err either by exclusiveness or by indefiniteness.

INQUESTS IN METROPOLITAN WORKHOUSES.

From a Parliamentary return just issued, it appears that during the year ended December 31, 1870, 418 inquests were held on the bodies of persons dying in workhouses in the metropolis. Of this number, 207 were on persons belonging to St. Pancras Workhouse. The total deaths from all causes were 6684, of which number St. Pancras contributed 425—no excessive proportion as regards "deaths from all causes," but suggesting two hypotheses with respect to the number of inquests: either that there must be in the St. Pancras cases an extraordinary difficulty in certifying the cause of death, or that throughout the rest of the metropolis many inquests are needed beyond those actually held.

ARMY MEDICAL DEPARTMENT.

The death of retired Inspector-General of Army Hospitals J. Henderson, M.D., places it in the power of the Director-General to recommend another officer for the £100 per annum good-service pension drawn by the deceased.

FEVER AND SMALL-POX IN GLASGOW.

During the week ending March 25 the births in Glasgow were 391, the deaths 371; the deaths from fever 17, from small-pox 6. The total number of small-pox cases known in the city was 144, and of fever 604. There was a slight decrease in both from the preceding week.

FROM ABROAD.—"THE SITUATION" IN PARIS—THE WAR CARRIED INTO THE REALMS OF SCIENCE—PURULENT INFECTION.

M. De Ranse, one of the editors of the *Gazette Médicale*, speaking of the present state of Paris, observes:—

> "If we could dismiss from our minds the sad preoccupations which besiege the mind of every citizen—of every Frenchman—we might find, in the present apathy and inaction of the Parisian population, a very curious subject of study for the psychological observer. On Sunday week we are informed that, while the dispatches of the Versailles Government, and the narrations of most of the newspapers, were carrying consternation into the provincial towns, the Parisians, taking advantage of a fine sunshiny day, were, with their families, filling the promenades, the squares, and the most frequented places. The toilettes shone as they do on festivals, and the barricades, with the cannon which defended some of them, were visited very much as would be the booths and shops of a fair at its high tide. Next day, when we arrived from the country, business affairs had replaced the Sunday holiday, but there was still to be observed, in the most striking manner, the contrast which the aspect of Paris presented, as compared with the uneasiness exhibited, not without good cause, by every face in all the provincial towns we had passed through. We began, indeed, to believe as exaggerations the news which had reached us at 150 leagues from Paris, and to regard the inhabitants of the departments as alarmists, when the noise of the fusillade, of which the Rue de la Paix was the theatre, almost struck on our ear. Heaven grant that this do not prove a prelude to yet more murderous collisions!"

In a recent paragraph, headed "The War carried into the Realms of Science," we adverted to the fact that some French *savants* had returned the honorary diplomas which they had in happier years received from the German academies and universities. Since then others have followed their example; and under the circumstances of the times, much excuse may be found for this invasion of the territory of science, which, in all former wars, has been regarded as neutral ground. Still more has this been the case, and yet with better reason, as regards Medical science, the votaries of which, even in the exercise of their calling, have often occasion to render mutual good offices to the subjects of the contending nations, and in some degree may be the means of smoothing asperities and of laying the foundation for future reconciliation. We therefore regretted much to find motions before the two bodies representing Medical science in France—the Academy of Medicine and the Society of Surgery—to the effect that all intercourse with Germany should be discontinued, and that all foreign Associates belonging to the Northern Confederation should be struck out of the lists. What decision the Society of Surgery has come to we have not yet heard, but we are glad to say that the Academy of Medicine has refused its assent to so mischievous a procedure. It was M. Béhier who introduced the proposition to the Academy to remove the names of these Associates; but M. Bouley, while agreeing with the proposer that the Germans had utterly dishonoured themselves in the present war, denied that the Academy had any right to abolish a title that had been acquired by science. "Science," he observed, "has nothing in common with crimes, and so much the worse for any *savants* who may have dishonoured themselves by acts unworthy of science. This is a question of inalienable right, which the Academy should respect." M. Verneuil, speaking under the excitement of a recent visit to St. Cloud, where he had enough evidence, he said, of the most shameful pillage and carnage, felt strongly that all intercourse with Germans should absolutely cease; but he agreed with M. Bouley, that the Academy possessed not the right of erasing the names of its Associates. On the motion of M. Barth, M. Béhier's proposition was referred to the Council to report upon. M. Béclard, the Secretary, at the next meeting, reported the resolution arrived at, prefacing it by a few very sensible observations. He said he fully appreciated and approved of the sentiments which induced Count Jaubert, M. Barth, and others, to renounce the honorary titles which they had received from German scientific bodies. These were personal and spontaneous acts, which merited every praise—"Although," says M. Béclard—

> "For my part, I should have been still more gratified if, looking directly at the end in view, and addressing the sovereigns, princes, and princelets, who, after all, are alone responsible for the disasters which have been committed, there had been disdainfully returned to them these honorary badges which so many of you have accepted, some of which have been even solicited, and which cannot now possibly be worn without the most revolting inconsistency.
>
> "The proposition of M. Béhier is, however, a grave, a very grave affair; for in accordance with it you would have to pass a resolution, not only as regards the present, but also involving the future. Are you aware of who are the men it is thus proposed to eliminate?—for such elimination, in order to be equitable, can admit of no exceptions. These are the men you propose to suddenly expel from the Academy—Liebig, Vogel, Stromeyer, Wohler, Arnold, Weber, Lebert, Chelius, Hering, Wützer, Gheissner, Ehrenberg, Jacobi, Bunsen, Virchow, and Helmholtz! For my part, I do not believe in the moral right of proceeding to such an execution. It is to be believed—and with regard to some I know it for a fact—that almost all these *savants* were, like ourselves, opposed from the beginning to this fearful war. Such an elimination would, then, be far too severe. Let us consider what should be condemned, and protest against what is iniquitous; but let us now, more than ever, know how to moderate our passions, and if we wish to be strong, let us be just."

After these admirable observations, M. Béclard read the resolution which had been unanimously agreed to by the Council, to this effect:—

> "The Academy, while participating in the sentiments of patriotic indignation expressed by our colleague M. Béhier, passes to the order of the day on the motion which he has proposed; but it seizes the occasion thus offered to it to protest, in the name of science, civilisation, and humanity, against the savage war which has been waged upon us, and against the bombardment of our scientific establishments and Hospitals."

M. Chatin proposed, as an amendment, that, without rendering the exclusion general, certain names should be struck out, inasmuch as certain *savants* who "had quitted the sanctuary of science" merited a more severe visitation. M. Magne, believing that many German *savants* had basely abused the hospitality accorded to them, demanded that their *honteuse espionnage* should be stigmatised by severe measures. The President, M. Wurtz, seeing that the discussion had gone quite far enough, put the resolution of the Council, and it was carried unanimously.

The Académie de Médecine has resumed one of its discussions which have been so often interrupted and postponed. The present is on "Purulent Infection;" and as its commencement, now near two years since, has doubtless been forgotten by our readers, we may avail ourselves of a brief recapitulation furnished in the *Gazette des Hôpitaux*, March 22. It arose on the occasion of M. Alphonse Guérin relating a case of purulent infection under his care, which was cured by large doses of quinine. The discussion which ensued soon passed from the consideration of the circumstances of the case into the general question of the physiological mechanism of the disease. M. A. Guérin expounded to the Academy a view that he had long held, in opposition to the older doctrines of purulent absorption or phlebitis, that purulent infection is due to miasmatic intoxication. The special miasm which constitutes it may be either produced spontaneously and locally in the wound, or it may emanate ready-formed from a subject of an attack of the disease. The miasmatic intoxication would thus be entirely assimilable to that which constitutes marsh fever, yellow fever, and typhus; and thence the name of "surgical typhus" which M. A. Guérin gives to this affection and its treatment by quinine. M. Verneuil, on the other hand, while also repudiating all the old theories of the disease, denies its right to be considered a special disease at all. He looks upon it only as one of the modes of termination of the various accidents consecutive to wounds, this being, however, a special mode, a true traumatic septicæmia resulting from the penetration into the economy, by means of the circulatory torrent, of a toxical septic substance engendered spontaneously at the surface of the wound, termed by him "traumatic virus."

The theory of "surgical typhus," and that of "traumatic virus," were vigorously opposed by MM. Bouilland and Legouest, who also maintained that these differed little from views of the disease already entertained. What seems a pretty conclusive objection to either of them is their failing to account for the occurrence of pyæmia in subjects having purulent collections without any communication with the external air, although that is regarded as the vehicle of Surgical miasm, and is essential to the production of traumatic virus. M. Chassaignac regarded the two theories as very much the same with different names, and admitted the truth of neither. He regards it as an error, also, to confound purulent infection and putrid infection, although they both arise under the common circumstance of local suppuration. In reference to purulent infection, our attention should be turned to the amelioration of the condition of the wound by adopting the best modes of dressing, and carefully directing the course of the suppuration.

M. Bouley, on resuming the discussion, furnished some interesting remarks derived from the domain of comparative pathology. Describing purulent infection as occurring in various animals, he observes that the horse is strongly predisposed to it, his organism being little favourable to primary cicatrisation. His most simple wounds suppurate, and even the wound made by bleeding will only heal after having done so. Purulent infection is relatively of frequent occurrence. The ox, on the other hand, has a great tendency to plasticity, his system being refractory to suppuration. Thus, when we wish to induce suppuration by means of the seton in this animal, we have to introduce corrosive sublimate. The pus which is produced is very creamy, and, contrary to what is observed in the horse, coagulation of the blood takes places very rapidly. The consequence is that purulent infection is not met with in the ox. The sheep has quite a different constitution, for, being very impressionable, it bears the effects of traumatism with difficulty, and there is but a feeble plasticity, with a certain tendency to septic accidents. Purulent infection would not be of rare occurrence in the sheep if it were more frequently the subject of Surgical operations, as the experiments of physiologists prove. The dog, again, is possessed of great plastic force; purulent infection is very rarely met with in him, although operations and experiments are so often practised upon him. The pig is another animal endowed with great plasticity, but, as obesity complicates his wounds, he is liable to some septic accidents, but not to purulent infection. But it is among birds that the plastic force is found developed in its highest degree. "The bird is a healthy animal *par excellence*; and, as a general proposition, we may say that it never exhibits suppuration." The rabbit "is an animal calumniated by experimenters;" and then there are two kinds of rabbits—a fact which these experimenters should bear in mind. The warren rabbit comports himself differently to the cabbage rabbit; but yet it is always an animal predisposed to septic and purulent accidents. But among the various domestic animals it is the horse in which these accidents most frequently occur from organic predisposition.

M. Bouley also goes at some length into a consideration of the differences derivable from race, for which we regret we have not space. Then the locality upon which the operation has been performed exerts its influence, it being found, as a general rule, that the chances of purulent infection are greater in proportion as the region which is the subject of the traumatism possesses a more perfect venous organisation. Thus, in the horse, the bulk of the cases of purulent infection proceed from wounds of the feet, or from phlebitis of the jugular. Another very important condition is the medium in which the animals live. Thus, the Hospitals at the veterinary school at Alfort, as decribed by Renault, were so constructed that the most skilful operators dared not perform therein the slightest operations even on healthy animals, and purulent infection induced ravages which cause Renault's recital at the present day to seem almost fabulous. Finally, the kind of traumatism has its influence on the production of putrid accidents—the more numerous and the more complicated are the wounds, the greater being the danger of purulent infection. The therapeutical conclusions which M. Bouley draws from his experience are—first, that we should endeavour to modify the organism by good diet, feeding the patients as well as possible, both before and after an operation—endeavouring to give a man, so to say, "the constitution of an ox." Besides mere food, actual tonics and generous drinks should be given, while tannin and quinine may exert preventive power. The experiments of the Veterinary Professor Gohier prove that tannin exerts an incontestable power on the putrescibility of organic fibre. Secondly, we ought to place the subjects of operations in the best medium possible. "Nothing is so dangerous for them as the presence of other men, even of healthy men." Vegetation also exerts a beneficial influence, and, according to M. Bouley, perfect ideal Hospitals would be isolated dwellings placed on lawns in the middle of a park. The "*haussmanisation*" of Paris has rendered such erections in Paris impossible, and all he can hope is that patients will never be placed in the gigantic new Hôtel-Dieu, which would be much better utilised in housing the learned societies, thus employing it as an instrument of science rather than of death. Thirdly, wounds should be rendered as simple as possible, and this should be sought by the extension of subcutaneous Surgery. Much would be done in preventing purulent infection could a limb be removed without the skin; but, in the meantime, we should make much use of detersive dressings, as phenic acid, alcohol, etc.

PARLIAMENTARY.—LUNACY REGULATION (IRELAND) BILL—ADULTERATION OF WINES—MILK—EXPORT OF MEAT FROM FRANCE.

In the House of Lords, on Thursday, March 23,

The Lunacy Regulation (Ireland) Bill was read a second time, Lord O'Hagan explaining that it extended to Ireland, with some differences of detail, the reforms effected in England in 1853 and 1863. Lord Cairns recommended a closer imitation of the English system.

In the House of Commons,

Sir J. Lawrence asked the Chancellor of the Exchequer whether the following order, issued by the Board of Customs on February 20, 1864, had been cancelled or altered:—"No chemical or unusual preparations, such as tannin, ether, etc., for the purpose of fining or flavouring, may be added to wines in bond, unless the necessity of such addition is clearly proved to the satisfaction of the Board, and their special sanction obtained." Whether any proof is required by the Board of the necessity of such admixture, excepting the statements of the owners of the wines or their agents; and whether it be true that, for the purpose of fining, Spanish earth may be mixed with wines in bond without any restriction as to the quality or quantity, unless the operation is likely to cause an alteration in the rate of duty, in which case the Board's sanction must be obtained, but not otherwise.

The Chancellor of the Exchequer: In answer to the first part of the question of the hon. gentleman, I have to state that I am informed by the Board of Customs that no such order as that mentioned has been issued, from which I infer that it has not been cancelled. (A laugh.) As regards the second part of the question, there is some proof required besides the statements of the owners and their agents. As to the third branch of the question, there is no order at all in existence regulating the quantity or quality of Spanish earth to be mixed with wine.

Lord E. Cecil said: The President of the Poor-law Board is reported to have said "that, among the samples of milk which had been analysed, many were supposed to have been lowered by admixture, but none to have been adulterated." I wish to know—1. What is the Poor-law Board's definition of adulteration. 2. Whether the President thinks there is any difference between the lowering of milk by admixture with water or any other liquid and ordinary adulteration. 3. Whether he is aware that there is as much as twopence difference per gallon between the contract prices of St. George's (Hanover-square) Union and some of the East-end Unions of London. 4. Whether he thinks that such a lowering of milk by admixture as these prices demonstrate is, or is not, a subject for inquiry, with a view to applying a remedy.

Mr. Stansfeld said that what he intended to say in reply to the noble lord a few days ago was, that he did not think the word "adulteration" was correctly applied to the lowering or impoverishing of milk. (A laugh.) It was a matter of opinion, for instance, whether wine was "adulterated" by the admixture of water. But, be that as it might, what he had stated with respect to the samples of milk referred to in the *Milk Journal*, to which the noble lord had called his attention, was that, in his opinion, there was no justification for speaking of them as furnishing "an exposure" as to the system of contract in supplying milk to the metropolitan unions. As hon. gentlemen were aware, articles of common consumption like milk varied very much in quality and richness (a laugh), not only as supplied to workhouses, but to noble lords and members of that House; and although he did not think a strong case had been made out in the present instance, he was ready to admit that it would be of service, not only to the public, but to the Boards of Guardians themselves, that some general inquiry should be made into their system of contract and method of purchase, and he had accordingly informed the noble lord that the subject should receive early consideration.

On Friday,

Mr. Alderman Lawrence asked the Vice-President of the Council of Education whether his attention had been directed to a statement made at a meeting of the Metropolitan Meat and Poultry Market Association, on Tuesday last, that, in their opinion, the Order in Council of March 10, prohibiting the importation of fresh meat from France and Belgium, was a measure of unnecessary precaution, which was calculated to interfere injuriously with the supply of animal food to this country, and to materially enhance its price, more especially to the poorer classes of the community.

Mr. W. E. Forster said he had seen the statement in the newspapers to which the hon. gentleman referred, but he could not help thinking it was very exaggerated and calculated to create unreasonable alarm. It was based on the supposition that the importation of all fresh meat had been prohibited by the recent Order in Council, but the directions given applied merely to beef and veal. He did not know whether it was thought to be an "unnecessary precaution" to limit the supply of meat in that way, but it was the opinion of the Privy Council, after careful consideration, that it was absolutely necessary to take that precaution with regard to the carcases of cattle. The cattle plague was still raging in France, and seemed to defy all the efforts which were being made there to put a stop to it. He was, however, convinced that there was no ground for apprehension that the price of meat in England would in consequence be raised. There was no reason to suppose that more would come to us this year than last; if anything, the quantity was, he believed, likely to be less. The number of cattle arriving from France and Belgium was also very small, and while he was of opinion that it was absolutely necessary to take the precaution in question, he was glad to think that its result would not be at present to interfere with the price of food. The regulation was obliged to be applied to fresh though not to salt hides.

WE (says the *Builder*) believe the benevolent individual who recently offered to expend £30,000 in the erection of a lunatic asylum for the benefit of the lower middle-class is proceeding to carry forward that purpose. We have also authority to state that this same gentleman, who desires at present no personal publicity, is prepared to devote for public and useful purposes a sum equal to that given by the late Mr. Peabody, so soon as he can satisfy himself as to the best means of effecting this so as to do the greatest public good, and to avoid the risk of pauperising classes who might not, in their present position, be eligible recipients in public opinion for such a gift.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending Feb. 18.	Feb. 25.	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.	Mar. 25. Sent to Hospital.
WEST—							
Chelsea	10	12	?	?	?	?	—
St. George, Hanover-square	28	14	16	7	19	10	8
St. Margaret and St. John, Westminster	100	47	30	27	?	?	—
St. James, Westminster	14	8	3	3	8	?	—
NORTH—							
St. Pancras	?	64	62	69	63	65	?
Islington	36	31	62	23	34	49	24
Hackney	?	30	36	41	31	24*	14
CENTRAL—							
City of London	?	20	22	17	13	13	2
St. Giles-in-the-Fields	?	10	5	10	?	?	—
Holborn	14	5	2	3	3	2	1
St. Luke's	?	?	20	27	18	12	8
EAST—							
Whitechapel	31	31	34	32	15	33	?
Poplar	?	?	9	?	?	?	—
SOUTH—							
St. Mary, Newington	25	8	16	19	?	28	19
St. Olave, Southwark	?	4	2	9	1	11	5
St. George-the-Martyr, Southwark	?	3	?	17	5	?	—
Bermondsey	?	20	15	?	?	?	—
Lambeth	18	28	12	28	33	?	—
Clapham	?	5	28	17	29	22	12
Battersea	?	14	?	13	?	?	—
Wandsworth	?	5	4	?	3	5	3
Putney	—	—	—	1	?	?	—
Streatham	?	?	1	?	2	3	?
Camberwell	?	5	26	14	13	4	2
Greenwich	?	—	2	?	?	—	—
Lewisham	?	2	1	16	2	?	—
Plumstead	?	4	1	1	4	6	—

* Return imperfect.

ABSTRACT OF THE CROONIAN LECTURES,

DELIVERED AT

THE COLLEGE OF PHYSICIANS.

By E. A. PARKES, M.D., F.R.S.

THE second lecture having been occupied with a discussion on the place of origin of urea and uric acid in health, the lecturer, in the third lecture, inquired how far the views previously laid down could be applied to the elucidation of disease. After a few introductory observations, pointing out how little effect is produced on nitrogenous elimination by non-nitrogenous articles of diet, by alcohol, coffee, tea, etc., and how insignificant in this climate are the changes produced by varying meteorological conditions, he went on to say that the remarkable balance between the entrance and exit of nitrogen which is found in health is replaced in many diseases by an order of facts entirely the reverse. In fevers the exit no longer corresponds to the entrance, but is largely in excess; there is a complete dislocation between the two phenomena.

In inquiring into the reason of this, the lecturer commenced with the best-ascertained fact in fevers, which is the loss of weight and progressive emaciation of all parts. How rapid this may be is illustrated by a pneumonic case of Huppert's, in which, the entrance and exit of nitrogen being known, it was calculated that 21 per cent. of the muscular structure was destroyed in five days. This emaciation of muscle is explained by the discovery of Zenker of the rapid granular degeneration of the muscles in enteric fever, which has been confirmed by Buchanan and others in several diseases; the nervous tissue, skin, etc., also show signs of the same rapid degeneration. As a contrast with these conditions, the lecturer cited the condition of the liver, spleen, and other glands; all are more or less swollen, rich in blood, evidently growing in many cases, and though degeneration may set in, this seems to be secondary.

Passing then to another order of facts, he stated that there was a largely increased outflow of nitrogen; and as an instance of an extreme case, he cited an observation of Huppert and Riesell, who, in a case of pneumonia, with an entry of only 9 grains daily, found an exit of 257 grains of nitrogen, or nearly thirty times as much. Where, then, did this large amount of urea come from, for it must have had some source? Evidently from the disintegrating muscles and nerves. And that it is so he considered proved by the fact that, in persons with little muscular tissue, and who had by starvation been brought to a point where there was little to waste, the urea in fever is sometimes little and sometimes not at all increased.

He then brought these facts together. In health the urea does not come from the muscles and nerves except in an inconsiderable degree; it comes from the albumen of the blood acted on by the glandular organs. In disease the urea must still be formed in the same way from the circulating albumen; but this circulating albumen is itself derived, not from food, but from the disintegrating muscular and nervous tissues.

In Voit's phraseology, the essence of fever consists in the usually stable organ-albumen breaking rapidly down and being converted into circulating albumen, which then undergoes the usual fate.

In this was the explanation of the increased urea of fevers, and not only so, but also of the very different and, so to speak, antagonistic condition of the muscles and nervous tissues on the one hand, and the liver and spleen and glands generally on the other. The first are disintegrating, and the last are growing and being over-nourished.

By carrying on the argument he attempted to explain why in some persons the liver and spleen were more affected than in others; why the spleen in old persons did not enlarge so much as in young persons, as shown by Sir W. Jenner's observations on typhus; why there were dangers from incapability of the glandular organs to do the work thrust upon them.

He then asked what is the cause of the rapid muscular disintegration in fevers, and referred it to altered nervous influence, and probably to some change in the inhibitory nerves. He regarded this, however, as a problem for the future. After a few words on the cause of the relative excess of uric acid in pyrexia, and dissenting from the view of Senator and Bartels, at any rate as universally applicable, that the excess of uric acid occurs in cases of defective breathing, he took up the subject of the connexion between abnormal heat and increased tissue metamorphosis. He debated the difficulties in the way of the complete reception of this doctrine, but concluded that though perhaps all difficult points could not be explained, the immediate dependence of pyrexial heat on increased chemical change was by far the most probable explanation.

The best diet in fevers was then discussed, and with some hesitation the lecturer considered that the wasting nitrogenous tissues could not be fed, and that to give large quantities of nitrogen was merely to still more overtax the liver cells. On the contrary, fats and starches would lessen emaciation and prepare the way for the nitrogen when the organ-albumen could be again formed.

The elimination of nitrogen in the afebrile diseases was next considered, diabetes mellitus and tetanus being chiefly discussed.

In diabetes there is generally an immense excretion of nitrogen, but this is largely dependent on the excessive diet; not wholly so, however, for in Pettenkoffer's and Voit's, and in Gaehtgens' cases, the exit, independent of food, was increased in each instance thirty grains daily over the excretion of a healthy person on the same diet. In diabetes, then, there is a breaking down of the tissues as in fever, and, in fact, Pettenkofer and Voit consider the essence of diabetes to be, not in the sugar-making, but in the peculiar condition of the albumen of organs, which tends to disintegration, approaching in this to the idea of Prout, who thought an ureal might precede a saccharine diabetes.

In tetanus the lecturer denied, from the observations of Senator, that there was any increased elimination of nitrogen, but stated that the observations on tetanus were in accordance with the experiments on exercise in health.

In a few words of recapitulation, the lecturer then summed up his conceptions of ureal formation. He repeated that it was not in the great nitrogenous structures of the muscles or nerves, and perhaps not in the nitrogenous framework of membranes and cells, that urea and uric acid were directly formed. These nitrogenous structures, when growing in youth, or repairing in old age, are able to attract albumen from the store in the blood, and thus to increase in size, or to replace what has become effete. And thus the fact is accounted for, that the composition of nerves and muscles so closely resembles the albuminous food they appropriate. Then, when, during or after use, a portion of this stable albumen of the organs loses its stability, and passes into a different physical state, it becomes unfit for function, cannot contract or feel, and is detached and becomes circulating albumen. Then it is appropriated by the cellular organs; perhaps in part nourishes their framework, or furnishes their peculiar secretion, and in part splits up into urea, uric acid, and other substances. In youth, when the tissues are growing, the power of attraction of the organs for albumen is greater than that of separation; in completed growth they balance; in old age the power of attraction—*i. e.*, of repair—is gradually lost. The organs most independent of the nerves retain, as a rule, their power longest.

This theory explains the phenomena of starvation when urea, bile, etc., continue to be found to the last; because the slowly disintegrating organs can still supply food to the glands.

In many of these matters a great parellelism between healthy and diseased nutrition could be perceived, and it was possible to hope that before long we should be able to comprehend more clearly the intricacies of healthy and diseased nutrition, and to make a still better application of our knowledge for the mitigation of suffering and the relief of man's estate.

REPORT OF THE ROYAL SANITARY COMMISSION.

No. III.—Present and Proposed Local Authorities.

Next after the confusion and incompleteness of the existing law, and its optional application, the multiplicity of local authorities is found to have been a main cause of failure in the past. It appears from the Report that—

"There are upwards of seven hundred districts, urban and semi-rural, which by councils, commissions, or elected boards exercise the powers of the Public Health and Local Government Acts. A comparatively small number of towns are still governed by Local Improvement Acts alone. But these towns, as well as all boards of guardians and vestries, have respectively the powers conferred by the Nuisance Removal, Sanitary, and Sewage Utilisation Acts." Notwithstanding, however, this wide application of sanitary statutes, there are still many places with very defective sanitary government, and still more with practically none at all, owing to the defective exercise of the powers which the law confers.

In practical working, each one of us must have realised that, beyond the ignorance of the law, an element eminently calculated to negative any effort to remedy an obvious abuse or defect is the difficulty of ascertaining to whom to apply.

The present game of cross-purposes arises principally from the fact that each group of Acts has designated a new authority, at least, nominally, for the particular purpose of that group. Thus, the administrative body under the Local Government Acts is called the "Local Board"; the Nuisance Removal Acts assign the sanitary functions connected with nuisances to a local board, or, in rural districts, to the board of guardians, under the double designation of "Local Authorities," or "Nuisance Authorities"; the Sewage Utilisation Acts and the Sanitary Act of 1866 invented the new name "Sewer Authorities"; whilst the carrying out of the Diseases Prevention Acts is entrusted, according to circumstances, to the guardians of the poor, the overseers of the poor, or the "Nuisance Authority." Intricate legal responsibilities being attached to so many various bodies, or, more confusing still, to the same under different names, doubt, as above stated, constantly arises as to where the responsibility or power actually lies. For result we find either inaction, litigation, or the frustration and abandonment of public works already attempted.

But while pointing out the inconvenience and disastrous results arising from the confusion of local authorities, the Commissioners are careful to avoid even the appearance of a desire to obliterate the principle which has given those authorities existence. They attach immense importance—some may be inclined to think undue importance—to the English theory that the executive should be as local as possible. They say—

"The principle of local self-government has been generally recognised as of the essence of our national vigour. Local administration, under central superintendence, is the distinguishing feature of our government. The theory is, that all that can should be done by local authority, and that public expenditure should be chiefly controlled by those who contribute to it. Whatever concerns the whole nation must be dealt with nationally, while whatever concerns only a district must be dealt with by the district."

The Report shows that the recommendation for little, if any, deviation from the principle which leaves the administration in local, rather than in central, hands is founded, in part, on a review of the operation of the French plan. A comprehensive sketch of the sanitary arrangements of France, and of the working of the *Conseils d'hygiène*, is given in the report, and, at first sight, seems to commend them for imitation. But the Commissioners feel bound to sum up against the Imperial system, which they do in these terms:—

"The appointment of the head of each local sub-division down to the commune, is vested in the central government, and in this manner the agents of the government are brought to administer the affairs of the remotest and smallest locality. The symmetry of the plan seems to be perfect; but it *fails in practice, resting as it does on the central power only*, and being wholly wanting in that pervading spirit in which consist local energy and national life." Nor does the Report fail to show the lessons to be learnt from a country which has developed English institutions in an entire scheme of government, laid down by founders of an experience already matured, when they took the work in hand, and has not built up, as in our scheme, an aggregation of scraps of tentative and casual legislation. From New England, the Commissioners admit—"We may gain some hints for simplifying our old and complicated institutions, even from their translation to a new theory of government, widely as the theory of government in England differs from that which exists in America. By our constitution the Crown is invested with the whole executive, which is locally administered everywhere in the name of the Sovereign. The sovereignty of the people is the adopted idea of New England government, and the popular power collects itself gradually to the Presidential head. But, whether derived from the centre, or culminating in it, local government is the essence of both schemes." But, if not to France, neither to America are we encouraged to turn in our search for a model on which to found a sanitary system. After a short analysis of the American plan the Report thus disposes of it:—

"The organisation of local government is very complete, though the working of it seems to be, from various causes, very imperfect. Streams near manufacturing towns are much polluted, and overcrowding of houses is unchecked except by occasional penalties. In some particulars the sanitary regulations are extremely strict, but they do not appear to be rigidly enforced."

The Report, in effect, if not expressly, affirms the following propositions:—That much of the past defect in our sanitary system is due to the confusion of local authorities, and to the want of coincidence in the area of districts for various sanitary purposes. For the latter evil, the statute proposed by the Commissioners suggests the remedy, and their views in regard to the former they have thus embodied in a resolution:—"That there should be one local authority for all public health purposes in every place, so that no area should be without such an authority, or have more than one."

The question being thus narrowed in its issue, the point to determine becomes, not whether we shall have local authorities, but of whom those local authorities shall consist, bearing always in mind the fundamental requisite that there shall be one such authority for all public health purposes in every place, and in no place more than one. Moreover, what it is desirable to secure is that particular functions of sanitary local government shall be distributed in a more effective manner. That, as far as possible, this shall be done through existing institutions. That, thus, the machinery which is already provided may be better utilised—homogeneous subjects may be no longer scattered under different authorities; and that, where a new or intervening institution may be required, it may be attained rather by the employment of what is ready to hand than by innovation, or the creation of new means.

In a new country, not already possessing territorial divisions, the first step would, of course, be to settle administrative areas; but in an old country like ours, possessing authorities already too many and complex, the first consideration must be given to those which exist. It then becomes necessary to ascertain whether any of them are such as can safely be trusted to administer the amended law. For convenience, therefore, if not from any conviction that their functions have in the past been discharged in a worthy manner, the Commissioners recommend that certain of the existing bodies should be saved and employed as urban authorities. The detailed recommendation is that the urban authorities should be as below:—

In boroughs and districts under special Acts the Town Council, or, where there is no Town Council, the body administering the local Act; in other boroughs, the Town Council; in districts which have adopted the Public Health Act, 1848, or the Local Government Act, 1858, but which are not boroughs or under local Acts, and in other places sufficiently populous to need an urban authority, an elected local board. In places already formed into "special drainage districts," under the authority of the Sanitary Act, 1866, and the Sewage Utilisation Act, 1867, the inhabitants are considered to have given, by erecting such districts, proof of an active and intelligent spirit entitling them to retain their powers. Their independent existence it is, therefore, proposed to preserve, but to add to their present powers those of the local authority under the new statute, and to constitute their districts "local board" districts.

Adopting the above as the suitable authorities for communities more or less urban, the Report proceeds to the suggestion of those for the rest of the country. The Commissioners summarily dispose of three out of the four available authorities. The four are—magistrates, highway boards, vestries, and boards of guardians. The magistrates are condemned as not being representative; the highway boards as not properly equipped. Vestries are thus dealt with—"The last difficulty (their want of equipment) would alone suffice to restrain us from recommending vestries as the rural authority. A small country parish could not find either occupation or pay for Medical officers, inspectors, and other functionaries. The powers under the Sewage Utilisation Acts, given to vestries as 'sewer authorities,' have been productive of little but disappointment, and there is no reason to hope that new and amended powers would be more efficiently exercised than the old. To set up vestries as authorities under the new statute would involve a rare combination of inconveniences. For any practical purposes of administration, they cannot be said to exist in very many places. To set them up would therefore be, in effect, though not in name, the unnecessary constitution of a new authority, or the permanent establishment of one already condemned by experience."

This exhaustive process leaves boards of guardians as, in the opinion of the Commissioners, the most fitting rural authority, and as possessing, in addition, the following recommendations:—They are representative, and already exist throughout the country. They have a complete organisation and staff, and, through their Medical officers, possess a knowledge of the state of disease. It is found that communications, which under the proposed plan would be rendered unnecessary, are continually passing between the Poor-law and the Sanitary authorities, and it is considered that, within certain limits, the same staff may render assistance in both services.

But in order to render the guardians more fit for the work, it is proposed that their tenure of office should be assimilated to that of the members of local boards. In the latter each member serves for three years, one-third retiring annually. By this tenure a member has an opportunity of becoming acquainted with the duties of his office, whilst the constant entrance of new members gives fresh life to the whole. A body of so fluctuating a character as results from annual election could not have that permanence and steadiness of purpose without which great works can be neither designed nor carried out. A like change has also been strongly advocated of late years as likely to improve the administration of the poor-law.

To meet cases of failure to elect, provisions are proposed similar to those in the Education Act, 1870, under which, should no election be held in the ordinary manner, Government is enabled to appoint members, and to remunerate them from the rates. In the elections, the numbers of votes should rise, according to the value of property, to a maximum of six votes for property having the rateable value of £250.

We conclude this sketch of the grounds upon which the Commissioners have condemned certain of the existing authorities, and of the reasons which have governed their selection of others, by quoting their resolutions on these portions of the subject:—

"That, from the time at which the new statute shall come into operation, it is expedient that town councils, improvement commissioners administering special Acts, and local boards, each within the limits of the respective jurisdictions from time to time assigned to them, and guardians of unions in all other places, should be the sole local authorities for administering the provisions of the new sanitary law.

"That it is desirable that the members of all local health authorities (with the exception of the *ex-officio* members where guardians are such authorities), should be elected, and should retire by rotation; and that the provisions in the new statute, as to the number and qualifications of the members and electors, the scale of voting, and the mode of election, should be substantially the same as is the case now under the Public Health Act, 1848, and the Local Government Act, 1858.

"That where guardians are the local health authority, it is desirable, in order to provide for the continuity of such authority, that the guardians should be elected for three years, with fit provision for the annual retirement of a part of the board."

(*To be continued.*)

SUMMARY OF EXPERIMENTS ON THE INFLUENCE OF SNAKE POISON.

By J. FAYRER, M.D., C.S.I.

(*From the Indian Medical Gazette.*)

THE experiments, of which this is a summary, were commenced in October, 1867, and have been continued as regularly since at such intervals as time and other and more important avocations permitted. My object has been to determine, by actual observation, the effect on life of the poison of the venomous snakes of this country, and to test the value of remedies, whether internal or external.

So many absurd ideas on the subject prevail, that it is desirable to know the real truth, not less with reference to the actual *modus operandi* of the poison than to the value of the many vaunted antidotes. The results, I regret to say, tend to show that in the present state of our knowledge we can do little to counteract or neutralise the action of the poison; but what may be expected from treatment I have endeavoured to show.

As to antidotes, I would speak with reserve on the subject of possible future discoveries; my experience does not encourage me to hope that we shall discover anything that can be regarded as an antidote, such as is generally meant by that term. But considering the imperfection of our knowledge on this and kindred subjects, I would do naught to deter or discourage others from further investigation.

My personal experience is derived from the action of the poison in the lower animals, and a few cases in man; the antagonism of the venom to the vital forces is shown in one as well as in the other, and is no doubt subject to the same laws. The deductions from one are applicable to the other.

The greatest care has been observed in all the experiments—and most of them have been often repeated—to exclude, as far as possible, sources of error, and to obviate generalisation from insufficient data.

Almost every experiment has been witnessed by competent observers, to whom I am much indebted for their assistance, and for the additional value which their presence attaches to the validity of what was done.

The object of investigation has been the simple truth. I can safely say there was neither foregone conclusion to maintain nor theory either to support or oppose.

The snakes with which the experiments have been conducted were:—The varieties of Naja Tripudians or Cobra; the Ophiophagus Elaps, or Hamadryad; the Bungarus Fasciatus, or Sankni; the Bungarus Cæruleus, or Krait; some of the Hydrophidæ; the Daboia Russelli; the Echis Carinata; the Trimeresurus Monticola. And in the case of the Calophides and the other Crotalidæ, I have referred to the experiments of others, not having had opportunity of testing them myself.

The living creatures experimented on have been the ox, horse, goat, pig, dog, cat, civet, mongoose, rabbit, rat, fowls, kites, herons, fish, innocent snakes, poisonous snakes, lizards, frogs, toads, snails.

The symptoms produced by the poison, both constitutionally and locally, have been carefully noted. The state of the blood has also been examined, especially with reference to structural changes; and for this part of the investigation I have been much indebted to Professors Partridge, Ewart, W. Palmer, J. Anderson, and Dr. Douglas Cunningham.

In point of relative deadliness, I should be inclined to consider that the cobra, ophiophagus, and daboia are very nearly on a par. They are quite capable of destroying a full-grown dog in half an hour, sometimes in much less time; and very frequently, I believe, man has succumbed within an equally short period, though generally the time is much longer.

The bungarus cæruleus is, I believe, just as deadly, but apparently does not kill quite so quickly. The bungarus fasciatus is less fatal, and kills less quickly than the bungarus cæruleus. The echis, if one may credit the reports from Scinde—and they are confirmed, to a certain extent, by Major MacMahon, Deputy Commissioner of Delhi—is also a very deadly snake. It destroys life rapidly in small animals, but from its small size it is perhaps less likely to be fatal to man, though, from what I have seen of the effects of its poison on pigeons, fowls, and dogs, I should regard it with peculiar dread.

Of the Hydrophidæ less is known, but the few experiments I have performed, and those by Mr. Stewart, prove that they are very fatal, and I should think human life would be in great danger from their bite.

The Calophides and Crotalidæ of Hindustan are certainly not so deadly as those I have mentioned, and though capable of inflicting a painful, and in some instances, no doubt, a dangerous bite, they are not so much dreaded as the other snakes.

There are differences in the symptoms produced by the poisonous bites of the different Thanatophidia, but none of any great physiological or pathological import. In some cases convulsions are more marked, and in others death is preceded by a more marked appearance of lethargy. In some, as in those of the echis, the local symptoms are peculiarly severe, in others less so. But the differences are more of degree than of kind. They all point to exhaustion and paralysis of the nerve-centres—the sources of the origin of vital force—every function fails rapidly, and vitality is soon extinct.

Local paralysis of the bitten part, great depression, faintness, exhaustion, nausea, vomiting, hæmorrhage, relaxation of the sphincters, involuntary evacuation, not unfrequently of a sanguineous or muco-sanguineous character, precede the complete loss of consciousness, and after this convulsions occur just before life ceases.

The post-mortem appearances frequently reveal simply nothing except the marks of the fangs and the slight ecchymosis about them; or if the creature have survived some hours, infiltration, and, perhaps, incipient decomposition of the tissues. The lungs are not generally congested; the heart is not generally overloaded; the viscera look natural enough; death is not traceable to special disturbance of any one great function, such as respiration; and the blood in the cases of the lower animals, certainly (and if in them, why not in man?)(a) nearly always coagulates firmly on removal from the body, after death from poisoning by the colubrine snakes. But in death by viper poisoning it remains permanently fluid. The cause of this I am quite unable to explain, but there can be no doubt of the facts as regards the lower animals, for they have been proved by often repeated experiments.

From experiments I have arrived at the following conclusions:—Snake poison acts with most vigour on the warm-blooded animals; birds succumb very rapidly; a vigorous snake can destroy a fowl in a few seconds.

The power of resistance is generally in relation to the size of the animal, though not altogether so; cats, for example, resist the influence of the poison almost as long as dogs three or four times their size.

The cold-blooded animals also succumb to the poison, but less rapidly. Fish, non-venomous snakes, mollusca, all die. So far as I can decide from experience, the poisonous snakes are not affected by their own poison—*i.e.*, a cobra may bite itself, or another cobra, with no evil result.

The less are probably affected by the more poisonous snakes—*e.g.*, the bungarus seem to be affected by cobra poison, though slowly.

It is possible that they can all to some extent affect each other, though infinitely less than other animals. In many of the various experiments I have performed, the cobra, daboia, and krait did not appear to be able to poison themselves or each other. Some of the experiments render this doubtful, and seem to show that a cobra or daboia may poison a krait, or *vice versâ*, but that they escape more frequently than they suffer.

(a) It is to be noted that in most recorded post-mortem examinations of human beings who have died from snake-bite (whether colubrine or viperine) the blood is noted to have remained fluid after death. I cannot reconcile this with the condition of the blood in animals, which is, as I have stated, coagulable after death from colubrine poisoning, fluid after death from viperine poisoning. Further examination is needed.

Snake poison is absorbed through delicate membranes. It is deadly when applied to a mucous or serous membrane, to the stomach or the conjunctiva. The idea that it is only capable of absorption by direct injection into the blood is erroneous.

The blood of animals poisoned to death by the colubrine snakes coagulates after death. That of animals poisoned by the viperidæ remains permanently fluid.

The bodies of animals poisoned by snakes are eaten with impunity by man and animals. I have had repeated proofs of this. The fowls and pigeons killed in my experiments were always taken away and eaten by the sweepers who were present, and who sought them greedily. They were not unfrequently given to dogs or cats; no harm followed.

The blood of an animal dead from snake-poisoning is itself poisonous; if injected into another animal it destroys life. This shows the intensity of the poison: a drop or two diluted with the blood of a fowl or animal renders the whole poisonous. Venomous snakes, though not at all, or very slightly, affected by snake poison, are very susceptible to other poisons, such as strychnine or carbolic acid. The latter destroys them very rapidly, and they seem to regard it with peculiar aversion. Poisonous snakes are not, as a general rule, very aggressive, except, perhaps, the echis. They seek to be left in quiet, to be let alone. They bite only if disturbed or irritated, and even then they often will not bite, but make one or two strikes at the enemy as if to frighten it.

In my experiments, I had always the greatest difficulty to get the cobra, krait, or daboia to bite voluntarily. An animal may remain in a cage or box with a cobra or daboia a very long time before it is injured, and perhaps, after all, it is taken out untouched, even after trampling on and bruising the snake, in its efforts to escape from its enemy, which is as much frightened as itself. There is much hissing and demonstration of attack, but frequently nothing done. If pressed and overteased, they bite at last, and if they insert their fangs and retain their hold, the bite is generally fatal.

The echis, however, will strike and mortally wound a fowl or small animal directly it approaches it, and its dart is so rapid that it is scarcely seen.

Snakes frequently strike, and even wound, without poisoning, or very slightly so. The fang merely scratches and makes a tear, but if inserted and retained for a second the poisonous bite has then been inflicted. Of course, any abrasion or scratch, however trivial, may be dangerous, as some of the virus may be inoculated or shed over it, probably not enough to kill, but sufficient to cause dangerous symptoms.

A snake that has bitten often, or that has very recently eaten, or that has been long in confinement without food, is less dangerous than others; its bite may be almost harmless, though not always so: a daboia that lived a whole year in a cage without food, was deadly a few days before its death.

The popular notions as to the effects of the so-called antidotes are, I believe, erroneous; such for the most part being utterly powerless or inert. The ligature, excision, or cautery (if applied in time) are the only rational remedies that can be of avail in a really poisonous bite. Others are recovered from by the inherent vigour of the person bitten, aided by rational treatment, support, stimulants, and possibly to some extent by arsenic, iodine, bromine, or potass, or others of the many remedies recommended; but as antidotes in the ordinary acceptation of the term, even these, I fear, are no better than others.

The poisonous snakes, when they either shed or lose by accident their fangs, regain new ones in from a few days to a month or six weeks. An echis was refurnished with fangs, firmly anchylosed to the maxillary bone, on the third day after the removal of the former ones. If the whole mucous capsule be removed, and the maxillary bone injured in extracting the fangs, the reserve teeth already developed and the germs are also destroyed, and no new fangs are reproduced. This is often done by the snake-catchers, but when imperfectly, and the reserve fangs and germs not destroyed, fatal accidents have occurred from the unexpected reappearance of fangs.

Snakes cast their epidermis frequently; the cobra and krait once or twice in a month, but the echis I have kept for three months without its changing its skin. Snakes will live months without food or water. A daboia lived for one year without food. It moulted frequently, became very thin, but it was active and poisonous to the last.

I conclude the summary by remarking that I feel thankful that I have brought this long series of experiments to a conclusion without any accident of a serious nature to those concerned in them. The constant manipulation of excited and vicious venomous snakes is a service of danger, and one in which we could hardly expect to be long engaged without some casualty. I am happy to say that only on two occasions was there any cause for anxiety. In the first, one of my assistants had a small quantity of cobra poison projected into the eye. Immediate ablution and careful avoidance of rubbing removed it, leaving only a temporary congestion and weakness of eye.

In the second case, my principal snake-man was bitten by an echis in the thumb; immediate excision and cauterisation of the part was had recourse to, and no evil results followed.

REVIEWS.

Lectures on Obstetric Operations, including the Treatment of Hæmorrhage, and forming a Guide to the Management of Difficult Labour. By Robert Barnes, M.D. Lond., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery at, St. Thomas's Hospital, etc. Second Edition, revised and corrected. London: J. and A. Churchill. 1871. Pp. 508.

Dr. Barnes's Lectures on Obstetric Operations were first presented to our readers in the pages of the *Medical Times and Gazette* three years ago. The judgment of the Editor, at whose request Dr. Barnes contributed them to our columns, was speedily upheld by the approval of the whole Profession in England and America, and the republication of them in a separate volume soon followed as a matter of course. The first edition was exhausted in little more than a year, and we now have a second, enriched by the addition of lectures on some of the conditions which render labour difficult or dangerous, which had not appeared in the first issue.

The author tells us that, instead of writing a treatise on obstetrics as a whole, he has preferred to take one branch—the nature, causes, and treatment of difficult labour. He has studied and described the different forms, the ways of Nature in dealing with them, and the indications to be gathered from this study of the best mode of helping Nature in her time of need; he has endeavoured "to place upon exact foundations the powers and applications of the instruments and operations used in obstetrics;" and, above all, to lay before the Practitioner, not merely the routine teaching of text-books, but the practice of the best and most energetic obstetricians, which is always more bold and more fertile in expedients than the tame conventional rules of formal teaching.

As for the general character of the work, it is needless to say that it is handsomely got up, clearly printed, and abundantly illustrated. The style is good manly English; the distribution of the matter clear and logical; and the illustrations all new, original, drawn, for the most part by the author's own hand, from cases within his experience, and from his studies of the mechanism of parturition under difficulty.

The author devotes his first lecture to a general account of Obstetric Instruments and Operations, in relation to the various conditions which demand them; he describes the best and most convenient models, and the "bag" which, after his example, has become the common mode of carrying them and certain selected medicines. "The absurd dread of possessing powerful instruments has long," he says, "been the bugbear of English midwifery. It has been sought to make an instrument safe by making it weak. There can be no greater fallacy." This especially refers to the forceps. This lecture winds up with some remarks on the hand as an obstetric instrument. How perfect, he thinks, must have been the *chirurgia*, the dexterity in manipulation, of the fathers of the obstetric art, seeing that they did many things with the hand unaided which we now do with various weapons. Dr. Barnes remarks, too, how a man's practice is often determined by the accidental perfection of, or familiarity with, particular instruments, and how one instrument displaces others. The man "who has only reached that stage of obstetric development which is content with a short or single-curved forceps will be armed with a good perforator and crotchet. He cannot fail to acquire skill and confidence in embryotomy, and greatly to restrict the application of the forceps." Again, the perfection given to the cephalotribe on the Continent causes cephalotripsy to be preferred to craniotomy. The long forceps tends to displace embryotomic instruments; yet it is eminently desirable to have the best means of bringing a child through a contracted pelvis, and so to minimise the necessity of the Cæsarian section. "Our aim should therefore be to get the most out of all our instruments, and to to make each one as good of its kind as possible."

Three lectures then follow on the Forceps, with sufficient preliminary notice of the lever and fillet. It needs scarcely be said that the author means by the word forceps the long, double-curved instrument. "I have," he says, "described the short, single-curved forceps in deference to a still common prejudice, and because many men possess only this instrument." He is most emphatic in his denunciation of the idea of allowing a "head delayed by slight disproportion at the brim" to be delivered by perforation for fear of the long forceps. "If," he says, "we rest satisfied with the short forceps of Denman, we have a feeble tractor, a feeble lever, and an instrument destitute of compressing force—an instrument whose powers of usefulness are of the most limited order." We are glad to see, by the way, that although he gives the rule to "feel for the ears" as the guide to the application of the short forceps laid down one after another by systematic writers, he frankly declares that Experience, in this as in other cases, sets at nought the refinements of theory, and clears out for herself a straight path through the cobwebs woven in the closet. Ramsbotham and Roberton are quoted as applying the blades on the sides of the pelvis; and, to our knowledge, there is many a Practitioner who would have been comforted had this rule been published thirty years ago. The rule of waiting six hours with an impacted head before using the forceps is also quoted to be condemned.

With regard to the forceps (*i.e.*, the long), every step of its introduction is carefully described, and illustrated by diagrams as clear as daylight. The occasional difficulty in locking the blades, whether due to malintroduction or to unfitness of the pelvis for the instrument, is explained, and the obvious rule given that if the two blades cannot find room in the pelvis to lie opposite each other, the case is not one for forceps, but for turning or craniotomy. The correlative proposition is stated: "Wherever the long forceps will lock without force, it may be reasonably concluded that the case is a fit one for the trial of this instrument; and a reasonable attempt should be made to deliver by its aid before passing on to turning or perforation."

We must not let our readers suppose that the mechanism of obstruction to the birth of the child and relief by instruments is all that is to be found in these lectures; on the contrary, we recognise the Physician and physiologist in every page, and the description of those cases is fully given in which the difficulty depends on nervous or muscular derangement, with the various manœuvres and methods of treatment applicable to each case, including, for example, the indiarubber bags and other means of dilatation which have been invented or perfected by Dr. Barnes himself.

We must leave the forceps with the quotation of Dr. Barnes's opinion, "that in no respect has modern midwifery given more satisfactory evidence of progress than in the extending practice of applying the forceps to obviate delay in the second stage of labour."

Important, however, though the forceps be, it is less so than turning, of which Dr. Barnes says:—"No other operation is capable of extricating patient and Practitioner from so many and so various difficulties. . . . . It is difficult to exaggerate the importance of carrying to the utmost limit the perfection of this operation. Yet the text-books exhibit a very inadequate appreciation of the subject. Turning by the feet was once said, not inaptly, to be the master-stroke of the obstetric Practitioner; and still the operation was very imperfectly developed." Unshackled by traditional rules, Dr. Barnes throws his whole energy into the subject, and, in the space of eleven lectures, delivers a clear and intelligible, but most exhaustive, account of this operation. Having defined it as "including all the proceedings by which the position of the child is changed in order to produce one more favourable to delivery," he sets to work methodically to investigate—First, the normal position of the fœtus in utero, and the conditions that determine it; and here he lays stress on the difference between the physical properties of a child living and of one dead and partly decomposed: the former an elastic, somewhat resisting mass, capable of being moved by pressure at either pole, the latter flaccid, ductile, and easily doubled on itself, with the arms dropping down, no longer upheld by vital tonicity. He also speaks of the normally antero-posterior-flattened shape of the uterine cavity as rendering probable the position of the child with its back to the front of the womb. Next, Dr. Barnes reviews the causes of abnormal positions; and thirdly, the mode in which Nature deals with them. Under this head, of course, the "spontaneous evolution" is considered, and is the subject of most elaborate, original, and ingenious elucidation, occupying the space of three lectures. After this follows, naturally, an account of the operation by which Nature is imitated, and the history of bipolar or combined external and internal version is given, with due credit to Dr. Braxton Hicks, who gave form and elaboration to a method which had been dimly foreshadowed by Wigand Rigby, Simpson, R. Lee, and Dr. Barnes himself. Every variety of turning is described, in conjunction with every contingency that can demand each; and in this part of the book there are episodically treated a variety of the incidents of labour, such as prolapse of the funis, asphyxia of the newly-born child, artificial respiration, and the like.

The seventeenth lecture, which is for the most part new in this edition, contains an account of retroflexion and retroversion of the gravid uterus, the complication of pregnancy with tumours, extra-uterine pregnancy, and various deformities of the skeleton, whether from rickets, mollities ossium, spondylolisthesis, or kyphosis. These words are rather startling, but the kinds of deformity designated are fully explained and shown by drawings from specimens.

Next come two lectures on the Sacrificial Operations, as Dr. Barnes emphatically calls them—craniotomy and the Cæsarian section—the former including cephalotripsy and Dr. Barnes's new method (embryotomy by the wire écraseur.) The twentieth lecture deals with the Induction of Premature Labour; and the remaining four lectures are devoted to Hæmorrhage in every variety, with the full examination of the conditions giving rise to them. In this, as in every other part of the book, there is much to convince the Practitioner what an elastic, growing, and improvable branch of practice midwifery is, and how much there is in the volume before us which would be quite new to any man who had intermitted his reading for ever so few years.

We have thus endeavoured to give in as short a space as possible some account of the tone and spirit, as well as of the mere contents, of this most valuable work. Of the contents, however, we may add that they include many more things than we can enumerate—abortion, sea-tangle tent, hydatiform ovum, inversion of the uterus—in fact, most or all of the elements of difficult labour, whether instrumental or not, and the remedies. We will not use the hackneyed phrase that no obstetrician's library can be perfect without it, but we may call it a library in itself. A book so full, so clear, and so deep is seldom to be met with.

NEW BOOKS, WITH SHORT CRITIQUES.

The Discovery of the Nature of the Spleen from an Investigation of the Lateral Homologies of the Liver, Stomach, and Intestinal Canal. By Henry R. Sylvester, B.A., M.D. Lond., etc. London: J. and A. Churchill. Pp. 64.

⁂ Dr. Sylvester has entered into a very ingenious if not very profitable argument: he maintains that both the liver and the spleen are blood-forming glands, but that, over and above, the liver has its biliary function. Now, we are not inclined to deny that the liver fulfils a double function—biliary and glycogenic—nay, more, Henle has said that the bile comes from the bile ducts and their ramifications alone, the rest is given over to glycogen. But, speaking roundly, we should be inclined to call the spleen the grand lymphatic gland of the blood circulation; the liver is not. Without denying a certain analogy between the two bodies, the one on the right the other on the left, still, as Dr. Sylvester founds his argument on an exact similarity between the two sides of the body, which we know does not exist, we content ourselves with again praising the ingenuity here displayed, and the industry with which the materials have been collected from various sources.

The American Practitioner: a Monthly Journal of Medicine and Surgery. Edited by David W. Yandell, M.D., Professor of Clinical Surgery in the University of Louisville, and Theophilus Parvin, M.D., Professor of the Medical and Surgical Diseases of Women in the University of Louisville. Vols. I. and II. Louisville: Morton and Co.

⁂ The two volumes now before us, excellently got up in every way, are, on the whole, creditable to American Medicine. Founded avowedly on the model of the London *Practitioner*, the editors seem to have attempted to limit in the first instance the subject-matter entirely to therapeutics, but in the second volume wisely abandoned the rule, admitting papers not only dealing practically with certain subjects, but some wildly speculative. Its basis is not broad enough; for it is quite impossible to have a constantly recurring series of valuable articles on therapeutics—the good ones must be mixed up with nonsense or twaddle to give the proper bulk to the number. It would be easy to find a sufficiency of good sound material, and that, too, of a practical kind, were it not necessary to keep up the cry for therapeutics.

FOREIGN CORRESPONDENCE.

FRANCE.

(*From a French Contributor.*)

M. Gubler on the Rationale of the Use of Arsenic.

Paris, March 27.

A month or two back, the Academy of Medicine listened to long and serious discussions on the Medical properties of arsenic. This medicament, now perhaps more than ever, is here administered in certain slow cases of phthisis, where, according to some of our best Practitioners, excellent results have been obtained from its use. Of course, in the discussions which arose on the subject, our Professor of Therapeutics, Dr. Gubler, took a prominent part. The *résumé* of his opinion was about as follows:—Arsenic, apart from its irritating and "*escharotique-sphacélante*" action, causes a diminution in the respiratory combustion, or what may be called *hématocausie*, and consequently of denutrition. Experiments upon man and animals coincide herein with clinical observation. They show a diminution of carbonic acid exhaled by the lungs, and of urea secreted by the kidneys. The mechanism which produces this lowering of the oxidation and of disassimilation is still not well known. It is highly probable, however, that this is brought about, after intussusception of the metalloid, by its direct action upon the blood and nervous system, working either directly or by taking the place of a corresponding proportion of phosphorus; but nothing can authorise us to say that arsenic possesses the power of fixing the oxygen to the blood corpuscles more intimately or for a longer period. Arsenic, therefore, ranks as a contra-stimulant, an anti-pyretic, but not as a tonic; it is opposed to waste, but creates no strength; it is, so to say, a dynamophorous substance. In preventing the organism from rapidly wasting away, it permits the reconstruction and storing up of fat, whence the appearance of health and *embonpoint* of men or beasts who make use of it to a moderate degree. The symptoms of arsenicism resemble, in a measure, those which accompany hemicrania, and especially the facility of respiration which characterises the paroxysms of that disease. Everything seems to indicate that the sedative action of arsenic affects the circulatory centres at the same time, a fact which has been established by quite a number of observations. Nevertheless, more precise data, completed by means of modern investigation, and especially by sphygmographic researches, are necessary to demonstrate this important point. The momentary increase of the appetite from the use of arsenical preparations is probably due to the direct stimulation of the mucous membrane of the digestive organs, and to the diminution of the febrile symptoms which caused and kept up the bad appetite. The *ensemble* of therapeutical facts confirms these physiological views, but many points still remain obscure, and require further inquiries. It is impossible as yet to establish a theory of the physiological action of arsenic which can explain all the facts that are known about it, and even the facts themselves have not always been observed with sufficient accuracy to furnish a sound basis for the edification of a scientific doctrine.

PROVINCIAL CORRESPONDENCE.

BIRMINGHAM.

March 22.

An Hospital for the diseases peculiar to women is to be established here. The formidable opposition, under the championship of Mr. Gamgee, which at first seemed to threaten its extinction, has vanished under the genial influences of a successful advocacy and powerful support. The new Medical bantling was fairly introduced to the public at a meeting held in the Town Hall, at which the Profession was moderately represented; and Professor Berry discoursed most sweetly on its comely appearance, and predicted for it a long and prosperous career. From the difficulty in getting subscriptions, especially in large sums, for the charitable institutions of the town, one might be led to doubt whether sufficient money can be raised for the carrying out of this new project; certainly, the fund for the extension of the Queen's Hospital furnishes sufficient ground for surmises to the contrary. This fund, called the Working Man's Fund, although largely supplemented by donations from other classes, has only now, after the lapse of many months, reached a very insignificant amount, as compared with the wealth of the town, and it will require all the begging energies of its working committee to be exhausted before the requisite sum of money will be got to pay for the enlargement contemplated. The women's Hospital is to be worked on the "free system," which, it is to be hoped, will be so carried on as not to interfere with the legitimate domain of the general Practitioner. It is only by a strict adherence to this line of conduct that the new institution can become popular with the Profession—the members of which feel that already their incomes suffer from the indiscriminate relief which the existing Hospitals afford.

The past year has been one of the healthiest in the history of Birmingham, and we may now justly claim for our town the distinction of being the most healthy of all the large towns. The old competitors, London and Bristol, were last year much behind; Bristol, formerly the healthiest of the big towns, being almost the worst of the towns included in the Registrar-General's weekly returns. Birmingham owes it low mortality-rate of the past year to the absence of any decided epidemic, but it is worthy of remark that the year's death-rate of 21 per 1000 is lower than that of the whole country, according to the ten years from 1851 to 1860. Figures, however, are on this subject more to be relied upon than words, and stated numerically the mortality of Birmingham stands thus for the past four years—1867, 24·326; 1868, 24; 1869, 21·5; 1870, 21 per 1000. This progressive decrease cannot but be regarded as most satisfactory.

The out-door Medical department of Queen's College, since its reorganisation, has continued to prosper, the number of students increasing annually; but we cannot speak so highly of the resident department, which from some cause or other fails to attract students, who have dwindled down to the lowest arithmetical number, and there are no signs of any increase. We are sorry to record the fact that the Medical tutor, whose appointment was of so recent a date, and which gave such general satisfaction, has thought fit to resign. This is to be regretted, as Dr. Hilliard possessed qualifications of the highest character, and peculiar aptitude for teaching. The post of Medical tutor is, we believe, still vacant. Some of the Professors of the College have expressed to us their conviction that the Institution, as a Medical school, would do much better were there no resident department, and of this there seems to be no doubt from the parasitic kind of existence which it appears to live, or rather starve, upon. One of the chief defects of the Birmingham Medical School in the past has been the want of one special course of instruction in pathology. The lectures on Medicine and Surgery have, of course, treated of the pathology of their respective subjects; but practical pathology has been sadly neglected. This state of affairs has now come to an end. The newly created office of Pathologist at the General Hospital has met the want, and the students now have weekly lectures, copiously illustrated by the great quantity of pathological material which the Hospital furnishes. Mr. E. Richards, the Pathologist, by this organisation of his work, and by giving careful instruction in the microscopical study of diseased tissues, has done excellent work for the students. Dr. B. Foster, too, at the General Hospital, has lately been carrying on some interesting experiments in diabetes. The peculiarly low temperature which Dr. Foster first observed in this disease—and which his recent experience abundantly confirms—the temperature in all cases uncomplicated by any inflammatory condition, always remains below normal from 1° to 2°, and sometimes falls as low as 94°, while the respiration and pulse show no proportionate decrease. The drugs which Dr. Foster has tried lately in the treatment have been bromide of potassium, ergot, and lactic acid. The first has been found to have no influence in the quantity of sugar, but, when combined with iron, the two drugs appear to produce more benefit than either does singly. Ergot, while diminishing the quantity of water, does not affect the sugar. Lactic acid, as prepared in Italy, has been tried recently, but the results have not proved satisfactory.

The system of nursing at the General Hospital has been changed. Up to the present time, it has been in connexion with the Training Institution; but this has been broken off, as it was found inconvenient to have any divided authority over the nurses. The Hospital will, in future, train its own nurses. Similar changes, we understand, are pending at the Queen's Hospital.

The annual election of district Medical officers took place this afternoon at the parish offices. There was a very large attendance of guardians, upwards of seventy being present. The occasion was made interesting by the fact that this year the appointments were to be permanent. There was a disposition on the part of some of the guardians to postpone the election until the contemplated public dispensary was established, but the majority ruled that the election should proceed, the result of which was that all the members of the old staff were unanimously re-elected. The Medical officers have, therefore, much reason for rejoicing at their improved position, which has, if not directly, indirectly been effected by the strenuous exertions of those who have laboured to raise the status of the hard-worked parochial Medical officers. The name of Mr. Rogers will occur to everyone as the life and originator of this unselfish enterprise.

GENERAL CORRESPONDENCE.

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VACCINATION AND REVACCINATION.

Letter from Dr. George Beaman.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am unwilling to encroach upon your space; indeed, should not venture to do so, did I not believe the suggestions I am about to offer important, as giving the result of upwards of fifty years' practical experience:—

1st. I recommend that vaccine lymph be taken from the arm on the seventh day instead of the eighth, the latter being the usual practice. 2ndly. It should, when taken, be as clear and transparent as the purest spring water; the least cloudiness will impair its protective efficacy. 3rdly. The lymph should be introduced by the slightest scratch, with a keen, perfectly clean lancet, just beneath the cuticle, and never into the cellular tissue beneath the cutis vera. 4thly. In a primary vaccination, two vesicles on one arm, just below the deltoid muscle, are amply sufficient; and in secondary or subsequent revaccinations, one vesicle is as protective as a dozen. Lymph should never be taken from a revaccinated person.

By attention to the above rules, the Profession will not see either eruptions or abscesses follow the operation, and yet find its protective efficacy against the small-pox more infallible, than by any other method. Permit me to add that I have just now before me lymph and pus combined, given to me in tubes from one of our largest vaccine stations. Who can wonder that skin diseases, abscesses, or other constitutional disorders should result from introducing such impure lymph into the human body? I am, &c., George Beaman, M.D.

Henrietta-street, Covent-garden, March 18.

INTENSE VACCINATION.

Letter from Dr. J. J. Trayer.

[To the Editor of the Medical Times and Gazette.]

Sir,—The whole subject of vaccination being now of pressing interest, you may think the following observation worthy of insertion in your journal:—

On February 20 a healthy vaccinifer brought to my dispensary presented a few well-marked vesicles of a vaccine eruption, the direct analogue of the variolous eruption, distinct from but caused by the inoculation of the small-pox. Taking a portion of lymph from one of these vesicles, I inserted it in one point of the arm of an infant I was about to vaccinate, and carefully cleaning my lancet, I inserted the lymph from the primary vesicles on the same child's arm in three other points, my practice being to make four punctures in each case. The result, as witnessed on February 28, was four equally well-developed and characteristic vaccine vesicles. It is just at times like the present, when the *constitutio anni* is plainly variolous, that these secondary eruptions of cow-pock are most frequent. Might not this be taken advantage of as affording an additional source of supply of lymph? I have retained a tube of lymph collected from that vesicle, and shall be happy to send to anyone wishing to make the comparison for himself of its behaviour side by side with the ordinary lymph.

There is one other point I would like to make a remark on—*i.e.*, the use of lymph from the arm of a revaccinated person. This I have never yet done, no matter how perfect the vesicle (and I have seen them absolutely typical in form), but there is just one contingency in which such a step might be advisable—that is, where an infant seemed to be insusceptible to the influence of primary lymph. In such cases I generally have succeeded by using, after one or more failures with milder lymph, that obtained from a vesicle still perfect in itself, but having more surrounding redness than is usual on the eighth day. I sometimes put up a few tubes of such lymph, marking it "hot," for use in such cases. And it is precisely because there is more appearance of "heat" about the vesicles in the revaccinated that I *à priori* credit the lymph thence obtained with greater power of overcoming the resistance of some constitutions to cow-pock infection. I lately revaccinated a lady, aged 33 (who remembers the failure of a former revaccination, but not the exact age at which it was performed), who had, for three or four days, a very sore arm, and considerable feverish reaction; as the vesicle began to wither, a slight erysipelas spread down the arm, and as it came to the hand the other hand took on a sympathetic action, but here the redness, etc., extended only to the ball of the thumb. Perhaps the possibility of such sequelæ occurring ought to make one pause and weigh well the propriety of using revaccination lymph at all. In primary vaccination I have never seen erysipelas arise except under gross provocation.

I am, &c., James J. Trayer, M.B.

Bagnalstown, March 20, 1871.

P.S.—One such case occurring in my practice is instructive. A fine healthy baby vaccinated by me, at six weeks of age (which is probably the best age for vaccination), on the eighth day presented a vesicle in all respects perfect; a small quantity of lymph was taken for use. On the tenth day, this child, still in perfect health, was taken to visit and be admired at a neighbouring convent. Here the ladies (with true feminine instinct unenlightened by maternal experience) one after another danced and tossed the animated toy, that threw, with infantile delight, its little arms aloft. Hearing this from eye-witnesses, I was not surprised, at an early summons (the season being a harsh and breezy February), to find him attacked with erysipelas, which spread from the seat of the vaccine down that arm, over the left side of the head, down the whole left side, then over the right side of head and body, and finally, as (in spite of all I could do) it reached the toes of that side, the little creature, worn out and exhausted with its long fight, succumbed to the disease.

FRUITLESS CALLS.

[To the Editor of the Medical Times and Gazette.]

Sir,—Some three miles from here is a village without a resident Doctor. Late one evening, in winter, I was requested to go there, in all haste, to a lady in a fit. As my horse was in the stable, and my man gone to his home, both some distance away, I got into a fly, and rode there as quickly as I could, paying a toll on my way, and afterwards 6s. for the fly. When I arrived, I was told that I was not then wanted, as they had discovered, since sending for me, that a Doctor from another place was in the village, and the lady was better. No fee was forthcoming. I had hardly reached home, and dismissed the vehicle, than an urgent message came for me to go to the wife of a tradesman some distance in another direction, as she was supposed to be dying, and they could not find their Doctor. I went immediately, but was told, on my arrival, that their own Doctor had just gone upstairs, and I was not wanted. In this case, as in the other, payment was refused because on arrival my services were not required. I am fain to ask you, therefore, what is one to do under similar circumstances? since in a parallel case our ancient and sapient county court judge recently ruled that, as no service was rendered, the Doctor was not entitled to compensation for any trouble he may have encountered. And as the very great age of our learned lawgiver should, perhaps, entitle his opinions to more than ordinary respect, we must, I suppose, scarcely dare to question their legal correctness; yet what are we to do, since a Medical man may thus be made to fritter away his whole time without acknowledgment or reward? I am, &c.,

Brighton, March 23. Medicus.

The New York Commissioners of Emigration report that, during the year 1870, 255,435 passengers arrived at that port, 212,170 of whom were aliens. Of these, 72,000 were from Germany, 65,000 from Ireland, and 38,000 from England, 11,500 from Sweden, and 10,500 from Scotland.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 14.

THOMAS CURLING, F.R.C.S., etc., President, in the Chair.

THE new PRESIDENT, on taking the chair for the first time, thanked the Society for the honour it had done him—an honour which was the more grateful to him, as to its *Transactions* he had contributed most of his published work. He had experienced difficulty in taking the chair after such a man as Dr. Burrows, but he did it with a hearty determination to support the prestige of the Society.

Mr. JONATHAN HUTCHINSON read a paper

ON XANTHELASMA PALBEBRARUM, AND ITS SIGNIFICANCE AS A SYMPTOM.

The author stated that his paper concerned the buff or yellow patches, not very unfrequently seen near the inner angles of the eyelids, which had been described by Dr. Addison under the name vitiligoïdea plana, and which had been accurately figured by Mr. Wilson, Hebra, and several other authorities. He preferred Mr. Wilson's name, because it had reference simply to the very conspicuous colour of the patches, and to their location; and because it involved no suggestion of similarity or relationship to any other malady. For some years the author had been engaged in collecting facts as to the clinical meaning of these curious patches, in the hope of finding that their presence might furnish a clue to their possessor's diathesis or state of health. More especially he had wished to investigate the correctness of Dr. Addison's belief (founded on but very few cases) that they were usually associated with disease of the liver. The paper was based upon the narrative of about thirty cases, and was illustrated by a series of coloured drawings. The chief conclusions arrived at are summed up in the following propositions:—1. That xanthelasma never occurs in children; whilst it is fairly common in middle and senile periods of life. 2. That, in a large majority of cases, its subject is not seriously ill, nor in any danger of becoming so. 3. That, in a small proportion of very severe cases, jaundice, with great enlargement of the liver, are met with. 4. That, when jaundice occurs, it almost always precedes the xanthelasmic patches. 5. That the form of jaundice is peculiar, the skin becoming of an olive-brown or almost black tint, rather than yellow, and the colour being remarkable for its long persistence. 6. That the enlargement of the liver may be very great, and that it may subside, and the patient regain good health. 7. That, in many cases in which there has been no jaundice, there is yet the history of frequent and severe attacks of functional disturbance of the liver. 8. That xanthelasma occurs more frequently in females than in males, the proportion being two to one. 9. That in all cases the xanthelasmic patches appear in the eyelids first; and that not in more than about 8 per cent. do they ever extend to other parts. 10. That the patches invariably begin near the inner canthus, and almost invariably on the left side. 11. That xanthelasmic patches are of little value for purposes of prognosis, being usually the evidences of past rather than of coming disease. 12. That it seems not improbable that they may result from any cause which has induced repeated changes in the nutrition, and especially in the pigmentation of the skin of the eyelids. Thus they occur to those who have been liable to have dark areolæ round the eyes, whether from "sick headaches," ovarian disturbance, nervous fatigue, pregnancy, or from any other cause; hence their frequency in "bilious subjects," and in the female sex. 13. That it is probable that of the causes mentioned, under which the pigmentation of the eyelids may be disturbed, disorder of the liver is the most powerful; hence the fact that the more extensive cases are usually associated with hepatic disease. The author stated, amongst other points, that when these patches are seen on the eyelids, it is usually safe to suggest that their possessor has been the subject, at some period of life, of very severe and frequent sick headaches, and that in two-thirds of the cases this suggestion would be confirmed. He added that he had met with some cases in which some of the less usual evidences of disturbance of the nervous system in connexion with sick headaches had also been observed. In one instance, a man had been liable during his headaches to become temporarily quite blind of one eye, and now and then of both; and another, a woman, was liable to sudden loss of muscular power in her arms. Two cases were related of great enlargement of the liver, with "black jaundice," both of which disappeared after a while. In one of these the patient became insane during the jaundice, but recovered afterwards, and is now well, but with large patches of xanthelasma. As regards the pathological anatomy of the patches, the author preferred to reserve his facts, which were as yet incomplete. He showed drawings, however, to illustrate the important fact, not previously noticed, that the patches sometimes show evidence of other changes in the skin besides the accumulation of yellow material. Thus it is not uncommon for sebaceous glands to become much enlarged, and plugged by pellets of indurated secretion, blackened at the free extremity; and in one instance a number of large thin-walled serous cysts were developed. In these rarer forms of the malady, its real nature is usually disclosed by the presence of small spots of the characteristic buff tint. It is also recognisable from the fact that, whether the disease be cystic or sebaceous, the morbid conditions are arranged above and below the inner canthus, in what may, for convenience, be styled the xanthelasmic positions. Like xanthelasma in its more typical forms, they are also after a time accurately symmetrical.

Dr. HILTON FAGGE said that in his cases there was no evidence of disease of the liver. In one instance, the condition had been hereditary for four generations. It was impossible to draw the line between plain and tuberous vitiligoïdea. In Dr. Pavy's case both varieties were present. In her, the spots began on the hands before appearing in the face. The jaundice she had was light, not dark. The dark spots were on the mucous membranes.

Mr. SPENCER WATSON had seen a case in a woman, aged 40, of dusky complexion, and liable to bilious attacks. There were a number of buff patches on the left eyelids, but hardly any on the right. She had disturbed vision at times, as from incipient glaucoma.

Mr. BRUDENELL CARTER said the condition of luminous zigzags surrounding the object looked at was common in hard brain-workers, and was thought to belong to hard brain-work, not to disordered liver. The fact that xanthelasma and temporary amaurosis had been so often noted together by Mr. Hutchinson might depend on his connexion with Moorfields Hospital.

Dr. SYMES THOMPSON had seen the clergyman referred to in the paper. The jaundice was not from obstruction, but was nervous. The recovery was complete. Such conditions might depend on defective innervation.

Mr. HUTCHINSON, in reply, thought Mr. Carter's suggestion fair. He still thought they might distinguish vitiligoïdea plana and tuberosa. He would have liked to have heard more of the enormous liver which subsided.

A paper by JAMES WYNNE, M.D., Guatemala (communicated by Mr. Spencer Wells), was read "On Central America as a Residence for Consumptive Patients." The object of this paper was to draw attention to the elevated table-lands of the Pacific slope of tropical America, and especially of Guatemala, a city situated 5000 feet above the sea, in lat. 14° 37′ 32″ N., having a mean temperature of 66° Fahr. The climate is that of perpetual spring; the air is tonic and invigorating, yet not too stimulating. Consumption is very rarely met with, and phthisical patients coming from a distance, if able to lead an open-air life, make remarkable progress. Twelve cases are recorded. Of these four died, five recovered, and three remained under observation. Of the fatal cases all but one were seen for the first time when the disease had reached a hopeless stage. It is suggested that the value of the Central American plateaux in phthisis should be tested by sending out twenty patients in an early stage of the isease for a few years, or, better, for permanent residence.

After a few words from Dr. Webster, Mr. SPENCER WELLS explained that he had brought the paper chiefly for the purpose of exciting a discussion on the effects of climate.

Dr. BAKEWELL said the condition of these countries, their liability to revolution, the filth, bad food, and bad lodgings, all greatly militate against their ever becoming health resorts.

THE Minister of Agriculture has peremptorily forbidden the holding of fairs and cattle markets in France, in consequence of the extent to which cattle plague prevails.

THE census for India is to be put off till next year. This is to be regretted, as not only the census for the empire, which was arranged for 1871, will be disturbed, but likewise the decennial period of comparison.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MARCH 7, 1871.

Mr. HILTON, F.R.C.S., President, in the Chair.

MR. MARCUS BECK exhibited a specimen of Spindle-celled Sarcoma from the posterior tibial nerve. The patient, a man aged 32, had been healthy till four years back. There then set in pain in the leg, which became enlarged behind, and the swelling continued gradually to increase. It was very tender. He came under the care of Mr. Erichsen, who made an incision, and, finding a soft growth attached to the fibula, put it down as malignant. The leg was accordingly removed, and the man did well. A soft mass was found to have invaded the posterior tibial nerve, which was thickened above and below. It was composed of spindle cells, with delicate fibrils supporting them. It had probably sprung from the nerve-sheath.

Dr. GREENHOW showed a specimen of Cancer of the Œsophagus, from a male aged 40, who till August last had been healthy. He then began to experience a difficulty in swallowing, which went on gradually increasing till February, when it was totally lost. He also suffered from violent dyspnœa when he tried to swallow anything. One day, after a violent fit of coughing, he brought up a fleshy-looking mass, and his dyspnœa was gone, but the swallowing was no better; the food he tried to get down returned by the mouth and nose. By the laryngoscope it was seen that the right vocal cord moved imperfectly. After death, it was found that the œsophagus was narrowed by a cancer, which had eaten its way into the trachea. It was epitheliomatous in formation, and the fleshy mass expectorated was also epithelial.

In reply to Mr. Weeden Cooke, Dr. GREENHOW stated that other parts were healthy. The case was most interesting from a clinical point of view.

Mr. WEEDEN COOKE next exhibited specimens of Medullary Disease of the Skull. A woman, aged 63, had been operated on for an open scirrhus of the left breast. After a time, a hard, nodular swelling of the frontal and temporal bones appeared, and the eye became prominent. She died quietly. At the point indicated, the calvarium was soft inside and outside, and the mass on the inside had caused absorption of the grey matter of the brain. The next occurred in a female, aged 32, who had a movable tumour in the breast, and one gland removed. Before death slight paralysis of the right side had appeared, and speech was affected. A deposit was found in the third left frontal convolution, and another further back.

Mr. ARNOTT said the late Mr. Moore strongly supported the view that cancer was local in its origin, but that it did not spread by any one means, though most frequently by the lymphatics; but it might do so by the blood also. Epithelioma was rare in the viscera; there medullary growth was commonly found, though all secondary growths tended to resemble their primary source. If the primary disease was epithelioma, the secondary would be the same, but not invariably.

Mr. COOKE thought cancer and tubercle interchangeable hereditarily.

Dr. DICKINSON exhibited a Mesenteric Tumour from a child, aged 2, and which, it was noticed in three or four months after birth, was most probably congenital. It was situated in the left side, and was nearly globular; hence some thought it was the spleen, others considered it renal. At the post-mortem it was found to be a mesenteric enlargement close to the kidney, but not joined to it. It consisted of a hard substance, arranged something like a sponge. The hard substance was partly fibroid tissue and cartilage, with cretaceous matter; the soft portion consisted of fat cells and myxomatous fluid associated with embryonic connective tissue. (Referred to committee.)

Dr. DICKINSON also brought before the Society a number of Sections of Spinal Cords from patients the subjects of Tetanus, showing the results of extravasation of blood and serum in tearing up the tissues, etc.

Dr. WHIPHAM exhibited a specimen of Dissecting Aneurism of the Aorta, beginning in the first or ascending portion of the arch just above the valves. A systolic bruit was heard all over the chest, yet the patient complained only of dyspeptic symptoms, and was about to leave the Hospital, when he was taken worse; a fit of vomiting came on, and he died. The aneurism was mostly within the pericardium.

In reply to Dr. C. T. Williams, Dr. WHIPHAM said the patient only complained of pain after food.

Dr. DICKINSON, for Dr. Hawkes, of Hanwell, exhibited a specimen of Ruptured Aorta from a patient who had suffered from mania and epilepsy. The man had suffered from gout. On the 6th of last month he looked bad, and was sent to the infirmary, where he suddenly expired the same evening. There were the remains of an old clot in the left cerebral hemisphere, and a curious, cyst-like body in the corpus striatum. There was a clot in the pericardium, the aorta being dilated and ruptured above the valves, there being a kind of dissecting aneurism in that situation. (The body in the corpus striatum was referred to Drs. Dickinson and Powell.)

Dr. C. T. WILLIAMS showed an Aneurism of the Aorta Opening into the Œsophagus. It affected the transverse and descending aorta. It contained a good deal of fibrinous clot, and the left subclavian was blocked. The vessel was atheromatous. The patient, a man aged 38, had symptoms of dyspepsia and pain in the scapular region. The left pupil was dilated. Latterly he suffered from dysphagia. One day, getting out of bed, he vomited blood, and died on the spot.

Mr. MORRIS, for Mr. Short, of Petworth, exhibited an Aneurism of the Abdominal Aorta bursting behind the peritoneum. The patient, a man aged 41, had been suffering from a pulsating tumour in the epigastrium. He suddenly became faint, and the tumour increased in size. He suffered much from pain. After death a large clot was seen behind the viscera, and chiefly on the right side. An opening was seen near the cæcum. A cavity existed behind the viscera; outside was the skin and vertebra; in front, the peritoneum and kidney pushed forward. There was a large opening into the aorta. The bodies of the vertebræ were carious, and the muscles were completely destroyed.

Dr. POWELL exhibited, for Dr. Quain, a specimen of Caries of the Vertebræ, from a male, aged 18. His habits had been very irregular. He complained of occipital pain. His head was kept fixed, and he wore an anxious look. He died suddenly. The axis, it was found, projected, and the odontoid process pressed on the cord. The ligaments were gone.

Mr. SPENCER WATSON exhibited a specimen of Spindle-celled Sarcoma removed for the fifth time after tying the femoral.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 10.

Mr. ERICHSEN, Vice-President, in the Chair.

DR. TILBURY FOX brought before the notice of the Fellows seven cases of Ringworm of the Arms and Hands, of an extensive and severe form, in seven men, in whom the disease had been contracted from a white pony whose body was studded over with patches of tinea tonsurans, having analogous characters to those seen in ordinary ringworm of the scalp. The disease occurred only in those men who had groomed the pony: in three men brought to Dr. Fox by Dr. Drage, of Hatfield, and who were the ordinary grooms of the owner of the pony; and in four others, attendants of the Royal Veterinary College, where the pony had been sent for treatment. The patches of ringworm were chiefly in the front of the arms; they were large, more infiltrated than usual, and, in one case, markedly herpetic. In one of the other cases, the central portions of the circular patches were studded with minute pustules. Dr. Fox attributed the severity of the disease to the large amount of fungus of a very luxuriant kind being sown at one time upon the arms of the men. In one man parasitic sycosis was produced. Hairs taken from the pony, exhibited under the microscope, were seen to be ensheathed in spores and mycelial threads, both of which invaded the shaft of the hair; and scales taken from a patch on the arm of one of the men were also placed under the microscope, and showed the mycelium of the fungus, which Dr. Fox pronounced to be the trichophyton, sprouting in all directions throughout the epithelial scales. Dr. Fox stated that he had never seen the transmission of ringworm from the horse to man before, nor had Professor Spooner in his forty years' experience; but he referred to the history of an epidemic which occurred some years ago amongst horses and mules in the valley of the Borne in Savoy, and which was reported upon by Professor Papa, in which a disease similar to that in the present seven cases was observed to be communicated to man from the horse. Bazin had also noticed the same occurrence. He remarked, however, that the transmission of tinea from the ox and calf to man was common enough. He concluded by remarking that the seven cases brought under the notice of the Society illustrated the fact that ringworm of the surface varies considerably in aspect, according to the amount and rapidity of growth of the fungus, from a mere erythematous desquamating patch (so-called parasitic pityriasis) to a pustulating surface resembling and liable to be mistaken for an eczema; the two extremes being connected by transitional forms, represented by an abortive herpes, a well-marked herpetic patch, or a desquamating circular area bounded by an herpetic edge; the occurrence of so much effusion as is necessary to produce herpetic vesicles being dependent upon the amount of irritation set up. Veterinarians who asserted that "ringworm" was common in the horse, and might be communicated to man, had not brought forward any proof that the disease which they styled "ringworm" was really parasitic, and he had no doubt many non-parasitic eruptions of animals were classed under that term. The disease in the white pony referred to was, as proved microscopically, undoubted tinea tonsurans.

The President asked if in other cases the virulence had been increased by transmission.

Dr. Tilbury Fox said that in many the herpetic characters of the disease were well marked, indicating considerable irritation.

Dr. Duffin said the great fact was transmission. He had seen a case somewhat similar from a mangy cat. Three children were affected, and the amount of irritation in these was considerable, producing something like eczema.

Mr. Coax, a veterinarian, said such transmission was well known, and the resulting disease was easily cured by a variety of stimulant applications. It tended to spread, and, by inosculation, to form large patches. He thought the disease was much more commonly transmitted to man than was supposed. Mr. Nettleship had tried direct experiments, and it was readily transmitted from animal to animal.

Mr. Prichard, of the Veterinary College, said he had never seen a case like this. The whole skin of the horse was involved. Neither had he ever before seen a skin disease transmitted from horse to man. This was also the opinion of others of his colleagues.

Mr. Cooper Forster had a horse affected some time before, and his man became so also, apparently with the same disease.

Mr. Henry Lee read an account of an Operstion for Removing the Tongue. The jaw was divided at the symphysis, and a ligature was so introduced that, when its doubles were cut, the tongue could be tied into six different portions. A portion of elastic ligature was wound round the base of the organ, and the diseased portion removed by the knife. The patient did well.

Mr. Callender said that in one case of cancer of the tongue the pain had been excruciating, and he thought of dividing the gustatory; but suddenly the patient lost all pain. He concluded that the disease had been eating its way through a nerve, which being destroyed, the sense of pain was lost. In removing the tongue, he preferred to cut the mucous membrane on the floor of the mouth; next, the parts joined to the bone; and then, by the écraseur, the tongue itself. The cases had generally done well.

Mr. Willet had last year removed the tongue by cutting the jaw. He removed without any special previous preparation of ligaturing vessels. Two vessels only required to be tied. The union of the jaw was unsatisfactory, partly, perhaps, because the patient was very restless. The cancer had been very acute, and the man was in danger of dying of starvation.

Mr. Cooper Forster said Mr. Hilton first thought of dividing the gustatory in such cases. He could strongly recommend the operation; in one instance relief was obtained for six months after. The ligature described by Mr. Lee was often used for nævi. He objected to division of the symphysis. With him, it was really a question whether a cancerous tongue ought to be removed at all. It subjected the patient to a certain risk. He had seen the tongue well removed by section from below merely. The electric écraseur was the best means of removal. At Guy's they used Middledorf's battery for the purpose. With it there was no bleeding, and generally that was frightful. He twisted up the wire as it made its way through.

Mr. Erichsen said many interesting points had been raised in the discussion. As to operation at all, it must be confessed that the operation was perilous. As to the methods of removal, many were difficult. In section of the symphysis, a plan introduced by Sédillot was good—viz., to cut through at an angle from above and below >, so that the two portions interlocked. As to the best mode of fixing the jaw after, he thought it best to drill the jaw before the operation. This was easily done by an Archimedean drill. In this mode of operating it was best to cut the tongue by the knife; in others, the écraseur was best. In the écraseur the wire was of some importance; if too thin, it cut through too quickly.

Mr. Heath had tied the lingual twice to check growth and hæmorrhage. It was easily tied in the digastric triangle. The operation was not satisfactory. He asked Mr. C. Forster what he did to draw out the tongue. He divided the symphysis in one case three years ago, and the patient was alive now. He had a good deal of difficulty with the jaw.

Mr. Forster said he sometimes inserted a pin to fix the wire at the proper spot. In the case of the electric écraseur, the wire must not be allowed to touch the pins.

Mr. Callender said they might have hæmorrhage after, even with the écraseur.

Mr. Gascoyen said the desirability of the operation at all was questionable. In all he had seen, the patient was dead in six months after; whereas, with no operation, they might live twelve or eighteen months. The patients generally died of want of food, or of exhaustion. After operation, they had pyæmia, or the disease returned.

Mr. Lawson said that at the Middlesex Hospital, where they saw such patients die, those suffered less who had been operated on.

Mr. Arnott had seen the gustatory cut without any permanent relief. He had always seen hæmorrhage with the écraseur.

Mr. Hart said the diseased glands should be extirpated more freely when the disease was advanced.

Mr. De Morgan said that years ago he got tired of operating, and his experience was against it; but after that a certain number of cases did well. Altogether, he thought it better to remove for the relief of pain and facility of eating. He tried the removal of glands in one case, but they were so closely attached to the vessels that he had to give it over, although they seemed loose. He had seen the écraseur used carefully, yet hæmorrhage followed. It was not, however, very troublesome, and could be stopped by cold. He tried the electric écraseur, but his wire got extinguished.

In answer to Mr. Reeves, Mr. Heath said he tied the lingual on one side only. The anastomosis was not very free. John Reid's personal experience was in favour of removal, even more than once.

Mr. Willett said the disease was very common in India; it returned there so readily that the Surgeons had given up operating.

Mr. Lee said that if the tongue could be removed without section of the jaw, by all means let it be so; but in his case it was impossible. The hæmorrhage so frequently dwelt upon made him think more of his elastic ligature.

Friday, March 24.

Dr. W. W. Gull, President, in the Chair.

Dr. Duffin read notes of two cases of Roseola Variolosa that had come under his notice. In the first, some six hours after a severe rigor, a thickly-set, papular rash appeared. It was strictly confined to the surface of the abdomen and the inside of the thighs, thus occupying a triangular space, with its base upwards. The rash blanched on pressure. The patient presented the signs of severe febrile disturbance. After forty-eight hours the eruption became purpuric, and at the end of an additional twenty-four hours, uniformly confluent. The regular papules of small-pox then appeared on the face. The patient had two imperfect vaccine marks on his arm. The case ran a moderately severe course up to the period of the secondary fever, when the disease aborted. In the second case, a papular rash, in all respects similar to the other, appeared on the arms and thighs of a girl twenty-four hours after severe rigors. The rash here also became purpuric on the third day, and on the fourth a modified small-pox eruption occupied the face. This patient also had been vaccinated. In reliance on the descriptions of Hebra and Trousseau, Dr. Duffin contended that where these limited rashes occurred they were pathognomonic of the appearance of small-pox, the diagnosis of which would be much accelerated. In vaccinated subjects they had little prognostic importance, but in the unvaccinated they were extremely formidable. No proper small-pox rash seemed to invade the purpuric area, which gradually faded as the disease evolved.

Dr. Fagge confirmed the accuracy of Dr. Duffin's description. He saw a patient some time ago with the rash, and next day there were papules of small-pox. A man came into Hospital with purpuric blotches, and passing blood. He died, as Dr. Wilks thought, from small-pox; but he had been ill over forty-eight hours, and there were no papules. Nevertheless, twelve days thereafter several patients in the same ward and the ward clerk were attacked with true small-pox, there having been no other case in the ward.

Dr. Habershon thought the early diagnosis of small-pox often far from easy. The roseola was not always confined to the abdomen. Sometimes it extended to the hands and arms, or other parts of the body. In one instance, where it affected the joints, the case was conceived to be one of rheumatism.

Dr. Rasch referred to his own case. A lady, who had visited him whilst ill, was attacked with a rash resembling scarlatina on the abdomen. One small-pox pustule followed.

Dr. Broadbent had altogether seen eight cases like those mentioned by Dr. Fagge. The first exactly resembled a case of scarlatina, but was rather deeper in tint. There were slight throat symptoms; hæmorrhage followed, and the patient died. There were no papules, though life was prolonged to the fourth day. The rash had been more or less general in all he had seen. With the eruption there had been a period of absolute comfort. Hæmorrhage had come on, and death followed.

Dr. A. P. Stewart had been called to a case of doubtful diagnosis. Twelve days before his visit, a scarlatinal eruption had appeared, with sore throat. The rash had faded, and slight desquamation was going on, when the patient was seized with a rigor, and on the twelfth day pustules, completely formed in less than thirty hours, appeared on the hands and feet. Was this small-pox? The crusts formed were like those of impetigo. Dr. Sibson had seen a similar case.

Dr. Sutton also affirmed that the early diagnosis of small-pox was not easy. He also had seen cases with roseolous rash over the abdomen. A girl had come into Hospital so, and in three days she was covered with pimples. Another came into the London Hospital with a measly rash on face and neck. No small-pox followed. It may have resulted from iodism. In a malignant case there had been a deep-red rash like that of erysipelas.

Dr. Duffin said he had seen another case since the paper was written.

The President said he had often made a better diagnosis by not looking at the patient with premonitory symptoms of small-pox. Syphilis was most frequently taken for it. They sometimes died with the purpura. He had seen an old gentleman who had had small-pox in his youth, but was again attacked, and died bleeding at every pore on the fourth day as the papules were appearing.

Mr. Christopher Heath read notes of a "Case of Complicated Stricture of the Urethra treated by Mr. Syme's Operation for Impermeable Urethra." Mr. Syme's description of the operation was first referred to, and the case was related as follows:—A discharged soldier, aged 28, upon whom external urethrotomy had been performed in India, had an impassable stricture of the urethra, complicated with perineal fistulæ, and an old false passage of considerable length. The patient had been under careful treatment for six months before he came under Mr. Heath's care; but no instrument could be passed into the bladder, nor was Mr. Heath more successful after several careful trials. He therefore adopted Mr. Syme's suggestion, and introduced a director through one of the fistulæ into the urethra behind the stricture, then passed a steel staff along the urethra and made it meet the director, and thus enter the bladder. Instead of then cutting upon the staff and dividing the stricture, as suggested by Mr. Syme, Mr. Heath preferred to pass Holt's dilator along the urethra and split the stricture; and this was successfully accomplished. The patient made a good recovery, and was taught to pass his own instrument, which he continues to do to the present time.

Mr. Maunder said there were certain general rules laid down for the treatment of impassable stricture. He objected to forced catheterism, and he did not think that in this case the track of the urethra had been followed. A false passage would be formed, and a granulating wound produced, ending in new contraction. It would be impossible to keep this new passage open. He would have selected a variety of perineal section. In all cases a bristle can be passed; the stricture may then be gradually dilated, and finally cut through.

Mr. Teevan said they were often in a dilemma, and must select the least objectionable measure. There never was any stricture in the prostatic portion of the urethra, so, at worst, they had only to work their way through the perineum. It was impossible always to keep in the track of the urethra; but they had to make their way through somehow, either by forcing or cutting, and he thought cutting best. He thought it better not to puncture by the rectum, and to withdraw the instrument on reaching the bladder, as it irritates and increases the subsequent contraction when left.

Mr. Barwell had recently examined a man on whom, years before, he had performed Syme's operation. He had a good urethra. He thought it best to cut through the hard mass. It was difficult to keep the urethra open, and close a fistula.

Mr. Cooper Forster did not think they could see cases as bad as they did at Guy's. Mr. Heath's plan he thought reasonable. He found a fistula, and he took advantage of it; if they did not find such an one, it was better to make it. Ordinarily, the urethra was dilated behind the stricture; they might cut into this, and then take off the water regularly, and thus give the stricture rest before operating. He had hunted about a good many times, without finding anything like a urethra.

Mr. Teevan said that when the man was tied up they might just as well conclude the operation at once.

Mr. Haward was surprised to find no reference to puncture from the rectum; he had seen it afford great comfort to the patient and relief to the stricture.

Mr. Croft thought Mr. Heath's case belonged to a class by itself, and demanded a special line of treatment.

Mr. Reeves said he had seen both Mr. Maunder and Mr. J. Adams manage to pass a bristle through an almost impermeable stricture.

Mr. Heath said Mr. Syme's plan was not his; they had got mixed up in the debate. In his case there was a long false passage, so that he could not know where to cut. In his case it was not forcible catheterism; he had a guide to the bladder. Mr. Teevan's experience seemed to be somewhat exceptional. Cutting sometimes led to fatal hæmorrhage.

Mr. Teevan briefly narrated the particulars of the Treatment adopted in a Case of Retention of Urine from Impassable Stricture in a man, aged 46, who had suffered from severe organic stricture for ten years, and from retention, with dribbling, for nearly one year. At last, complete retention set in, and he was taken to a Hospital, where, after an unsuccessful attempt to pass a catheter, he was relieved by a hot-bath and medicine. A few days later, he came under Mr. Teevan's care for his complaint. He still followed his occupation as cab-driver, as the continual dribbling relieved him. Mr. Teevan tried for half an hour unsuccessfully to pass the smallest elastic catheters and bougies, and when he renewed his attempts two days afterwards he met with the same want of success. The following day complete retention set in, and at four o'clock the next morning he was taken to Mr. Teevan, who succeeded, after a quarter of an hour's trial, in passing the No. 1 smallest filiform bougie, which was only about one-fifth of an English No. 1; and having allowed the instrument to remain in for ten minutes, he withdrew it, when a very fine stream of urine began to flow, and continued for an hour, when nearly three quarts of urine had been passed. The patient was afterwards cured of his stricture by gradual dilatation. Mr. Teevan called the case one of impassable stricture, as no catheter could be passed for the relief of the retention. He brought it forward to show what the filiform bougie could achieve in an apparently hopeless case for its successful use. The occurrence of the retention facilitated the passage of a bougie, and therefore, if the patient had been put into a hot-bath, which would probably have been useless, as the weather was very hot, he would have lost a valuable opportunity presented him for commencing that treatment by gradual dilatation, which relieved the retention and ultimately cured the stricture. The bougie had, in this case, saved the patient an operation.

Mr. Reeves had tried these bougies, and found them bend and double up very often.

Mr. Heath congratulated Mr. Teevan in passing a bougie in such a case. What would he have done if he had failed?

Mr. Croft said that, at St. Thomas's, they often passed catgut guides first of all. There was also a plan of pressing against the stricture for a time, after which it might become passable.

Mr. Maunder had the highest opinion of the value of these French bougies, and he regretted he was unable to procure any more from Paris. Experience and skill obviated the possible occurrence of the incident mentioned by Mr. Reeves. Gentle handling was the great secret.

Mr. Teevan said that, in inserting such fine bougies, they should be withdrawn a quarter of an inch for every half inch of progress made. Had he failed, he would have tied the man up, and cut into his bladder.

OBITUARY.

JAMES HENDERSON, M.D., INSPECTOR-GENERAL OF HOSPITALS,

Died, at Jersey, a few days since. He entered the army as Hospital Assistant August 5, 1809, and served at the capture of Guadeloupe in 1810. He was in Medical charge of the 13th Regiment in the campaigns of 1813, 1814, and 1815 in Lower Canada, including Plattsburg, and was also employed throughout the whole of the Burmese war, under Sir Archibald Campbell, in Medical charge of the 13th and 41st Regiments. In 1834 he was at the capture of Coorg, as Surgeon of the 48th Regiment; in 1842 with the 3rd Light Dragoons, in Affghanistan; and in 1848 and 1849 in the Punjaub campaigns including the affairs of Ramnugger, action of Sadoolapore, and battles of Chilianwallah and Goojerat. He became Staff Surgeon July 27, 1855, and was afterwards employed at Malta. He had received four medals and four clasps.

EDWARD LONEY, SURGEON R.N.,

Died on March 16 at the residence of his sister, Hill-house, near Cashel. Mr. Loney entered the Navy in June, 1851, and after a short period of service at Plymouth Hospital he proceeded to the West Indies, where he served afloat and in Jamaica and Bermuda Hospitals for seven consecutive years. Returning to England after this long-continued tropical work, and with health impaired by service at the Hospitals during two or more epidemics of yellow fever, he embarked on board the *Cæsar* to return, as frequently happens with officers, to the same station. The *Cæsar*, however, ultimately went to the Mediterranean, where he suffered—with long interval—from two attacks of erysipelas in the head, which placed his life in great danger at the time; the last attack was succeeded by hemiplegia, terminating in apoplexy. The Naval Medical Service counted few officers more accomplished in every department of his Profession, or more devoted to its duties.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 23, 1871:—

Aylen, Thomas Vaughan, Southsea, Hants.
Doran, Alban Henry Griffiths, Lansdown-road, Notting-hill.
Hazel, William Francis, Seymour-street, N.W.
Lycett, John Allen, Scarborough, Yorkshire.
Noakes, Samuel Silverthorne, Newhaven, Sussex.
Rose, William, High Wycombe.

The following gentlemen also on the same day passed their First Professional Examination:—

Fulford, William Edward, London Hospital.
Moore, Samuel William, St. Thomas's Hospital.
Murrell, Clement F. F., St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cass, Stafford Thomas, L.R.C.P. Edin., M.R.C.S. Eng., etc.—Resident Medical Officer of the Notting-hill and Shepherd's-bush Dispensary.

Williams, C. Theodore, M.D. Oxon.—Physician to the Hospital for Consumption, Brompton, *vice* Dr. Burdon-Sanderson, resigned.

MILITARY APPOINTMENTS.

24th Foot.—Staff Assistant-Surgeon Richard Charles Coleman Hickson, to be Assistant-Surgeon, *vice* George Frederick Duffey, M.B., who resigns.

34th Foot.—Staff Surgeon Albert Augustus Gore, M.D., to be Surgeon, *vice* Sydney Alder, who exchanges.

Medical Department.—Surgeon Sydney Alder, from the 34th Foot, to be Staff Surgeon, *vice* Albert Augustus Gore, M.D., who exchanges; Staff Assistant-Surgeon John Munday, to be Staff Surgeon, *vice* Robert Turner, whose promotion, which appeared in the *Gazette* of January 24, 1871, has been cancelled.

BIRTHS.

Alcock.—On February 12, at Glendoven, Letterkenny, county Donegal, the wife of D. R. Alcock, R.N., Assistant-Surgeon H.M.S. *Trafalgar*, of a son.

Cheadle.—On March 24, at 2, Hyde-park-place, Cumberland-gate, W., the wife of W. B. Cheadle, M.D., of a son.

Foulis.—On March 28, at Edinburgh, the wife of Roberts Foulis, M.D., of Cairnie Lodge, Fifeshire, of a son.

Head.—On March 22, at East Grinstead, the wife of Robert T. Head, Surgeon, of a son.

Hinton.—On March 19, at Bath, the wife of Staff Assistant-Surgeon J. Hinton, of a son.

Maxwell.—On March 21, at Stickney, near Boston, Lincolnshire, the wife of Peter Maxwell, M.D., of a son.

Provis.—On March 23, at Biddenden, Kent, the wife of Dr. Wilton Provis, of a son.

Rolleston.—On March 24, at Oxford, the wife of Professor Rolleston, of a daughter.

MARRIAGES.

Cooke—Manin.—On March 22, at the French Protestant Church of Edward VI., St. Martin's-le-grand, Thomas Cooke, M.D. Paris, M.R.C.S. Lond., only son of John Hawley Cooke, Esq., of Shrewsbury, to La Comtesse Aglae Helene Edme De Hamel De Manin, daughter of the late Jean François Comte de Hamel de Manin.

Grose—Rossell.—On March 16, at St. Matthias', Richmond, Surrey, Samuel Grose, F.R.C.S., Surgeon H.M.S. *Warrior*, to Mary Cecilla (Pollie), third daughter of Henry Rossell, Westbourne, Sheffield.

DEATHS.

Davenport, Charles, Surgeon, Tunstall, Staffordshire, at Odd Rode, Cheshire, on March 22, aged 79.

Denham, Joseph William, eldest son of Dr. Denham, of 30, Merrion-square, Dublin, at sea, on the passage home from Buenos Ayres, on February 26.

Everett, William Giffard, M.D., formerly of Devizes, at 38, Grosvenor-place, Bath, on March 26, aged 61.

Fender, Thomas, Surgeon, Alnwick, on March 21, aged 60.

Henderson, James, M.D., Inspector-General of Army Hospitals, at 1, Upper King's Cliff, St. Helier's, Jersey, on March 19.

Holme, James Johns, M.R.C.S., late of Linton, Cambridgeshire, at Chippenham, Wilts, on March 19, in his 80th year.

Hozier, Anna Maria, wife of William H. Hozier, M.D., at Glashare, in the county of Kilkenny, Ireland, on March 26.

Jones, Harriet, the last surviving daughter of the late Dr. G. H. Jones, of Talyclyn Issa, Carmarthenshire, at Carmarthen, suddenly, on March 19.

Loney, Edward, Surgeon Royal Navy, at Hill House, near Cashel, Ireland, on March 16.

Neville, Mary, widow of William Henry Neville, M.D., late of Esher, at 16, Colville-square, W., on March 27, in her 77th year.

Miller, Barbara, the infant daughter of J. N. Miller, M.D., Blackheath, on March 24, aged 3 weeks.

Minssen, Frederick John, International Assistant-Surgeon, eldest son of Dr. Minssen, Professor at Versailles and Military Colleges, and grandson of the late Isaac Higgin, Esq., of Cave Valley, Jamaica, at Tours, on March 9, aged 19.

Watkins, Joshua, M.R.C.S., late of Chandos-street, at 49, Mornington-road, on March 21, aged 76.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Aysgarth Union.—Medical Officer and Public Vaccinator for Askrigg District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Geo. Winn, Esq., jun., Clerk to the Guardians, on or before April 17.

Essex and Colchester Hospital.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Committee at the Board-room, on or before April 13.

Lincoln County Hospital.—House-Surgeon and Apothecary; must be M.R.C.S.E. and L.S.A. Applications and testimonials to the Secretary, or or before April 10.

Lincoln General Dispensary.—House-Surgeon; must be M.R.C.S. Eng., and be also either L.S.A. or L.R.C.P.L. Applications and testimonials to the Secretary, on or before April 10. Election on the 15th.

Middlesex County Lunatic Asylum, Colney Hatch.—Assistant Medical Officer for the Female Department. Candidates must be duly qualified and registered. Applications to be made on printed forms, which can be obtained of the Medical Superintendent, on or before April 15, after which date no applications will be received. The election will take place on the 18th.

Ormskirk Union.—Medical Officer for the Fourth District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. W. Parr, Clerk, Ormskirk, on or before April 5.

Parish of St. Mary Abbotts, Kensington, W.—Medical Officer of Health. Applications and testimonials to the Clerk of the Vestry, on or before April 3.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

Royal United Hospital, Bath.—Honorary Physician; must be a Graduate of a British University, and be a Fellow or Member of a College of Physicians. Applications and testimonials to the Committee, on or before April 10.

Scarborough Dispensary and Accident Hospital.—House-Surgeon and Secretary; must be duly qualified and registered. Applications and testimonials to the House-Surgeon, under cover to the Medical staff, on or before April 4.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

West London Hospital.—Junior Surgeon; must be a Fellow of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Secretary, on or before April 12.

Westminster Hospital, opposite Westminster Abbey. — Resident Obstetric Assistant; must be qualified to practise under the Medical Registration Act of 1858. Applications and testimonials to the Secretary of the Hospital, on or before April 4.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

APPOINTMENTS.

Alnwick Union.—The Workhouse is vacant; salary £30 per annum. The Alnwick District is vacant; area 200; population 5569; salary £50 per annum. The Lesbury District is vacant; area 9319; population 2261; salary £25 per annum.

Hoxne Union.—The Saxtead District is vacant; area 2658; population 694; salary £15 18s. per annum.

Presteigne Union.—Mr. Dyer has resigned the Union; area 23,397; population 3484; salary £60 per annum.

Shaftesbury Union.—Mr. W. H. R. Bennett has resigned the Fontmell District; area 14,944; population, 3369; salary £70 per annum.

RESIGNATIONS.

Bodmin Union.—George C. Carter, L.F.P. & S. Glasg., L.S.A., to the Second District.

Neath Union.—Enoch Davies, L.R.C.S. & P. Edin., to the Glyncorrwg District.

West Derby Union.—Ollive S. Shaw, M.R.C.S. Eng., L S.A., as Assistant Medical Officer at the Workhouse for Sick Poor.

Durham University.—At a meeting held on Saturday in Newcastle, Sir William Armstrong in the chair, it was resolved to found a school of physical science in connexion with the Durham University. There are to be four professorships and ten scholarships. The cost of maintenance will be £2000 a year, of which the University will defray one moiety for six years certain, and permanently if the college be successful.

Conversazione in the Hall of the Faculty of Physicians and Surgeons, Glasgow.—On Wednesday se'nnight the President and Fellows of the Faculty of Physicians and Surgeons held a *conversazione*, to which a large number of visitors were invited. About 300 gentlemen attended. The arrangements made for the reception of the guests were very complete—the whole of the building being utilised, so that each might find an opportunity of viewing with comfort and ease what to him might be of most interest. In the rooms were displayed a variety of objects, not only of interest as more immediately connected with the study of Medicine, but with collateral branches of science. Dr. Fleming, the President, having made a few congratulatory remarks, Professor Herschel showed a number of experiments in corroboration of the experiments of Professor Tyndall, upon which his germ theories were founded. A vote of thanks was carried by acclamation to the President and Fellows of the Faculty for the privilege they had afforded the Licentiates of meeting together and enjoying a pleasant evening's intercourse.

Caution to Quacks.—On Thursday last, the notorious Du Brauge, of Gilbert-street, Oxford-street, whose bills are so freely circulated about the metropolis, was summoned before Mr. Knox, at the Marlborough-street Police-court, for describing himself as a Member of the Royal College of Surgeons of England. Mr. Straight, M.P., instructed by Messrs. Wilde, solicitors to the College, opened the case. The defence was that the prisoner acted under one Frederic William Peskett, who was admitted a Member in 1854, and whose diploma was suspended in the shop. Mr. Knox refused to recognise the plea, and, stating what a very proper prosecution it was on the part of the College, inasmuch as so much mischief was caused by these ignorant pretenders, at once inflicted the highest penalty —viz., £20—and regretted he had not the power to inflict a greater punishment. The defendant's solicitor urged that time should be allowed to pay. The worthy magistrate refused to entertain it, stating that, unless the fine were immediately paid, execution would fall, and imprisonment for three months. The College will, of course, take proceedings against Peskett.

Mr. Humphreys held a resumed inquiry on Thursday week respecting the death of Mr. Raphael Meldola, aged 39 years. The deceased was a Surgeon, and was found sitting in a chair, dead. As some drugs were found in the room, an adjournment of the inquest had been ordered for an analysis of the contents of the stomach to be made. Dr. Letheby stated that he had analysed the contents of the stomach of the deceased, and found that he had died from the effects of a new poison called "chloral." This was a poison very rarely used; a small dose would produce sleep, but an extra dose would, in a few hours, cause death. Verdict: "That the deceased's death was caused by swallowing a poison known as 'chloral'; but under what circumstances he took the said poison, there is no evidence to show."

Dr. Clements, of the Liverpool Workhouse Hospital, has died of typhus fever, caught in the discharge of his duties.

The Countess of Portsmouth has opened a cottage Hospital, for convalescents in humble circumstances, at Chumleigh, near Eggersford House.

Thirty more patients can now be received at the Temporary Small-pox Hospital, 1, Brook-road, Clapton, as a temporary iron Hospital has been erected on the adjoining land. The terms of admission can be obtained on application to the Medical Superintendent or the Sister Superior of the Hospital.

The Weymouth and Dorsetshire Royal Eye Infirmary is to be rebuilt, at a cost (including furniture) of £2200, the present building being quite inadequate to the requirements.

The Mayor of Stockport, and five other magistrates, have been summoned by the Corporation for smoke nuisances at their respective mills. Fines were imposed in every case.

The Manchester baby-farming case was on Monday further investigated at the city police-court. Evidence was produced as to the condition of the children, who had been removed from the house of the prisoner, Frances Rogers, and also as to certain advertisements which Rogers had published. As it was considered necessary to have the evidence of a Medical man who had one of the children under treatment, the further hearing of the case was adjourned for a week.

The Corporation of Birmingham has been singularly unfortunate with the sewage of the town for a long time past, and the subject has at length attained the proportions of a "difficulty." On the one hand, the inhabitants and owners of property in the neighbourhood of the bank of deposit at Saltley have succeeded in getting an injunction, restraining the Council from depositing sewage at their sewage works in such manner as to be a nuisance to the inhabitants and owners of houses at Gravelly Hill, a distance varying from half a mile to three-quarters of a mile from the works; and, on the other hand, Sir Charles Adderley has also obtained an injunction against the Corporation.

Bathers, says the *Manchester Examiner*, like smokers, are apt to entertain exaggerated notions of the liberty of the subject. Seventeen respectable young men were put on their trial at Lewes, on Saturday, upon an indictment charging them with bathing in the sea under circumstances which were said to amount to indecency. The defendants are all inhabitants of Chichester, and the question was, whether they were to have their own way in the matter of sea-bathing, or whether the public rights were to be respected. The part of the shore selected by the bathers is admirably adapted for the purpose, but it is close to a public footpath. The main point of the defence was, that the practice had been carried on for nearly half a century, and that it had only been complained of since the prosecutor purchased some property in the immediate locality. On this, the Lord Chief Justice observed that, however long it might have existed, such a practice was illegal, and could not be upheld. The footpath referred to was a public one, and must be taken to be "an ancient and accustomed path." On the other hand, his Lordship said it was desirable that the inhabitants should have a bathing place, and this one appeared to be very suitable. He suggested the erection of a shed, in which the bathers could dress and undress. The proposal was accepted with gratitude on both sides, and the seventeen young men were discharged, doubtless to sin no more. Might not this wise suggestion be more often accepted in cases of a similar kind?

The Cemetery of Staglieno, near Genoa. — At the fortnightly meeting of the Glasgow Philosophical Society, last week, Professor Gairdner, M.D., read a communication from Mr. Charles Heath Wilson, "On the Cemetery of Staglieno, near Genoa." After some preliminary remarks on the carelessness and indecency which formerly characterised the method of interment used in Italy generally, Mr. Wilson said the Campo Santo, at Staglieno, was opened in 1851, and when finished will cost 5,000,000 fr. Although opened only nineteen years ago, the cemetery contains four or five times as many monuments as St. Paul's, London, all erected by private munificence. A discussion followed, at the conclusion of which Professor Gairdner said that the only remark he had to make was to strengthen the conclusion to which Mr. Wilson's paper seemed to point—that in all large places, such as Glasgow, it was a clear duty for the municipality to remove this matter out of the domain of private enterprise, and deal with it in the large and liberal spirit which it demanded, as a matter of public taste and æsthetics, and, what was of far greater consequence, as a matter of decency and public health.

Dr. Brown-Séquard.—The members of the Profession will hear with pleasure that this gentleman has returned to Boston, and will make it his place of residence, for the present at least. Driven from Paris by the threatenings of war during the last summer, he receives a hearty welcome from his brethren here, and his Professional services will be gladly availed of by those having important cases in his specialty.—*Boston Journal*, February 16.

Melancholy Accident.—A sad case of drowning occurred near Reading on Thursday. It appears that Mr. Philip Lucas, a pupil of Messrs. Maurice and Royds, Surgeons, of Reading, went boating on the Thames, on Thursday afternoon, with his two fellow-students (Messrs. Armstrong and Mitchell). When near Sonning, the boat was drawn towards the weir, over which it went, and was capsized. Mr. Lucas could only swim a little, and Mr. Armstrong gallantly endangered his own life in unavailing efforts to save him. Mr. Lucas was drowned, but Mr. Mitchell fortunately got safe to shore. The body of the deceased, who was a promising young man, has not yet been recovered.

Manchester Clinical Hospital.—The annual meeting of the Manchester Clinical Hospital and Dispensary for Children, Park-place, was held on Monday in the Town-hall, under the presidency of the Bishop of Manchester. Dr. Hardie, Hon. Surgeon, read the report of Dr. Whitehead, the Hon. Directing Physician. The report stated, that of the two chief groups of disease from the prevalence of which we were at no time free—first, fevers of various types; and second, acute ailments much influenced by season and atmospheric agency—they had the usual proportion as to numbers, but perhaps on the whole the cases were less severe than for some time previously. Scarlatina and hooping-cough were the most prevalent and fatal, the mortality being at the rate of 70 per 1000; but with most of these cases were conjoined serious complications. Of cases of typhus they had had none recorded for two years, and only six cases of small-pox in the last four years, and no death. Of the second group of cases, lung affections and diarrhœa predominated.

Testimonial to a Surgeon.—A beautifully executed and framed address, together with a purse of gold (£45), was on March 21 presented to Mr. Crocker, Surgeon, in recognition of the services rendered by him as a Medical men during an eight years' residence at Wetherby; also as a mark of esteem for his uniform character as a kindhearted friend, one whose loss to the neighbourhood must be severely deplored. There was a large number of subscribers, the sums varying from 3d. to £2 10s. Mr. Crocker was a prizeman at the Leeds School of Medicine, and gained his diploma by unwearied study and perseverance whilst an assistant at Wetherby, a town twelve miles from Leeds.

The Sewage Question.—The Town Council of Exeter being unable or unwilling to propose a scheme for freeing the river Exe from the pollution of the city, a company intend coming to the rescue, under the name of "The City of Exeter Sewage-Manure Irrigation and Farming Company." The object will be the utilisation of the sewage of the city, the flow of which is stated to exceed a million gallons daily. A provisional agreement has been made with Lord Devon for, in the first instance, about 500 acres of land well suited for irrigation purposes.

An Anti-Vaccinationist.—In examination before the "Vaccination Act Committee" last week, Mr. Aaron Emery, of Marylebone, said that one of his children died from vaccination in 1869. An inquest was held, and the jury returned a verdict that the child died from erysipelas, caused by vaccination. He obtained permission from the cemetery authorities to have the verdict cut on his child's tombstone. The witness had a child 8 months old, who had not been vaccinated. If he was summoned, he should pay the fine, but he should never submit the child to vaccination. There was a strong objection to vaccination in that part of London where he lived, and he had seen numbers of cases in which vaccination had resulted seriously. He was a member of the Marylebone vestry, and he found that, of 110 cases of small-pox which occurred this year, 92 per cent. had been vaccinated. Why did not Mr. Emery state the percentage of deaths in the vaccinated and unvaccinated persons?

There is no nation where madness is so rare as in Turkey, where the people of all others think the least. In France, Germany, and England—countries more distinguished for intellectual activity—the number of suicides is greater than in any other countries.

Small-pox in the City of Glasgow.—The Medical officer reports that during the fortnight ending Saturday, March 18, the deaths from all causes were 625, against 665 in the preceding fortnight. Of these, 318 were under 5 years of age. During the same period the cases of fever reported amounted to 421. On the 20th there were 631 known to be within the city; of these, 581 were under Hospital treatment, and 50 were treated at their own homes. There were also reported 74 cases of small-pox, as against 120 in the preceding two weeks; and on March 20 there were 124 cases of small-pox under Hospital treatment, and 22 treated at home; in all 146. Of the 124 cases of small-pox in the Hospital, 82 were vaccinated and 42 unvaccinated. Since the month of November last, when the epidemic might be said to have commenced, till the end of February, there had been 328 cases of small-pox, and 77 deaths were known to this department; but as every death from small-pox was known to them, and every recovery from the same disease not known, it would follow that a calculation of the mortality from small-pox in the city based upon these figures would be fallacious. Taking, however, the rate of mortality in the small-pox wards in the Fever Hospital, Parliamentary-road, which was between 12 and 13 per cent., or 1 in 8 or 1 in 7, as a general rate over the city, then these 77 deaths represented at least 600 cases of small-pox. From information derived from Dr. Russell, it was observed that during January and February 157 cases of small-pox were admitted into the Parliamentary-road Hospital. Of these, 69 were unvaccinated, and 19 died (27·5 per cent.), and 88 were vaccinated, and 3 died (3·4 per cent.). Of these three vaccinated persons who died, all were adult males—one, aged 24, with two very imperfect vaccine marks; one, aged 27, with one good vaccine mark; and one, aged 32, with a distinct but indifferent mark. The vaccination stations of the Board had now been in operation for two weeks; during that time 2015 persons had had their arms, etc., carefully examined, and of these 310 were vaccinated—160 children, and 150 adults, young men, and women.—*Glasgow Daily Mail.*

Two natives of the Garrow-hills, in Madras, are to be trained as vaccinators to practise in their tribe, which suffers severely from small-pox. On the other hand, the villages of Kunnool oppose the entrance of vaccinnators by force, and hide their children in the jungle.

Epidemic.—The inhabitants of Malpas have been suffering from a disease of a typhoid nature; and on Monday week a public meeting was held to investigate the circumstances, and provide means, if possible, to prevent the spread of the disease. The meeting was well attended. Dr. Jordison advised what precautionary measures should be adopted. A discussion followed respecting the purity of the drinking-water supplied to the town, but this was satisfactorily answered, an analysis having been made, and the water pronounced perfectly pure. The patients were improving, though slowly, as the disease reduces them to an exceedingly weak condition. Four deaths have been recorded since its commencement.

The figures in the following suggestive table from the Madras Administrative Report are certainly curious. They give the death-rate of British soldiers in the Presidency under the circumstances stated:—

Period of Residence.	Deaths per Mille of Strength. 1867.	1861.	1869.
Deaths under 1 year of residence .	19·3	19·2	27·2
From 1 to 2 years. . . .	13·2	16·0	42·1
„ 2 to 3 years. . . .	15·0	16·6	25·03
„ 3 to 4 years. . . .	19·1	18·2	34·1
„ 4 to 5 years. . . .	44·7	24·0	23·9
„ 5 to 6 years. . . .	11·7	2·8	21·2
„ 6 to 7 years. . . .	8·6	5·5	3·6
Above 7 years	17·6	19·1	18·3

The following advertisement appeared in the *Mercurius Politicus* of September 30, 1658:—"That excellent, and by all Physitians, approved China drink, called by the Chineans Tcha, by other nations Tay, *alias* Tee, is sold at the 'Sultaness Head' Cophee House, in 'Sweeting's Rents,' by the Royal Exchange, London."

The Medical Profession in Vienna.—In 1870 there were 739 Doctors of the Medical Faculty, 107 military Doctors having rights to practise in Vienna, 2 civilian and 16 military Masters of Surgery, 73 municipal Surgeons and accoucheurs, 52 dentists, 50 apothecaries, and 725 midwives; making a total of 1764. In the year 1860, the numbers of Doctors of Medicine were 584, of Military Doctors having right to practise 73, of Masters of Surgery 22, of municipal Surgeons 113, of dentists 26, of apothecaries 45, and of midwives 885.

Three Cases of Tetanus Cured by Hydrate of Chloral.— Dr. Dorigo has published, in the *Gaz. Med. di Padovia* of December last, the case of a boy of 13, who suffered from tetanus in consequence of a wound of the sole of the foot. The final recovery took place on the fifty-fourth day, the average daily dose having been ninety grains. When the narcotic effect became weak, the chloral was immediately given again. Dr. Grandisso-Silvestri mentions in the same paper another case of a girl, 8 years old, who had tetanic attacks after a lacerated wound of the middle finger of the right hand. She soon recovered after having ingested about half an ounce of chloral in five days. Dr. Bensasson, of Tunis, has also communicated to the *Imparziale*, of Florence, February 16, 1871, the successful case of a boy, aged 13, who was seized with tetanus in consequence of a nail running into his foot. The treatment lasted thirty-five days, about five ounces of chloral being used altogether.

Burns and Scalds.—Dr. S. R. Judkin states that he has treated a good many cases of burns and scalds with entire satisfaction. He dissolves whitelead in flax-seed oil to the consistency of milk, and applies it over the entire burn or scald every five minutes, using a soft feather to apply the liniment. It gives relief sooner, and is more permanent in its effects than any preparation he is acquainted with.

Emery Churcher Clayton, a case of dementia, was found dead on the evening of September 24, sitting on a form in the day-room between two patients. On inquiry it was found that he had been at work in the cemetery during the morning, and that the attendant out with him had seen him eating yew-berries, and had checked him. A post-mortem examination revealed a large mass of these berries half digested in his stomach, and as all the symptoms of death by some irritant poison were present, there was no doubt that the yew-berries caused his death. It can only, however, be in large quantities that they are poisonous, as many of the patients have for years been in the habit of eating occasionally a small number, and this man is known often to have done so.—*Report of the Sussex County Lunatic Asylum.*

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Dr. Charles Kidd is thanked for his courtesy.

Theta.—Yes; as far back as the beginning of the last century.

Erinensis.—We regret that our space will not permit us to publish the report *in extenso.*

"*The Army for our Lady Doctors.*"—We must thank a correspondent who has favoured us with a short article bearing the above heading; but we are afraid of putting so luscious a *morçeau* before our younger readers. Certes, few prudent men would send their sons into the army if our correspondent's plan were acted on. Has he sent it to the Horse Guards?

N. P. asks us if the growth of hair has ever been treated of in connexion with epochs in life? He is approaching his grand climacteric, and says that he is conscious of an unusual growth of coarse, rough hair on the inside of the concha of the ear, and likewise on the back of the ear, near the site of that folded-down peak which Mr. Darwin and Mr. Woolner believe to be a vestige of the ape-origin of man.

What is this discovery, says "A. B.," who sends a cutting from the *Echo.* We do not know—

> TO SHORT PERSONS.—Anyone (Male or Female) wishing to increase in Height and Symmetry of Figure, by means of a remarkable physiological discovery, may send a stamped directed envelope to Captain F. Stafford (U.S.), Church-terrace, Kentish-town, London, N.W.

A Sanitarian asks us to recommend to our readers the cheap wall-papers sold by Pollard, 21, Little Newport-street, Leicester-square. He says: "The inside of a papered room becomes foul in a degree as a dirty shirt does; and most wall surfaces cannot be washed, and are made shabby if merely rubbed down. Hence it is a good thing to be able to get a clean and cheerful pretty-looking paper at one farthing per yard. Working-men's wives ought to be able to strip a wall of its old paper, and put up a new one, and even, with their husband's aid, to wash and whiten a ceiling." We shall believe in the "working classes" when they do things like this, instead of spouting politics.

Edward Jenner.—Some curious and interesting details of the treatment of small-pox are given in the "Letters of the First Earl of Malmesbury," lately published. Speaking of the treatment, it is said, "They are kept very cool, and are allowed to eat bread and all sorts of fruit and vegetables, but no butter; for a single slice of bread and butter would inflame their arms, and bring on a bad small-pox. This is known by experience."

Adelaide.—The agricultural statistics are to be taken on April 1, and will be collected simultaneously with the census returns.

J. B., Swansea.—On July 19, 1819.

T. W., York, can be legally compelled to fulfil the engagement.

Census.—The first census was taken in 1801, during the administration of Pitt.

W. W., Chester.—The Universities of Melbourne and Sydney are, we believe, the only places in the Australian colonies where degrees in Medicine and Surgery are conferred. By the Queen's Royal Letters Patent, the degrees of both universities are placed on an equality with those of universities in the United Kingdom.

Melbourne.—As might have been anticipated, the quarrels of our brethren in Melbourne have formed a theme for merriment and joking for the newspapers. The *Melbourne Herald* indulges in some rather ribald jesting on the matter; but the "Doctors" have only themselves to thank for being held up to public ridicule.

Etiquette.—We certainly think it contrary to the principles which should govern the conduct of the Profession, that a paragraph like that which has been published with respect to the health of Mr. Paget should have appeared. Do not such paragraphs touch upon the delicate question of Professional honour—the honour of secrecy with respect to our patients? But it must be admitted, also, that the patient himself may be injured by the perusal of such statements. We can only repeat what we have stated on several occasions, that the Medical press cannot be too cautious in making such announcements. We beg leave to state that these remarks are addressed to the Profession, and not to the public.

The following paragraph appears in the third annual report of the Richmond Infirmary:—

"On the other hand, there has been a falling off of £66 in the collections on Hospital Sunday, as some parishes were unable to give that aid which they had previously afforded, on account of the calls made upon them for the sick and wounded in the war."

An Army Medical Reserve.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—We will suppose that John Bull does not go to sleep again after his late spasmodic awakening, and that in future England is to be provided with a standing army large enough to be of some use in the event of our becoming involved in a European war. Let us also suppose that considerable reserves are to be organised for the defence of our own shores, and it is quite evident that for a reserve army to be anything more than a sham it must be properly officered, and among those necessary to be attached to it would be Surgeons. It matters not whether we call our forces for home defence militia or by some other name, or whether it shall be composed of men who have passed through the regular army, or of men called out annually for a month or two of field exercise, or of both combined. If it is to be really efficient and capable of at once taking upon itself the garrisoning and protecting of the country, so as to set the active army at liberty to act abroad, it must be complete in all parts. So, probably, we shall see combatant officers appointed to it in sufficient numbers, and it is equally clear that Medical officers should be appointed also. Where are these men to be obtained? We have had a deal of grumbling and discontent in the Army Medical Department for many years, chiefly on the score of pay and promotion, and one can hardly wonder at it, as a man who has gone in for a regular profession expects that that profession should not only provide bare existence, but supply him with the means of supporting a wife and family when he arrives at middle age. Now, whatever may be said about the pay of the army, at first it can hardly be said to increase in the ratio that a Surgeon settling in civil practice would expect his income to increase. After an Army Medical Officer has given ten years to the service of the State his pay is 15s. a day, or £273 15s. a year, and surely nowadays no one will fairly argue that such a sum is sufficient for a man expected to live like a gentleman to support a wife and family upon. Remember that the Government does not supply him with quarters, and that the above sum is still further cut down by house-rent, reducing it to starvation allowance. In addition, perhaps, a regiment moves suddenly, and so our friend finds himself with the rent of two houses on his hands. All this has been alluded to for the purpose of drawing attention to the fact that it is after several years' service when the pay has the greatest probability of being least sufficient for the Surgeon's wants. It is not likely that the Chancellor of the Exchequer would feel disposed materially to increase the pay; so if nothing is done we may expect grumbling and discontent to go on. But could not an army Medical reserve be formed by allowing army Medical Officers of ten years' service to retire from the active army and become connected with the reserve, being allowed at the same time to settle down and engage in private practice? They should be liable, however, to perform any duty with the reserve forces within their own district in times of peace, and, in addition, liable to be called upon for garrison duty within the limits of the United Kingdom. Who so fit for appointments in our reserve forces as trained Medical officers who have been taught their duty in regiments and are accustomed to manage men? They surely would be better than mere civilians, and certainly have more claim upon the State. Of course Government would insist upon those going into a semi-civilian life agreeing to some modification of pay and claim to pension, but surely some arrangement could be arrived at. If some such scheme as sketched here were carried out, many a one who year by year found his army-pay less and less sufficient, would, without entirely leaving the service of the Crown, be enabled to begin private practice before it was too late to supplement his slender pay, be useful to himself and useful to the country, and, in addition, by leaving the active army accelerate the promotion of all below him. After twenty years, even, of service in all climates, an army Medical officer is generally constitutionally too old to begin civil practice, and if Government refuses to allow him to leave while still sufficiently young to begin a new walk in life, the moral responsibility is incurred of providing suitably for him; and how inadequate the pension is, even after twenty-five years, may be inferred by the numbers of men that hang on to the army long after those years.

We are living in a most expensive age, and if the nation can't afford to pay her servants properly, she might at least give them a chance of doing something for themselves. It is just possible that she might make money by so doing—or save it, which is the same thing—as men electing to retire from the regular army would not require to be paid more than if as civilians they had been employed in the reserve of the future, and we may be pretty certain their pensions would be cut down. However, the certainty of some help in the way of pay for the first few years, while beginning civil practice, would probably induce many to accept rather hard terms. At any rate, the offer might be made to them.

I am, &c., An Army Medical Officer.

COMMUNICATIONS have been received from—

Medicus; Dr. C. T. Williams; Dr. James O'Brien; Dr. James Russell; Mr. Holton; An Army Medical Officer; Worcester; Dr. Seguin; Mr. W. H. Trevan; Dr. Gee; Mr. Walter Reeves; Dr. Oliver; Dr. W. S. Playfair; Mr. A. H. Newth; Mr. Weightman; Dr. James Dunlop; Dr. W. Gordon; Dr. Phillips; Professor Laycock; Mr. J. Chatto; Dr. Pollock; Dr. E. A. Parkes; Mr. H. Arnott; Dr. J. Hughlings-Jackson.

BOOKS RECEIVED—

Crisp on Prevention of Small-pox—Report of the Surrey County Hospital—Report of Rotunda Lying-in Hospital—Oliver's Plain Facts on Vaccination—Modern Medicine: Has it kept Pace in Advancement with the Times? by Dr. T. B. Crosby—Report of the State Board of Health of Massachusetts.

PERIODICALS AND NEWSPAPERS RECEIVED—

Pharmaceutical Journal—Melbourne Herald—Gazette des Hôpitaux—Medical Temperance Journal, April—Nature—Cork Examiner—Glasgow Herald—Gazette Hebdomadaire—North British Daily Mail—Transactions of the Odontological Society of Great Britain—Medical Press and Circular—New York Medical Gazette—Philadelphia Medical Times—New York Medical Record.

APPOINTMENTS FOR THE WEEK.

April 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Mr. O'Neill, "Spirit of the Age."

3. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Dr. Brunton, "On a Case of Measles with Variola, Measles with Eczema, Scarlatina with Variola, and Scarlatina with Varicella." Dr. Meymott Tidy, "On a New Process for the Detection of Sugar in Diabetic Urine."

Royal Institution, 2 p.m. General Monthly Meeting.

4. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Mr. F. Churchill, "Pedunculated Growths from the Skin; Effects of Ether Spray upon the Skin in Addison's Disease." Dr. Whipham, "Growth in Liver." Mr. Hulke, "Large Medullary Tumour of Belly, with similar Tumour of Orbit," etc., etc.

5. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Obstetrical Society (Council Meeting, 7 p.m.), 8 p.m. Dr. Hewitt, "The Vomiting of Pregnancy, its Cause and Treatment." Dr. Wiltshire, "On Tetanus after Abortion." And other Papers.

Royal Microscopical Society, 8 p.m. Mr. Wm. K. Parker, F.R.S., etc., "On the Mode of Working out the Morphology of the Skull." Mr. Chas. Cubitt, C.E., "On Linear Projection considered in its Application to the Delineation of Objects under Microscopic Observation."

6. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society (Council Meeting, 7¼ p.m.), 8 p.m. Discussion on "Variola and Vaccination."

7. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 25, 1870.

BIRTHS.

Births of Boys, 1228; Girls, 1201; Total, 2429.
Average of 10 corresponding weeks, 1860-69, 2116·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	840	825	1665
Average of the ten years 1860-69	755·2	733·4	1488·6
Average corrected to increased population	...	...	1638
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	27	3	5	2	8	...	...	1	2
North ...	618210	64	1	10	1	13	3	5	3	...
Central ...	383321	14	...	3	1	11	...	...	...	2
East	571158	37	4	5	...	8	1	2	2	1
South	773175	63	2	13	2	8	8	7	...	4
Total	2803989	205	10	36	6	48	12	14	6	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·840 in.
Mean temperature	47·1°
Highest point of thermometer	70·9°
Lowest point of thermometer	30·2°
Mean dew-point temperature	41·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·02 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 25, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending Mar. 25.	Deaths Registered during the week ending Mar. 25.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2429	1665	70·9	30·2	47·1	8·39	0·02	0·05
Portsmouth ...	125464	13·2	106	36	67·0	34·0	46·6	8·11	0·00	0·00
Norwich	81787	10·9	55	34	68·5	30·0	46·0	7·78	0·00	0·00
Bristol	173364	37·0	136	74	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	65	29	64·1	35·7	47·1	8·39	0·00	0·00
Birmingham ...	378574	48·3	298	193	66·2	35·0	47·7	8·72	0·00	0·00
Leicester	101367	31·7	102	39	70·2	33·5	48·2	9·00	0·00	0·00
Nottingham ...	90480	45·3	46	41	67·6	33·4	47·7	8·72	0·00	0·00
Liverpool	526225	103·0	415	413	65·7	38·2	48·5	9·16	0·00	0·00
Manchester ...	379140	84·5	309	191	71·2	35·0	49·6	9·78	0·31	0·79
Salford	123851	23·9	115	53	72·9	36·1	49·2	9·55	0·45	1·14
Bradford	148030	22·5	108	69	62·0	36·0	47·2	8·44	0·00	0·00
Leeds	266108	12·3	263	119	65·0	33·0	47·0	8·33	0·00	0·00
Sheffield	255247	11·2	201	139	69·0	33·1	48·0	8·89	0·20	0·51
Hull	135195	38·0	87	57	67·0	29·0	43·7	6·50	0·00	0·00
Sunderland ...	103037	31·2	69	44	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	120	81	56·0	35·0	45·9	7·72	0·00	0·00
Edinburgh	179944	40·6	132	94	59·7	40·0	50·1	10·06	0·10	0·25
Glasgow	477627	94·3	374	360	61·5	32·5	48·6	9·22	0·07	0·18
Dublin (City, etc.†)	322321	33·1	230	188	67·1	30·5	48·8	9·33	0·00	0·00
Total of 20 Towns in United Kingd'm	7336941	34·4	5660	3919	72·9	29·0	47·6	8·67	1·15	2·92
Paris—Week ending Mar. 24	1889842	98	...	...	...	...	...	...	...	...
Berlin—Week ending Mar. 18 ...	800000	52	...	...	...	...	...	...	...	...
Vienna—Week ending Mar. 18 ...	622087	68	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·84 in. The highest was 30·12 in. at the beginning of the week, and the lowest was 29·59 in. on Friday at noon.

The general direction of the wind was variable.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

By Appointment.

DR. ANGOVE'S ACCIDENT CASE.

Extract from LANCET, May 21st, 1870.

"The advantages are that it will contain instruments enough for almost any accident, together with lint, plaster, bandages, tourniquet, &c.; and by keeping this stocked and hung up in a handy place, you are ready to be off at any moment. It is easily carried on horseback. By taking the instruments, &c., out, you have an oblong box, in which you can put what you like, the instruments being only kept in by a leather strap and an elastic band, which do not take up any room in the case. In a mining practice one scarcely ever knows the nature of the accident he is called to. I, therefore, find it invaluable, being, 'with my case,' ready for the smallest cut or anything else, including an amputation."

The Cases are made of hard, solid leather, and will stand any amount of knocking about, and cost a very small sum. Size of Case, 14 inches long, 5 inches deep. Price of Case, covered in morocco and lined velvet, with swivels and straps, complete, 17 6; Case complete with Instruments, £4 4.

MANUFACTURED SOLELY BY

ARNOLD & SONS,

Instrument Makers, by Appointment, to Her Majesty, St. Bartholomew's Hospital, Seamen's Hospital, &c., &c.,

35 & 36, WEST SMITHFIELD, LONDON.

Established 1819.

HOOPER'S

WATER BEDS AND CUSHIONS,

(obtained the only Prize Medal, 1862).

USED BY
THE ROYAL FAMILY
AND ALL
CLASSES OF INVALIDS.

Full Length Water Mattress.
In sending an order the Width of the Bedstead should be stated.

ALSO IN
H.M. ARMY AND NAVY,
AND THE
INDIAN PRESIDENCIES.

Three-quarter Size Water Mattress.

Half Size Water Mattress.

HOOPER, Operative and Manufacturing Chemist, 7, Pall-mall East, and 55, Grosvenor-street, London.

SILVER MEDAL AWARDED 1867.—JUROR 1862.

MORSON'S PREPARATIONS OF PEPSINE.

MEDICINAL PEPSINE

(Poudre Nutritive, or "Pepsine Acide Amylacée" of the French Codex)
Contains the active digestive principle of the gastric juice, purified and rendered permanent and palatable. Dose—15 to 20 grains.

PEPSINA PORCI,

A concentrated and neutral preparation of Pepsine, free from any disagreeable taste or smell. Dose—5 to 10 grains.

☞ These preparations of Pepsine are carefully examined and tested by a professional Chemist, and certified to answer to the tests indicated. Every bottle containing the preparations named, and bearing the Trade Mark of T. Morson and Son, is sold with a guarantee to that effect.

PEPSINE WINE, PEPSINE LOZENGES, PEPSINE GLOBULES,
Are convenient forms for the administration of Pepsine.

SACCHARATED WHEAT PHOSPHATES,

A Dietetic Preparation, supplying an important deficiency in the ordinary Food of Invalids and Children.

Manufactured by T. MORSON and SON, Pharmaceutical Chemists,
31, 33, and 124, SOUTHAMPTON-ROW, LONDON, W.C.

ORIGINAL LECTURES.

ON THE INFLUENCE OF THE NERVOUS SYSTEM ON DISEASES OF THE ORGANS AND TISSUES.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture II.

SPECIAL TISSUE-CHANGES IN RELATION TO DIAGNOSIS AND THERAPEUTICS.

(*Concluded from page* 360.)

Does the trophical system regulate the chemical constitution of the blood and the lymph, and the nutrition and contractility of the blood and lymph corpuscles? Blood may be considered as a fluid tissue, of which the corpuscles constitute the cells. The chemical constitution and contractility will be modified, therefore, as in other tissues. Now, clinical facts prove beyond question that changes in both will result directly from changes in the nervous system. Emotion induces chlorosis, purpura, and dropsy. When I speak of dropsies and blood diseases, I shall have to point out special observations of this class. I would only anticipate what I shall then say on one point. The degenerations of the lymph and blood corpuscles seem to follow the pathological law of retrocession to a lower type. The blood of embryonic mammals contains chiefly nucleolated red corpuscles like the normal corpuscles of birds, but the normal corpuscle in adult mammals is without nucleoli. Mr. Gulliver has worked out this question very ably.(a) Without the guidance of this law it is not easy to understand the pathological relations of blood diseases like leukæmia and chlorosis to the nervous system. The neurotic relations of the lymphatics and of the lymph, fibrin, and serum of the blood are of great clinical importance in all so-called exudations and effusions. There are, for example, three kinds of leprosy: one, tubercular and plastic and exudative, without anæsthesia; another, anæsthetic—non-exudative, but effusive in the form of pemphigus; and a third, anæsthetic and gangrenous. In all these the nervous system is involved, as well as the blood and lymphatics, but differently in each. Herpes zoster, an effusive inflammation of the skin, derives its characteristics from its neurotic relations. This is true indeed, also, of syphilitic and other febrile exanthemata, although due to a specific virus. The state of the nervous system often determines the course and characters of the local inflammations.

Of the chemical blood diseases scorbutus is the most typical; yet even in this the state of the nervous system is of practical importance. No doubt the causation is complex, because healthy nervous function is dependent upon healthy blood; but we know that the vigorous condition of brain and nerve with which the sentiments of hopefulness and cheerfulness are associated have warded off many of the bad effects of insufficient diet and other causes of scorbutus in crews and armies and bodies of men exposed to them. On the other hand, the effects of morbid blood are not always rightly estimated. The so-called anæmic murmurs, even when there is anæmia, require a nervous element for their production, for, as a clinical fact, they are almost peculiar to women, being very rarely indeed heard in men, however anæmic.

In tissue changes which are associated with morbid conditions of the blood—such as dropsies and inflammatory or other exudations—the lymphatic system is probably more directly influenced by the nervous system than even the vascular. The contractility of the lymphatic vessels seems also more dependent thereon. In several species of reptiles there are lymph-hearts, which are so closely connected with the nervous system that Claude Bernard found destruction of the spinal cord stopped the movements of the lymph-hearts in a frog when those of the blood-heart continued. It is not less significant, if the statement be absolutely true, that, evolutionally, lymphatics are peculiar to vertebrates. We may conclude, therefore, that the lymphatic system has more important relations to the nerves and nerve-centres than has hitherto been suspected. In a future lecture I shall show that the pathology of plastic exudations, œdemas, and anasarcas may be placed in a wholly new light by these facts.

I make the same remark as to the current humoral pathology of certain diseases in which there is a theory of deposits of a *materies morbi* from the blood. Many, if not all such—as, for example, gouty "deposits"—are not deposited, but *produced* in the tissues where they are found, and are found there because the absorbents have failed to take them up and so remove them with other effete products. Hence, two conditions have to be considered, the undue production and the non-absorption—two things different, yet due to common causes, in which defective innervation is one of the most important. But, even these must be differentiated, for gouty deposits do not characterise muscular rheumatism, so that there must be a difference in both nerve and tissue affected in these diseases.

Muscular energy is the type of all motor power, as it is of vital energy. The "vis insita" of the voluntary muscles means electricity of high tension. It has important relations to the vis nervosa. It is thought generally that the nervous system not only excites the evolution of muscular energy, but supplies it in part. Dr. C. B. Radcliffe has, however, by a connected series of experimental facts, shown that the whole power is in the muscle. M. Matteucci, having discovered that muscular action is accompanied by an electrical discharge analogous to that of a torpedo, and it being further found by M. Dubois-Reymond that the longitudinal surface of the muscular nerve-fibres is electrified positively, and the transverse negatively, it became easy to account for the phenomena if we suppose there is a property of physical contraction strongly inherent in muscle. But this supposition includes vital properties of muscle not taken into account, and omits other properties. I give the explanation, however, because it is instructive, although not satisfactory. The electricity in the muscle, being statical, is of high tension, and so keeps the muscular molecules in a state of tension and of resistance to their physical contractility. When, however, the electricity is discharged, then the state of elongation and inaction ceases, the physical contraction comes into play, and the muscle shortens; so that, according to this theory, the function of the motor vis nervosa, set free by or during an act of volition or otherwise, is to discharge the electricity of the muscle. Whenever these electrical relations of the transverse and longitudinal fibres are reversed, contractions, varying as the causes of the reversal vary, take place. Now, the causes may influence either the state of electricity of the muscle or the state of electricity of the discharger—the nerve and nerve-centres. *Rigor mortis* is said to be due to the physical contraction which follows upon the complete reversal incident to death. Cutting off the supply of blood to muscle or nerve, or a supply of bad blood, and various injuries to the nerves and nerve-centres, chemical, thermal, or mechanical, all have the effect of reversing these relations; so that spasms and convulsions, either local or general, result from the consequent physical contraction of the muscular fibres. Epilepsy and other convulsive disorders are thus explained. We can apply the same reasoning to arterial palsy. If the dilator- and conductor-fibrils of arteries be in similar electric relations to each other as the longitudinal and transverse surfaces of muscles, then palsy of the dilating fibrils will set free the physical contractility of the contracting fibrils—just as I stated with regard to the iris and its movements.

The weak points in this ingenious theory are two—firstly, it assumes that the contractility of muscle is, like that of caoutchouc, physical in the sense of not being vital; and, secondly, it fails to explain important facts. How is it that a furious maniac can put forth such enormous strength when the discharges of the electricity are morbid? Besides, muscular contraction is not a persistent tension, but consists in a rapid alternate lengthening and shortening, as is proved by the myograph. The proper word, therefore, is rather vibration than contraction, for the energy developed in muscular action is proportionate to the rapidity of the vibrations of the muscular fibrils; and as this implies a constantly recurring production and discharge of electricity, it follows that there is a suitable material in muscle for that production. When that material is exhausted, or when from a trophesy it is not formed, the muscle loses its contractility. Anyone may demonstrate the vibratory action of muscles stethoscopically, or, better still, by placing the side of his head and face on a firm pillow, so that the ear and masseter muscles press on it; if the masseter be contracted by shutting the jaw, the vibratory muscular fremitus will be heard, and it will be found that the rapidity of the vibrations increases with the volitional energy of contraction. It is these vibrations which we elicit in the muscles of wasting palsy when we excite fibrillary contractions by concussion.

(a) *Medical Times and Gazette*, 1862, vol. ii.

Apart from the theory of muscular contraction, the electric theory of a *vis insita* has support in clinical observation. When we remember that nerve as well as muscle is in a state of electric tension, we can understand how disturbances in the electric tension of the atmosphere will induce rheumatic and neuralgic pains in persons predisposed thereto, and in others affect the feelings and intellect. It is to some condition of this kind that we must attribute the neurotic influences of certain winds—the east wind in this country, the north wind in certain other regions, as at Buenos Ayres, where it is known to excite, in some, great irritability of the sensory nervous system. Electrical therapeutics are also rendered more precise. Continuous currents of low tension, such as of the common galvanic machine, have a paralysing influence on both nerve and muscle, the sensibility of the one and the contractility of the other being suspended. At the moment of closing or of opening the current, the opposite condition is induced; and this is what results from the use of the coil machine: you excite the contractility of the muscles and sensibility of the nerve. Again, the line of physiological activity to which I referred in a former lecture must be considered. When a part of a nerve or of a muscle is subjected to a centripetal or "inverse" current for some time—two or three hours—that part which lies between the nearest galvanic (positive) pole and the muscle is found to retain its electricity and resume its irritability; but a centrifugal or direct current has an opposite effect. When the irritability of a muscle is wholly lost, it has no electricity. These are some of the points it is necessary to remember in the treatment of neuralgia and palsy by electricity and galvanism. In improving nutrition you restore the natural electricity. Doubtless spasm could be relieved in certain cases by the continuous current, and I think it has been tried successfully.

There are certain trophesies of muscles which require us, in observing them, to take into account another principle of physics. The idea of polarity or of motion by antagonism is the foundation of many systems of philosophy and cosmography, as it is of the theory of Dr. Radcliffe. Now, antagonistic action is a great fact in all muscular action. It is seen in the action of the iris, of the heart and arteries, of the flexors and extensors, adductors and abductors of the voluntary system; so that much of clinical observation turns upon an appreciation of the fact. In rheumatic gout, and in the *main-d-griffe* of wasting palsy, there is morbid contraction of the flexors and adductors; in dropped hand of lead poisoning, a palsy of the extensors, but no affection of the flexors. It would appear from various experimental researches(b) that there are centres in the spinal cord which specially regulate the flexors and extensors and other antagonistic muscles of the body and limbs. We thus comprehend how tetanus differs from convulsions, and the flexion and extension and other movements of limbs observed in the bodies of persons dead of yellow fever and cholera from *rigor mortis*.

An important point in muscular pathology merits special notice. A large amount of heat is given off in ordinary muscular exercise, and in the muscular contractions of tetanus, and chemists have explained the production of it in various ways, more especially, however, by two theories—the one attributing it to the chemical decompositions which accompany muscular activity, and the other to increased friction of the blood in the vessels. But neither of these theories serves to explain the large amount of heat given off in rickets and in acute muscular rheumatism, in which the limbs are kept motionless; in inflammations generally of fibrous tissues, such as pneumonia; in ardent fevers, or in the bodies of persons who have died of tetanus, yellow fever, pyæmia, and rheumatic fever. Such theories fail for want of breadth of view, since the thermogeny must be considered in relation to other causes of heat-production than those alleged. The so-called metastasis of rheumatism and pyæmia is only one of many clinical facts which prove the influence of the nervous system on the phenomenon. So, also, with the state of the blood in cases of heat-production after profuse hæmorrhage. In like manner, the changes in the blood, as to the amount and quality of the fibrine, are in relation with the nutritional condition of the muscular and fibrous tissues, and indicate that they are already in a state that predisposes them to take on morbid action. Before an outbreak of acute rheumatism the blood is highly hyperinotic. It is for this reason that excessive muscular exercise, as well as pregnancy, chlorosis, and other hyperinotic conditions, predispose to rheumatic affections. All these chemical facts indicate the need for much more comprehensive views of heat-production than the chemists entertain. I shall revert to these points when speaking of morbid heat.

(b) Müller, Engelhart, Poletti.

ORIGINAL COMMUNICATIONS.

ON THE OCCURRENCE OF

EPILEPTIC ATTACKS AND OF MANIA IN CONJUNCTION WITH CHOREA:

AND ON

IRREGULAR EPILEPTIC ATTACKS.

WITH ILLUSTRATIVE CASES.

By JAMES RUSSELL, M.D., F.R.C.P., etc.,
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THE first two cases which form the subject of the following report are given in continuation of certain illustrations of the combination of chorea with epileptic symptoms and mental disorder, reported in a former number of this journal (April 2, 1870). The subject of the concurrence of chorea with epileptic attacks, as mentioned in my former communication, has been especially referred to by Dr. Hughlings-Jackson, who has done much to impart a considerable amount of interest to its consideration in connexion with nervous diseases in general.

The question as to the origin of epileptic attacks in the course of such diseases as chorea, and the comparison of the fits occurring under these circumstances with those which constitute the accepted form of the true epileptic attack, have a very interesting connexion with an inquiry as to the different modes in which nervous disease is brought about in different cases, whether by changes inherent in the constitution of the proper nerve tissue itself, or whether by lesion of other tissues or organs outside the proper nervous elements. It is needless to observe that this inquiry has of late years attracted increased attention on account of certain suggestions which have been thrown out in order to explain the etiology of chorea itself as well as of certain forms of delirium and mania.

The means we possess of tracing the origin of many of the diseases which affect the organs of the nervous system, by examining the organs themselves, are undoubtedly defective. Independently of the obvious fact that the molecular operations by means of which the several nervous functions are performed, both in health and in disease, cannot be made the subject of anatomical investigation, neither during life nor after death, our method of anatomical investigation has hitherto proved only partially effective in detecting organic changes whenever such changes concern the finer component elements of the tissues. This may be still asserted, notwithstanding the advance made by the present analytical school of pathology in supplying the deficiency, an advance well indicated by the able lectures of Dr. Moxon at present appearing in this journal. Under these circumstances the clinical history of the diseases in question becomes of greatly increased value, and may even be cautiously employed in the absence of more direct means of research. By endeavouring to trace the conditions under which any particular disease originates, the course it ordinarily pursues, the collateral circumstances with which it is generally associated, and the mode in which it terminates, we may, perhaps, succeed in establishing some important distinctions having a direct bearing upon its etiology, and may indicate a separation between particular groups of cases, in which, nevertheless, as in the various forms of the epileptic attack, both the symptoms themselves and the manner in which they are grouped together may be nearly alike.

Comparing now the clinical history of chorea with that of the particular form of disease to which the term epilepsy is applied *par excellence*—viz., the essential or idiopathic epilepsy—certain significant distinctions will present themselves, quite apart from the special symptoms which characterise each of these maladies. Thus, whilst in idiopathic epilepsy the family history, where manifesting any proclivity to disease, most generally points to the presence of some infirmity involving the purely nervous functions, such as peculiarity of temperament, defective mental conformation, insanity, or epileptic fits without evidence of coexisting disease—possibly, also, to the operation of other influences which have a direct tendency to degrade the health of the nervous tissue—in chorea, on the other hand, hereditary infirmity, when present at all, manifests little evidence of special nervous disease strictly so-called, but rather relates to conditions which seem to operate upon the nervous tissue indirectly, either through the bloodvessels or through changes in the adventitious elements of the nervous structures, of which rheumatism is the most prominent.

Again, as regards the circumstances belonging to the patient himself, under which the disease actually manifests itself: whilst in epilepsy we are not able to connect the occurrence of the malady with any particular constitutional or local abnormity, chorea, on the other hand, is related in so large a number of instances to certain special conditions of other than the purely nervous organs—especially to rheumatism, cardiac disease, and pregnancy—that the connexion between the two cannot be regarded as accidental; and to these conditions may be added other forms of disease affecting the purely auxiliary elements of the nervous centres, many of which have been collected by Dr. J. W. Ogle in an extended series of observations on fatal and non-fatal chorea, contained in the *British and Foreign Med.-Chir. Review* (January, 1868, *et seq.*). Nor does the force of this statement seem to be invalidated by the admission that, in certain cases both of chorea and of epilepsy alike, powerful nervous excitement may have been chargeable with the immediate production of the attack. Once more: whilst epilepsy, when once developed in the individual, appears commonly to ally itself with the ordinary nutrition of the nervous centres, and so to become a permanent condition, enduring through a large part or even the whole of a life of average duration, commencing, too, very commonly in early years, chorea is limited in its duration, occurs in distinct attacks—sometimes, it is true, of several months' continuance, but still restricted by definite periods of time—and finally leaves the patient altogether.

These differences in the clinical histories of the two diseases I have cited must not, I am aware, be carried too far in the present state of our knowledge, especially in the face of the very imperfect clinical history we often obtain after the most careful inquiry; they certainly, however, hold a prominent place in the descriptions of the two maladies which present themselves to our minds, and have not been contradicted by the results of anatomical examination, whenever such examination has been made. So far as they go, they have a tendency to separate the diseases in question, as relates to their etiology, in the same way as the common forms of paralysis are separated from the characteristic group of insanity.

But under the term epilepsy (used in its loosest application) is comprised a variety of other forms of convulsive diseases, often spoken of as epileptiform, in contradistinction to the idiopathic variety. Now these latter forms, so far as their clinical history is concerned, stand contrasted with idiopathic epilepsy, and ally themselves in this particular with chorea; and so far as actual pathological examination is concerned, the distinction from idiopathic epilepsy is warranted by the discovery of disease in other organs or tissues than those which are purely nervous.

The confusion thus introduced into the nomenclature of epileptic disease results from the want of separating from each other the two elements which exist in the production of the attacks; the first is the actual condition of the nervous tissue at the moment of the explosion; the second, the particular condition, whatever it may be, which brings about the explosion, or disposes to its occurrence. No doubt the former element is the same in every variety of paroxysm, since the method in which the motor phenomena are actually effected must be unvarying. It is in regard to the second element that the essential difference obtains between the two forms of epilepsy mentioned above, and this difference appears to be sufficiently indicated in the distinction already suggested between their respective clinical histories. In the idiopathic form, the cause seems to be involved in the particular mechanism by which the fits are effected—it is identified with the constitution of the nervous tissue; and since the molecular mechanism of ordinary movement escapes our means of observation, so does the peculiar change in this mechanism whereon the epileptic constitution depends. In the other form, on the contrary, the cause is external to the nervous tissue, and may be of most diverse nature, from tumours or other morbid growths, through various changes, descending probably to alterations in the ultimate elements of the central organs.

Now, it is to this second form that the cases appear to belong in which epileptiform attacks are connected with chorea; and this conjunction of epilepsy with chorea is of still greater interest when looked at in connexion with the attacks sometimes occurring in the course of the same disease. I am not competent to follow the clinical history of mental disorders to any sufficient length, but I may observe that, between the clinical history of certain forms of mania, especially the choreic and the puerperal, and ordinary insanity, certain striking distinctions appear to be indicated of the same character with those on which I have been dwelling. A case has just occurred to me, which, though proving nothing, may yet serve as a suggestive illustration. Six months ago I attended a young lady with puerperal mania; she is still in an asylum. The other day I was called to see her sister, who had been confined, and had been attacked with rigors, followed by tenderness over the uterus and over the left femoral vein, but without any cerebral affection. The mother of these two ladies died of some childbed disease after giving birth to my last patient.

On this account I have connected together a report of a case of epileptiform attacks following chorea and one of mania occurring in conjunction with chorea; but I have further added the particulars of three cases, probably of the second class of epileptic attacks, as being nearly connected with one part of the subject I have been discussing. These cases are well calculated also to exemplify the difficulties which attend the practical separation of these two forms of epileptiform attacks. Two are typical instances of the clinical phenomena which are presented by the epileptiform attacks due to coarse disease of the central organs, and are closely conformed to the model so clearly presented by Dr. Jackson (*Transactions* of the St. Andrews Medical Graduates' Association, iii., 1870, and elsewhere); the third is an unusual form of epileptiform attack, by no means conformed to the ordinary type of essential epilepsy; yet in none of these cases can I point to any conclusive proof of the presence of cerebral disease, in the ordinary acceptation of the word, nor of disease elsewhere. The distinction between the two groups has been sought for in the presence or absence of particular symptoms, especially of unconsciousness, of the one-sided nature of the convulsive attacks, of the occurrence of temporary paralysis after the attack, etc. All these distinctions are open to the uncertainty to which every division of disease based merely upon clinical observation is more or less exposed. Even as regards the most typical form of epileptiform attacks (those in which the attack is unilateral and often followed by paralysis), Dr. Jackson, whilst stating "I have had no autopsy in any case of the class of fits which I describe in this paper in which I have not found organic disease," yet asserts that, apart from special symptoms on post-mortem examination, the presence of this organic disease cannot be safely predicated. Further experience is needed to decide this question, which yet is one of no small pathological interest, and of much practical importance.

Case 1.—*Paroxysms of Tonic Spasm occurring after Chorea.*

E. E., aged about 14, had chorea at the end of April, 1870. There were no noteworthy antecedents excepting much vertigo. He has not had rheumatism, and his family history is free from that disease. Syphilis, too, appears to be excluded from family and personal history. The boy is spare and pale; the sounds of his heart are feeble; his urine is free from albumen. My friend, Mr. Arthur Bracey, finds his optic disc healthy.

The chorea was bilateral, and he became emaciated during its continuance. The disease lasted with considerable severity during six weeks; the movements then lessened, but could not be said to cease entirely. In October he had a return of the vertigo, and is now (February) brought to the Hospital "for a pain in the hands and legs, and the use going out of them." His description and that of his mother are far from being lucid, but I gain that he has had three attacks, in which first the calf of the left leg is drawn up with cramp, and he experiences pain in the region of the left hamstring and around the left inner ankle; but I could not learn if there was any order in the approach of these phenomena. Then the left knee becomes flexed; afterwards it relaxes and the right side is similarly affected; the right hand is next flexed on the wrist, but the left hand escapes altogether. During the attacks he is very pale, but perfectly conscious; he does not fall, but he has some double vision, and his sight is misty. The attack occurs suddenly, and without warning. Lately he has had some occipital headache and pain in his joints.

Case 2.—*Severe Chorea with Maniacal Outbreaks—Consolidation of the Left Lung.*

E. E., aged 16. Her family history is free from rheumatism and from any form of nervous disease. For the last six months she has been exposed to great privation in consequence of the desertion of her father, and has been much overworked. After an imperfect rheumatic development, indicated by some swelling of her joints—insufficient, however, to keep her at home above one day—which lasted some weeks, she experienced a sudden development of chorea in a somewhat severe form, and was admitted into the Hospital on February 8, three or four days afterwards. The movements were bilateral; they began in the left fingers, then extended up the left arm and the left side of the neck and face (according to her mother's account), then to the left leg, and in three days reached the opposite side. She was a large, florid, bloated-looking girl; the sounds of her heart were normal.

On February 9 she was placed in a private ward. The preceding night she was stated to have raved very much, and to have been much disturbed. She was ordered scruple doses of chloral every four, and then every three, hours; a liberal diet of milk and eggs; and six, afterwards eight, ounces of wine.

Up to the 12th the chorea continued violent; the bowels had been freely unloaded, and the patient took food freely. But the chloral failed in giving sleep; nor did two doses in succession of two scruples of chloral with one scruple of bromide of potassium succeed any better. She was quiet, but did not sleep, except in short snatches of ten minutes, or half an hour at the longest. On this day (February 12) her temperature rose considerably (the record has been unfortunately mislaid); the lips were cracked and dry; the urine was of high specific gravity (1032), deficient in chlorides, but contained large excess of urea; and it was then discovered that there was dulness at the base of the left side of the chest posteriorly, with feeble breathing, but no other symptom of chest disorder was presented. Two doses of chloral, each of two scruples, with half the quantity of bromide of potassium, were given in succession on each of the two following nights, without any better effect; the patient was quiet, but perfectly helpless, and, on the least excitement, was thrown into violent movement. Tincture of hemp (♏ xv.) was then substituted every four hours.

On the 16th (seven days after her admission) she was annoyed by a visit from her mother, and the movements again became violent. During the night she suddenly broke out with a terrific outbreak of mania, which lasted two hours, accompanied by a frightful aggravation of her choreic movements. All attempts to control her having failed, she was at last tied down in bed, and then she at once fell asleep, and awoke in a more tranquil condition.

She had now become greatly reduced in flesh and strength. The movements were again quiet, but incoördination existed to so great an extent that she found relief in having her hands and feet tied closely to the bed, in order to avoid the disturbance which attended any muscular act. The temperature continued high, and the urine loaded with urea. Moreover, the conjunctiva lining the lids, and reflected upon the globe, was intensely injected, and the eyes were closed with thick mucus. On the 18th slight internal strabismus of the right eye was observed. She continued quite deranged, at times shrieked most violently, and talked incoherently. She passed her evacuations involuntarily. Her pupils were rather below medium size, and sluggish. The chest dulness, too, was unchanged, though no fresh symptoms referable to the lungs developed themselves. But all this time she continued to take nourishment freely.

On February 19 a blister was applied to the scalp, and opium in one-grain dose every four hours was prescribed. From this time she obtained an increasing amount of sleep. On the night of the 20th she slept for three hours. On the 22nd her eyes were clear of mucus, and were almost free from vascularity. The opium was to be taken every six hours. The amendment was progressive. The temperature reduced slowly (I am unable to speak more accurately); but evidence of mental feebleness remained in a striking manner. Her aspect was quite unmeaning, she hardly spoke a word, and when fully recovered, it was found that she retained only very imperfect recollection of her past illness. Muscular power, too, was equally enfeebled. When reared up in bed, her body swayed and fell forward in a perfectly helpless manner. On March 2 she passed her evacuations consciously for the first time, and from that date recovery was rapid, so that she was able to leave the Hospital on March 22, cured; clearness on percussion being also restored to the chest.

(To be continued.)

The Boarding-out System.—At a recent meeting of the Warwick Board of Guardians, the Boarding-out System Committee presented their report, which stated that the system had been in operation more than a year, and has proved successful beyond the anticipation of its promoters. The thirteen children placed out are all in good health, and have in every case met with the greatest kindness and care from their foster-parents.

HEDONISM.

By METCALFE JOHNSON, M.R.C.S.E.

The uncertainty of conveying to another the same meaning which we ourselves attach to a word is one of the failures of language, or, as Reid says, "There is no greater impediment to the advancement of knowledge than the ambiguity of words."(a) And Maudsley observes:—"It by no means follows that because the same name is given to an idea in two people it has the same value in each."(b) Still, as Browning happily expresses it,

> "How else know we save by *worth* of words?"(c)

The word at the heading of this paper is intended to express the gratification (ʽηδονὴ) derivable from satisfying some craving obtained from heredity of ganglionic system, or acquired property of the cerebro-spina; but, in order to get at the worth of the word "hedonism," a few examples may be cited of what are ordinarily termed "eccentric persons." The word "eccentric," as will be seen, does not convey the required meaning, for hedonism may be far from being eccentric—as a normal healthy disposition to derive pleasure from ordinary things, as music, art, trade, wine, food, etc. The following cases will better explain it:—

A. B., a well-known character in the district in which he resides, about 35 to 40 years of age. His usual costume consists of a rough coat, a shirt, and a pair of "breeches"; no shoes or stockings, or hat. He uses a long rough stick to climb the mountains, to which he is an intelligent guide. He has considerable talent as a painter; his hedonism leads him to disregard appearances and the customs of society, and to gratify the cravings for a feral life in the mountains, together with the Bohemianism of artist pleasures.

Every town or village has its eccentric person. The hermit of —— is a fern-collector, who occupies the ruins of a picturesque old mill; his hedonism developes into solitude and botany.

C. D. is a man of middle age, stooping gait, and ungainly walk or shuffle; he has a convergent squint, and is altogether a remarkable-looking man. His clothing is ragged, his hose are footless, and his boots unlaced. He has not slept in a bed for twenty years. A man of considerable intelligence, fond of politics, reads the *Times* or any other daily papers which are given him by his wealthy neighbours or by travellers on the railway. Writes well, and can calculate averages with great facility. Notwithstanding his strange appearance, he is much trusted by those who know him, and is always welcome to his bed in the barn, as being a safeguard against thieves and poachers. His hedonism is truly "Bohemian," and his literary *penchant* makes him a sort of rudimentary Walt Witman.

E. F. is an eccentric antiquarian, who lives in a state of poverty among his parchments, seals, fossils, coins, pots, etc., and, in fact, resembles much the character of Crook the Chancellor in Dickens's "Bleak House." Indeed, the pages of this great novelist teem with examples of disordered hedonism, insomuch that it is difficult to find a normal example out of his numerous creations—*e.g.*, Mr. Dick with his kite, Pecksniff with his morality, Job Trotter, Jingle, Smike, and Mell.

G. H. was one of those curious creatures (with certain talents) called "ne'er-do-weels." In his early life his hedonism led him to become a groom in a travelling circus. Later in life he earned the sobriquet of "Man Dart" in the following manner: Being "hard up," he advertised an entertainment at a small village inn. Having arranged a curtain between the audience and the window, which opened upon the bank of a canal, he came "to the front," and said, "Ladies and gentlemen, the performance will commence with 'Man Dart,' which will take place immediately." He then retired behind the curtain, darted through the open window, swam the canal, and "walked off in the opposite direction," with a sum of £3 in his pocket, leaving the yokels to discover the swindle "in due course." Of course, the avenues to fame and fortune were closed to him for some time, and he was obliged to fly the country. This he did as a militiaman. He served in the Mediterranean as groom, the duties of which office he discharged to the satisfaction of his master. After the end of the Russian war, he returned to civilian life, and at one of the "trainings" was discharged from the militia, at the request of an "inspecting officer," as unfit for service, on account of his strange manner "in the ranks." He was a great drunkard, and died in a workhouse. His hedonism always deterred him from industrial labours.

(a) Reid's "Essays on the Intellectual Powers of Man," p. 219.
(b) Maudsley's "Physiology of Mind," p. 110.
(c) Browning, "The Ring and the Book."

J. K. was a man of considerable talent, whose venereal hedonism caused him to forsake the paths of civilisation and to spend his life among harlots. Having contracted syphilis and drunk hard, he suffered from an incurable ulcer, for which I removed his leg; after which he returned to his old life, subsisting by means of his talents for bookkeeping, which he did for certain employers who were unable to keep their own accounts. After a while his habits told upon him; an ulcer broke out in the other leg, and he died in a wretched hovel, attended by an old hag, the partner of his diabolical life, choosing rather to die in his wretchedness than submit to the order and drinkless condition of a workhouse.

L. M. is a young man of gentle nurture, who has the curious desire to follow one of the most revolting trades; and so great is his hedonism in that direction, that he will pay large sums of money for permission to work as a labourer—always, of course, *sub rosâ.* He will lie in bed thinking of his darling employment, and sometimes rise in the night for the purpose of playing at this dirty trade. He is conscious that in doing so he is offending against the rules of society and the wishes of his friends, and states that after a day spent in secret gratification of his hedonism, he is overcome with remorse and disgust, and resolves never to do so any more; but like other resolutions, it is only made to be broken. He has for some time given way to "secret practices," and suffers from frequent acute cephalalgia.

In this and similar cases the brain is not necessarily diseased, but subject to some more or less abnormal development of cerebro-spinal or derangement of sympathetic nerve.

To consider the whole body, rather than the brain alone, as the organ of mentation by which a consciousness of the external world is acquired and expressed, we must remember that every facet of a joint has its exact angle and outline; every muscle its requisite number of sarcous particles; every padding of areolar tissue its appropriate quantity of oil-globules; every artery, vein, and capillary its given place, length, diameter, and elasticity; and every nerve, whether cerebro-spinal or sympathetic, its fitting calibre and arrangement, all in exact proportion and aptitude, not only to the whole, but "each to each." Indeed, if we consider how the nutriment of a single cell demands a set of capillaries of a special character, under the control of a ganglionic filament of suitable power, and that an embolon in a small artery or capillary (See Dr. Bastian's "Observations," January 9, 1869), or the over-excitement of the cerebro-spinal system by anxiety or mental straining, which would deprive the ganglionic filament of its otherwise due supply of blood, would at once prevent the nutriment of the areolar, muscular, osseous, or cerebral cell, and that contour, muscularity, gait, posture, and facial expression, all depend on perfect cell-formation for their greater or less normality, we shall then see that a consciousness of these harmonies makes Cæsar to exclaim—

> "Give me men about me that are sleek,
> Men that sleep o' nights,"

in contradistinction to "the lean and hungry Cassius;" makes us to understand how "the fair round belly" demands a solar plexus which so guides digestion as to cause the development of fat from well-assimilated ingesta. It is this which shows us how the cold grey eye requires a muscularity to supply the demands of a brain in harmony with this "window of the soul;" or the large glutei and gastrocnemii of the fleet runner and jumper demand a flexible nostril and an expansive chest.

We then see how impossible it would be for an artist to represent Pickwick as lean and gaunt; Newman Noggs, as a "little, grey, fat man;" "Miss Cammysole," as a buxom woman, "fat, fair, and forty;" or "Major Sugarplums," as stout and dumpy. Under this view, the process of mentation may be examined as one of cell metamorphosis or molecular change; and if we examine cell-growth through the light of Dr. Lionel Beale's interesting treatise on "Protoplasm" (always avoiding some of his deductions), we are led to a series of conclusions, which may be briefly summed up as follows:—

Life is a phenomenal condition of some forms of matter, without which cell-change cannot take place. The examination of cells, from monads and infusoria to brain, reveals a unity of law of which the successive characteristics (in the unit condition) are simple blastoderm, bilateral division within a primordial utricle (gleocapsa), contraction of cell-wall, amœboid protrusions, and ciliary development.

All cells possess two properties—nutrition and reproduction.(d)

The accidents in the life of a cell modify its resultant form. (See *Monthly Microscopical Journal*, January and April, 1870.)

Cell-formation is closely associated with the process of elimination, which is a homologue of reflex action and sensation. (See the following table.)

Homologues.

Organ.	Deposited structure.	Ultimate product or function.
Skin	Epithelium	Epithelial cells
Mucous membrane	Epithelium	Mucus
Lieberkuhn follicles	Epithelium	Intestinal mucus
Salivary gland	Stroma	Saliva
Pancreas	Stroma	Pancreatic juice
Liver	Lobules	Bile
Kidney	Malpighian corpuscles	Urine
Muscle	Sarcous particles	Contraction or force
Sympathetic nerve	Ganglia	Arterial control
Cerebro-spina	Tubes and polar cells	Reflex action
Convolutions	Polar cells	Sensation

By examination of the organs and changes concerned in the nerve message, we shall see that the production of mentation by means of cell metamorphosis is merely a modified form of a simple "reflex act." In order to produce a perfectly normal result from the cell metamorphosis, "the sum of the force-centres termed body" (Owen) must be in a condition of health, and any aberration (congenital or pathologic) will produce an abnormal result (a disordered hedonism).

The parts concerned in the nerve message are:—Nerve tube (containing pulp), surrounded by white matter of Schwann; ganglion at posterior root of spinal nerve; grey matter of cord (containing polar cells); tube of spinal nerve; medulla oblongata, thalamus opticus, and corpus striatum (containing polar cells); efferent nerve communicating with sympathetic; ganglia of sympathetic; branch of sympathetic to arteries, and capillaries to grey matter of convolutions, as well as intrafibrous grey matter of cord and central ganglia. The present evidence of connexion of nerve tubes with polar cells is much in favour of both afferent and efferent communication (Bowman). We may, therefore, suggest that the wave of force passing through nerve tube to polar cell (in cord), excites in that body a change, which proceeds, by a second or efferent tubular prolongation, to ganglion at posterior root, which, by its control of capillary circulation (more free around polar cell than white matter [Bowman]), secretes, by dialysis, between blood cells and polar cell, a force, which passes by efferent nerve, either to muscle direct, or, passing along the tubules of spinal cord, through the medulla to central ganglia (or any part of its course in which polar cells may be present); thence by efferent fibre to cervical ganglia, middle cerebral artery, and grey matter of convolutions, producing, in the first case, a simple reflex action on the muscle directly, or, in the second, a communication which expresses itself in sensation and what is termed a "volitional act." But, as has been before observed, this result, to be normal in character, demands a perfect nomality in the organs on which the "*choses extérieures*" (or accidents of life) act; and when we come to enumerate the intra- and extra-uterine causes of variation, it will at once appear that it is next to impossible for any two persons to be so formed and influenced by these *res ab extra* as to educe equal volition—and hence to produce the perfectly normal characters—unless the norma or law be calculated from an average of specimens rather than from any given type. Considering pangenesis (Darwin) and heredity (Häckel), we are prepared to expect an equally infinite variation and consequent modification of experience.

The intra-uterine causes of variation are—syphilis in remote ancestor, producing *scrofula et hoc genus omne morborum;* syphilis in male and female parents; influence of previous gestations (zebra foals); family resemblance of uncles, aunts, etc., in muscularity, contour, etc.; musical taste and colour-blindness, derived from remote ancestors; consanguine marriage; *choses extérieures* on pregnant mothers (Laban's flock); consumptive father, mother; secret vices; drunken fathers, mothers (see Duncan and Millard); hereditary or acquired intellectual developments—father, mother; fatigue, mental and bodily, in generative process;

(d) Motions have been seen by Schwann among the granules of the hen's egg as if occasioned by endosmatic currents through the walls of the cell (Todd and Bowman's "Physiology").

mesmerism in female; affection for persons other than the father (see horses). The extra-uterine causes are—fright, anger, etc., on mother's milk; wet nurses', cows', asses', and goats' milk in "hand-fed" children; climatic, geographical, atmospheric, and educational influences.

Now, considering that every person, thing, or circumstance that obviates or surrounds an individual is a "*chose extérieure*" to him, and will so act upon him as he is prepared to receive its influence, then the hedonism of a man is the spiritual expression of the sum of the force-centres termed body (Owen).

There are numerous varieties of hedonism, such as the normal of "common sense," the instinctive of the sympathetic nerve, gastric, alcoholic, and venereal; and those which belong to the region of cerebro-spina or experience (hereditary instinct of Darwin), such as of music, colour, form (art), money (misers), wealth, power, admiration, etc.

Under this view of society, we see that the comparatively non-volitional nature of an action educes from us that "charity" which "thinketh no evil" but "hopeth all things," and will make the thoughtful among us strive "to guide the erring into the way of truth," not by the demoralising influence of "prison" ethics, or the refined cruelty of "shot drill" and the "solitary cell," but by encouraging self-interest—"the first law of nature" (see Helvetius)—to teach the stubborn ass to win the race by the enticement of the prevenient cabbage rather than the painful stimulation of the compulsory stick.

Lancaster.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

WESTMINSTER HOSPITAL.

OPERATIONS.

Ligature of Nævus—Removal of Tumour from Breast—For Harelip—Removal of Epithelioma from Scrotum, and of Nasal Polypi.

(By Mr. FRANCIS MASON.)

WE had the pleasure of attending to see the operations at this Hospital on Tuesday, April 4, when Mr. Mason operated upon some patients from his wards. The first was a baby, with a nævus spreading over the left eyebrow. This Mr. Mason tied with the knot known as "Fergusson's knot," a measure which he always adopts in the treatment of nævi, and with whose results he is well satisfied. His next case was one of doubtful diagnosis. A woman in the decline of life came under Mr. Mason's observation, with a hard nodulated tumour the size of a large walnut, situated at the extreme outer margin of the left breast. From its rapid growth, and from the acute pain attending it, Mr. Mason deemed it probably of a scirrhous nature, although its free mobility and want of any attachment to the skin rendered its cancerous structure doubtful; and the diagnosis was not aided by a lymphatic gland in the axilla, which was distinctly indurated and slightly enlarged. The doubt was dispelled, however, by a jet of thin fluid shooting across the theatre as the scalpel pricked the tumour during its removal. It turned out to be a thin-walled, very tense cyst, developed apparently in the margin of the atrophied breast, and with a singularly fasciculated lining, which had caused its nodulated form, instead of the usual smooth ovoid shape of these cysts. A bit of gland tissue imbedded in its wall thickened it at one part, and lent weight to the idea that the cyst was formed by a dilatation of some of the gland acini.

A good-looking sailor was next brought into the theatre in order to have some improvement effected on a harelip, which had been clumsily operated upon in childhood, and which now caused considerable disfigurement by means of its wide scar interrupting the moustache and notching the lip. Mr. Mason simply cut out the scar, and brought the edges together with harelip pins in the usual manner.

The next case was one comparatively rarely seen nowadays—namely, "chimney-sweeps' cancer" of the scrotum, occurring in a *bonâ fide* chimney-sweep. The time has not long passed since no little disturbance was created by the endeavour to ameliorate the condition of chimney-sweeps by an Act prohibiting the employment of "climbing boys"—the one party using as their strong argument the "spreading of a loathsome disease" by the existing system, whilst the opponents of the measure, anxious lest their chimneys should suffer by the substitution of machinery, raised an opposition as foolish and inhuman in many respects as that now declared by the Anti-Contagious Diseases Act party. As a matter of fact, the passing of the Chimney-Sweepers Act has made what was formerly a very familiar disease to Hospital Surgeons a happily rare occurrence. The present patient presented all the ordinary characters of epithelioma of the scrotum—the ragged growth being about the size of a shilling, after some years' duration—and the disease was simply cut away by Mr. Mason, the edges of the wound being brought together with harelip pins.

Finally, Mr. Mason removed a rather large nasal polypus from an old man, on whom he had operated more than a year previously for the same complaint.

We were surprised to see that, with all the other theatre arrangements in such admirable order, the use of the old-fashioned stretcher is still adhered to in this Hospital. One is so used nowadays to the canvas sheets laid on the operating-table, into whose sides poles are thrust by the porters, who so carry the patients comfortably back to bed, that it seems like a glimpse into past days to see a stretcher brought in, laid on the floor, and the patient lifted down on to it, and strapped down like a "drunk and disorderly" police subject, for removal to the ward. This is surely the least comfortable and commendable way of transporting sick folk, and we wonder that it is still employed anywhere.

UNIVERSITY COLLEGE HOSPITAL.

STRICTURE OF THE TRACHEA FROM SYPHILITIC ULCERATION.

(Under the care of Mr. ERICHSEN.)

HENRY, J., a brushmaker, aged 38, was transferred to Mr. Erichsen's care from the Physicians' Ward on January 28, 1871, in order that tracheotomy might be performed for the relief of considerable dyspnœa, due to laryngeal obstruction, presumedly of syphilitic origin.

The history was that seventeen years ago, whilst in the army, a hard indolent bubo appeared in the left groin. This was unaccompanied by any sore, nor could the man remember having a sore at any previous time. His general health had always been excellent. The bubo was poulticed by order of the regimental Surgeon, and painted with iodine. After some weeks, as it did not open spontaneously, it was lanced. No pus escaped, however, nor did any suppuration ensue, although it was kept poulticed for a considerable period. He was then put on a course of mercury and hot baths, and kept salivated for some weeks; but he was at the same time unavoidably exposed to occasional cold, and his left leg swelled very much (this swelling the man affirmed had never quite disappeared; and even now the limb was found to measure one and a half inches more round the calf than its fellow). As the bubo gradually subsided, an ulcer formed above one ankle, and this eventually brought about his discharge from the army. This sore did not heal until nine years ago, when patient married, and he continued free from any venereal symptom until two years ago, when an ulcer appeared on his forehead, and shortly afterwards, during a fit of sneezing, a purulent discharge took place from the nose, and continued during two months.

Whilst under treatment for this by iodide of potassium, a fresh sore opened in the neck, and bone was exposed in the ulcer on the forehead. Since that time various other syphilitic symptoms have appeared, and in the summer of 1870 he was admitted into this Hospital, under Sir H. Thompson, who operated on an old-standing anal fistula; and whilst taking iodide of potassium at this time, another deep sore formed on one shoulder. Since November, 1870, he had been under treatment by the Physicians for cough, dysphagia, and difficulty of breathing; this last being specially severe at night. Syphilitic laryngitis was diagnosticated, and iodine inhalations and iodides, etc., were ordered, but without producing any marked change in the symptoms.

The state of the patient when transferred to the Surgeons' Ward, as taken by Mr. Marcus Beck, was as follows:—"The patient has considerable difficulty of breathing, but there are no marked signs of asphyxia. He has no spasms nor paroxysms of dyspnœa; the difficulty is constant. He has scars of old syphilitic sores on the forehead, and there is a cicatrix at the root of the neck, over the end of the left clavicle. The end of the clavicle has apparently necrosed and come away in part. The cicatrix stretches over the trachea, which can be felt immediately beneath it. It feels as if there were a deficiency in the rings at this side opposite the scar, and on inspiration a distinct hollow is produced at this part. On swallowing there is no vertical movement of the larynx or trachea. On auscultation the greatest amount of stridor is heard immediately above the top of the sternum. His voice is hoarse, but not markedly so. A laryngoscopic examination has been made, but no disease detected above the glottis. The vocal cords were entire, and white and sharp at their edges.

Mr. Erichsen, deeming the obstruction insufficient to call for operation, at once put the man on a generous diet with ℥vi. of wine, and ordered a mixture containing hydrarg. bichlor. gr. $\frac{1}{12}$, and potass. iod. gr. v., to be taken three times a day. Under this treatment the man notably improved, but by the end of a fortnight he was slightly salivated, so that the mercury was discontinued, to be replaced after a few days by pot. iod. gr. v. in dec. cinch. ℥j., t.d.s.

The patient continued to improve, and was discharged on March 6, not wholly well but greatly relieved.

ROYAL FREE HOSPITAL.

CONGENITAL SCROTAL HERNIA IN A CHILD EIGHTEEN MONTHS OLD — STRANGULATED TWENTY-FOUR HOURS—HERNIOTOMY WITHOUT OPENING THE SAC—RECOVERY.

(Under the care of Mr. JOHN D. HILL.)

Mr. Francis Lett, the House-Surgeon, has kindly furnished the following notes:—

W. C., aged eighteen months, was brought to the Hospital with a strangulated congenital scrotal hernia, which was characterised by the usual symptoms, but in addition there was a quantity of fluid in the occluded tunica vaginalis. The usual means of reduction having been tried and failed, Mr. Hill proceeded to operate, after the child had been placed under chloroform, by making an incision an inch and a half long, commencing just above and slightly to the outer side of the external ring, and extending downwards to the scrotum. With a small scalpel, the more immediate coverings were divided on a director, and so the hernial sac reached, when Mr. Hill insinuated the director, and along this a hernia knife, under the conjoined tendon, which he slightly incised, and then endeavoured to return the viscus, in which he was successful. Suture and strapping were used to close the primary incision, a pad and a bandage being fixed over all. The patient was placed in bed, and one-minim doses of tinct. opii ordered every four hours.

February 16.—Patient doing well; no more vomiting; bowels acted once freely.

17th.—Wound quite healed by first intention.

Mr. Hill carefully avoided opening the sac, because he thought the fluid therein had protected the viscera, so that the constriction of the neck of the sac was not such as to cause apprehension of any perforation of the intestine, and considering the rate of mortality in opening the peritoneum as compared with the more simple operation of herniotomy without the sac.

It may be observed that the internal ring was drawn almost directly behind the external, and that there was thickening about the internal ring, a truss having been worn for some time.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

CASE OF MITRAL OBSTRUCTIVE DISEASE (FUNNEL-MITRAL), TERMINATING FATALLY, WITH CEREBRAL COMPLICATION; WITH REMARKS ON THIS FORM OF HEART DISEASE.

(Under the care of Dr. R. DOUGLAS POWELL.)

The following case is interesting from its being a very typical one of mitral obstructive disease uncomplicated with regurgitation, and from the peculiar nervous symptoms with which it terminated.

B. B. came under the notice of Dr. Powell as an out-patient at the Brompton Hospital, in March, 1869. He was aged 23, of healthy parentage, and had enjoyed good health, with the exception of an attack of diphtheria, until six months previously, when he caught a severe cold, and had since suffered from shortness of breath and palpitation, with cough and expectoration. He had never had rheumatism. His symptoms had become lately more serious, and he had been unable to follow his employment as an ostler for a fortnight. The expectoration had been tinged with blood the day before he came to the Hospital. The pulse was moderate and regular, and the digestive functions undisturbed. He had, however, been getting thinner for some time. The patient was short in stature and slightly made; the face somewhat puffy, but there was no œdema of extremities. On inspecting the chest, the sternum was slightly prominent, and the lateral region flattened. The cardiac apex-beat was in the sixth interspace within the nipple line. Cardiac dulness increased, commencing above at the third rib nipple-line, and reaching to three-quarters of an inch to right of sternum at nipple level. The cardiac impulse was attended by a marked thrill, and preceded by a long blowing murmur, which occupied nearly the whole of the interval of pause, and terminated abruptly with the flap of the mitral valve. There were some largish clicks and coarse crepitation scattered over the right lung, but no dulness was detected on percussion. The *diagnosis* was mitral obstructive disease and pulmonary congestion, with probably some pulmonary apoplexy.

Counter-irritation was ordered to the right side, and a mixture given containing iodide of potassium, iron, and digitalis. Under this treatment the patient improved considerably, but a further rest in the Hospital was desirable, and he was admitted in June.

In February, 1870, he again came under Dr. Powell's care, having continued pretty well until the last month, when the old symptoms again returned. He had occasional slight hæmoptysis; the pulse was rather quick, but regular; there was some fulness in hepatic region, but no dropsy, nor any notable alteration in physical signs. He continued, under treatment until September, when he was again admitted into the Hospital under Dr. Sanderson.

In July, there was some œdema of the legs, and a slight icteric tinge of conjunctiva, with dyspeptic symptoms; and in August diarrhœa.

On admission, the œdema of the legs had disappeared, but the dyspnœa and palpitation distressed him on the slightest exertion. He greatly improved, however, in every respect until November 8, when, after some exertion, a severe attack of dyspnœa and palpitation came on, with cold, clammy sweats and rapid, feeble pulse. In the evening, pulse 124; temperature 98·4°; respiration 52; crepitation throughout both bases.

By December 14, the pulmonary signs had much diminished; but while at dinner he felt giddy, and went to lie down. After an hour's quiet, however, feeling better, he again got up to complete his dinner in the ward; the giddiness returned, he felt his heart give two "jumping beats," and that he had lost all power in the right side, and then became insensible, in which condition he remained for half-an-hour. On returning to consciousness, Mr. Bartlett, Assistant Medical Officer, noted that the paralysis was complete (both motor and sensory) on the right side, but without any deviation of the tongue. Pupils and pulses equal; temperature 98.

Dr. R. Thompson, under whose care the patient was at this time, in Dr. Sanderson's absence, considered that the symptoms were due to embolism of one of the cerebral arteries. At this time there was almost complete aphasia.

The last note of the cardiac murmur was taken on the 19th, and agreed in all respects with what Dr. Powell had before noted—viz., that there was a presystolic murmur commencing immediately after the second sound, and increasing in intensity up to the first sound, with the shock of which it abruptly terminated. The pulse at the wrist followed closely upon the systolic shock, and then the second sound, after which the murmur commenced again. On passing the stethoscope towards the aortic cartilage, the murmur gradually faded, and the second sound became more distinct; on similarly passing towards the scapular angle, the first sound, though very audible at apex, became more distinct by being less complicated by the loud presystolic murmur.

December 15.—Slept moderately well; complained of headache. Muscular power and sensation have returned to a great extent in the right side. Tongue furred; pulse 88; temperature 98°. He somewhat improved. While keeping perfectly quiet in bed there was no alteration in the heart's sounds.

On the 20th there was a slight rise of temperature (98·8°); He had passed a restless night; tongue furred; bowels confined; face flushed; pulse 100.

21st.—Headache, severe, throbbing; temperature had risen to 102°; face much flushed; some coarse crepitation at left base, but no dulness; pulse 102; respiration 30.

22nd.—Power again diminished in right arm; temperature 105·8°; pulse 140; respiration 50; lung signs not more decided.

23rd.—Very restless; bilious vomiting; headache; temperature 103·4°.

The temperature continued between 101° and 102° until the 26th, the patient gradually failing, with occasional slight delirium, quick, feeble pulse, very rapid breathing, and on the 27th he died, after a very severe attack of dyspnœa.

On post-mortem examination, the brain was found generally healthy and somewhat anæmic, but the anterior and inferior portion of the middle lobe of the left cerebral hemisphere was softened, and, indeed, broken down into an irregular cavity. The softened brain substance was, however, very anæmic and white, and no zone of inflammation could be discovered. The vessels at the base of the brain, and so far as they could be traced into its substance, were not obstructed. The heart was large, and weighed 14 oz. The right auricle was somewhat dilated, and contained a large recent clot. The right ventricle was hypertrophied and dilated, its muscular substance being remarkably tough and hard; the apex of this ventricle reached to the extreme apex of the heart. Auriculo-ventricular opening natural; musculi papillares were of great strength. The left auricle was greatly dilated, and its walls much thickened and muscular. The mitral valve projected as a shallow funnel into the ventricle, having at its apex a slit-like aperture, which would not admit the end of the little finger. The valve was thick and hard, its auricular surface roughened by fibrinous deposit, which could, however, be scraped off, leaving a smooth surface. The ventricular aspect of the valve was smooth, the papillary muscles shortened, the ventricle itself of about normal thickness and natural firmness, strikingly contrasting in these respects with the right ventricle. The lungs were remarkably toughened in their texture throughout. They were a good deal congested, but there was no pneumonia present, nor could any trace of former pulmonary apoplexy be found. The other organs were healthy, with the exception of the spleen, which presented two hæmorrhagic infarcts of old date and shrunken.

Remarks by Dr. Powell.—There are three points of particular clinical interest in this case—1st, in connexion with the physical diagnosis; 2nd, the origin of the disease; 3rd, its termination with brain symptoms and remarkable elevation of temperature.

The *funnel-mitral*, though one of the rarest forms of heart valve diseases, is not, absolutely speaking, very uncommon; it is, when present, marked by very characteristic signs. A prolonged presystolic murmur, occupying almost the whole of the pause and terminating abruptly with the sharp first sound, is most generally pathognomonic of this form of disease. The cone-like valve projecting into the ventricle, having at its apex a small button-hole slit, is readily and completely closed with the contraction of the ventricle, admitting of no regurgitation, and hence the first sound instead of being accompanied by a bruit is often more sharp and pronounced than natural. In the more common form of constricted mitral, on the contrary, where the mitral valve is stretched across the auriculo-ventricular orifice like a rigid diaphragm, having a slit-like opening with margins of cartilaginous hardness, very often uneven and roughened by cretaceous deposit—in this form of disease the *presystolic* murmur, more or less ill-defined, is followed almost invariably by a high-pitched and often squeaking *systolic* bruit. The presystolic murmur is, I think, in these cases never so prolonged, and is often not to be distinguished, being masked, no doubt, by the subsequent more obvious murmur. The marked hypertrophy and induration of the right ventricle is in cases of funnel-mitral disease in marked contrast with the perfectly natural condition of the left ventricle—this ventricle having, indeed, rather less than more work to do. I have thought the funnel-mitral the form of heart disease peculiarly of non-rheumatic origin, but in this view the experience of Dr. Fagge, recorded in his interesting paper in the present volume of the *Guy's Hospital Reports*, does not altogether bear me out; and among the several cases which have been published in the Pathological *Transactions* there are a few having a distinct rheumatic origin, so that my experience may be somewhat exceptional in this respect. In the majority of cases, however, there is no history of rheumatism traceable, and the post-mortem appearances are much more in accordance with its being a congenital disease or malformation.

I am unable to give any sufficient explanation of the great elevation of temperature which preceded death in this case. Around the softened portion of brain, which, I presume, must have been the result of minute embolism, there was no inflammatory redness—indeed, there was a state of marked anæmia. This case, and also another case of uncomplicated funnel-mitral which terminated with cerebral embolism, fully accord with Dr. Fagge's remark on the frequency with which mitral constrictive disease is associated with blocking of systemic vessels.

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Medical Times and Gazette.

SATURDAY, APRIL 8, 1871.

THE SMALL-POX EPIDEMIC.

The registered mortality from small-pox in London fell last week from 205 to 192, and in Liverpool from 97 to 73. After distributing the Hospital deaths, the Registrar-General perceives but slight variations from the numbers in the previous week, but notices the fatal prevalence of the disease in St. Pancras, Shoreditch, and Bethnal-green. The Health Officers' returns of fresh cases seem to show a diminution in the number of fresh cases in St. Pancras, as well as in the adjoining parish of Islington.

Much as we have been suffering from small-pox in London and Liverpool, our outbreak will bear no comparison with the severity of the disease in some of the larger towns in Holland during the month of January last. We are informed that "in Rotterdam, of 605 deaths, showing an annual death-rate of 59 per 1000, 205 were fatal cases of small-pox; in Utrecht the 365 deaths included 162 from small-pox, and gave a death-rate equal to 72 per 1000; and in the Hague, of 646 deaths, 392 resulted from small-pox, and the annual death-rate in the month was equal to 83 per 1000 of the population." Here, then, we have in one town about a third, in another nearly one-half, and in another more than three-fifths of the deaths in the month of January arising from the attacks of this epidemic malady.

Two useful popular expositions of the doctrines held in the Profession with respect to the protective power of vaccination have recently appeared, which ought not to be allowed to pass without notice. The one is a speech made by Dr. Carpenter, of Croydon, at a recent meeting of the local board of health, of which he is an active member. He took occasion, on the presentation of a report from the sanitary committee, to refer to certain assertions made by the *City Press* on the subject of small-pox and vaccination, which he thought it his duty to answer, especially as that journal has an extensive circulation in his neighbourhood. The first assertion he combatted was that the Medical Profession had no proposal to reduce the ravages of small-pox within the limits of scientific control, that vaccination is no longer the safeguard it has been, but has broken down and become a "miserable sham." Against this he adduced the recent outbreak of small-pox in St. George's Hospital, where seventeen cases occurred by contagion from a case accidentally admitted, and fourteen days after its removal. That very day every servant, nurse, Medical man, and student connected with the establishment was vaccinated, and, although the seventeen patients were treated in the Hospital, not a single case occurred afterwards. His second argument was derived from the oft-quoted experience of Mr. Marson; and his third from the experience of his own private practice and that of other Medical gentlemen in Croydon, who, being careful that their whole *clientèle* was properly vaccinated, had not had a single person fall a victim to the disease. The Profession had nothing new to say upon the subject; they rely upon vaccination as they always have relied on it, submitting themselves and their children to the operation in assured confidence of its success. The second assertion of the *City Press* was that vaccination was very clumsily performed, and the writer held the Profession responsible for this carelessness. Dr. Carpenter's reply was that, prior to the Compulsory Vaccination Act, Medical men were in the habit of vaccinating people *gratis*, preferring this unpaid work to the attendance upon small-pox cases among the poor; and he pointed out that, when vaccination was made compulsory, the miserable pittance accorded to public vaccinators has been such that it would not pay them to look up unvaccinated persons at their houses, so that large numbers of children went unvaccinated altogether, furnishing pabulum for repeated epidemics. The third assertion he combatted was, that the lymph now used has lost its power by frequent transmissions, and has now become disease. Dr. Carpenter denounced this as a fallacy on the face of it. If a man sowed oats in his garden, oats would come up, and not something else; and so, however often vaccine was sown upon the human body, nothing but vaccine would be produced. The analogy was complete. In our opinion, Dr. Carpenter has done good service, and his example is worthy of imitation by persons having the necessary knowledge, and sitting upon guardian boards. The other exposition we refer to is put forth in the form of a neat pamphlet, by G. Oliver, M.B., of Redcar. It is entitled "Plain Facts on Vaccination." The pamphlet is well put together, and concise, as it ought to be for its designed purpose. All we have to do in commending it to our readers is to warn them against an exaggeration where the writer alludes to vaccinations performed from the heifer. No one of any authority, that we know of, has advocated the substitution of heifer vaccination for vaccination from arm to arm in this country. The utmost that has been recommended has been the maintenance of a vaccinated heifer, from which Medical men might, as occasion arises, renew their supply of vaccine. Dr. Oliver greatly overstates the failures in vaccination direct from the heifer. No doubt during the panic in Paris they were excessive, because the inoculations were made with a haste and a want of care scarcely decent. But carefully and deliberately performed, with a due selection of the proper day for taking the virus, vaccination from the heifer, though not so invariably successful as good arm-to-arm vaccination, nevertheless rarely fails. The non-success at Rotterdam is stated by Dr. Seaton at 12·3 per cent. Our own opinion is that this even is in excess of the average, where the vaccination is performed as it always ought to be, when using heifer virus, by free scratching and deluging the scratched surface with the lymph.

THREE-HALFPENCE A-DAY.

WE sometimes see newspaper paragraphs headed "Seasonable Beneficence," or "Anonymous Munificence," and announcing that some unknown friend of humanity has sent £1000 to the Refuge for the Destitute, or to the Middlesex Hospital; and, peradventure, we may see in the "agony" column of the *Times* an acknowledgment from the secretary of some special Hospital of some similar huge donation sent by a benefactor unknown.

All this is very laudable. Rich men, who have thousands lying idle at their bankers, do well to provide the managers of Medical charities with the means of relieving the sick. The unknown donor most likely thinks within himself that he knows personally of no deserving and destitute persons, and that he cannot select better almoners than that band of Medical officers to Hospitals and dispensaries who are devoting their time and skill to the relief of the sick-poor.

But we may tell these anonymous givers that their benevolence halts half-way. If they were to inquire, they might find out that it ought not all to go to the sick-poor through the Medical Profession, but that some of it might well be bestowed on the families of the less fortunate members of that Profession who have been left without provision.

We are writing with the prospectus before us of the Society for the Relief of Widows and Orphans of Medical Men, which is now relieving 111 widows and children of deceased members, at the rate of nearly three thousand pounds *per annum*; and it is well known that the recipients of this bounty are drawn from all ranks of the Profession, and sometimes include the families of those who have held high places as Hospital Medical officers and teachers in Medical schools. We venture, therefore, to suggest to those benevolent rich men who give away their thousands that the Society we have just named would be a fitting vehicle for charity to the families of those who gave their services without pay to the sick and needy. Nor need we hesitate to add that there are few of us, whether attached to institutions or not, who do not contribute our full share to the work of benevolence.

The Society for the Relief of Widows and Orphans partakes of the nature partly of a mutual insurance and partly of a benefit club, and confines its relief to the families of its own members. But then its area is a wide one, including London and the counties adjacent, and one might reasonably expect, from the advantages it offers, that its list would be full and increasing. A contribution of two guineas *per annum*, continued for a certain number of years, or a proportionate sum paid down, and a good character, are the only conditions of membership, and on these easy terms any man may make morally sure that his widow and children can never be destitute. Widows and unmarried daughters receive pensions, and sons are aided in their start in life, and these privileges are guaranteed by the fund of nearly £70,000 which the Society has accumulated.

Who is there, it may be asked, that cannot spare £2 2s. a-year, which is less than tenpence a-week, or three-halfpence a-day, to save his family from all chance of destitution? Why is it that we receive, from time to time, those harrowing letters describing the death of some old college friend, leaving widow and children absolutely dependent? Why are we told by the Society that the number of members is rather on the decrease? whilst, peradventure, the fruitless and despairing applications for aid for the families of Medical men who have not been members are incessant! How much such a society is needed is clear from the fact that in one year twenty-one members died and the families of eight applied for relief.

If the truth were told, it would be that most young men before marriage never give the matter a thought. When they marry they trust to their good fortune; they expect to make money or to inherit it; whilst, alas! there is a large number of men whose increasing family swallows up every penny of their hard-earned income, and who, when they recognise the necessity of making provision, find they cannot. To some men it is unfortunately useless to speak of thirty guineas down, or of two guineas a-year, or tenpence a-week, or three-halfpence a-day. Their work may be laborious and their gross incomes large, but every penny is appropriated before it is earned. The year's balance is a *minus* quantity, and whether ten pence or ten pounds, the attempt to take it out of an empty exchequer is fruitless.

We do not hesitate to urge our younger readers to make themselves life members of this Society at once, with the assurance that it is rash to wait. Time may bring a larger income, it is true, but it is also sure to bring an increase of claims. Every young man is quite right in looking for success

—life would be intolerable without such hope—yet prudence dictates that the rocks ahead, the causes of failure, should not be left out of the calculation.

It may be profitable just to glance at some of the causes of failure in Medical life. Health may break down; and, to say nothing of accident, the very strongest may succumb to the fatigues, exposure, and anxieties of Professional work. It is difficult to save; but when money has been hardly saved, it is often recklessly invested, and some treacherous shares, or funds, or society (limited), may sweep off in an hour what it has taken a lifetime to save. Expectations from friends are more treacherous still. There is poor ———, the Surgeon, who was telling in all the Societies, a few years ago, how his wife's father had married again at 76, and had cut the names of his ten children out of his will. Some men embark their all in an unlucky house and neighbourhood; they do no good where they are, and yet are utterly unable to move. One young man buys the skeleton of an old, worn-out practice in an old, worn-out neighbourhood, where all the old patients are dying off, the younger ones move out of town, and the streets become filled with lodginghouse-keepers, who are usually models of impecuniosity—for who would keep a lodging-house in a decayed neighbourhood if he could help it? Some men lose their practice because a whole district of houses is swept off by a railway terminus or new bridge. Marriage is a terrible trap to many. A simpleton, who is not doing well, has heard that married Medical men are more popular than single ones, and thinks that he shall mend his fortunes by marriage. But we may assure him that, if he cannot get practice enough to live easily as a single man, he is not likely to better himself by adding a wife and children to his responsibilities. Some men, we do not hesitate to say, do not get on because they have not studied their Profession in a sufficiently practical manner; they are not good stethoscopists or accoucheurs, or they may know nothing of the eye or of mental disease, and thus may miss many a chance of distinguishing themselves in general practice in the country. Anyhow, we would advise our younger readers, before they marry, to make themselves Life Members of the Society for the Relief of Widows and Orphans. If their families need it, they are sure of relief; more blessed if they need it not, they will be conscious of having relieved others.

PARISIANA.

Cameron Stuart Macdowall, Surgeon to the 3rd Bombay Light Cavalry, a true soldier, his veins boiling with the hottest Celtic blood, the spoiled child of Mars and Venus, and a living example of those heroes whose achievements shine in the pages of "Harry Lorrequer," has given the world his experience of the siege of Paris.(a) Finding himself at home on leave at the outbreak of the Franco-German war, in spite of a tremendous dysentery which crippled him, he sniffed the battle from afar like Job's war-horse, and started for Paris. There he was held fast by illness till the siege began, and when he was well enough to move there was no getting out. So he volunteered to act as Surgeon to the 37th Battalion of the 12th Regiment of the Paris National Guard, served in the defence of the ramparts, accompanied his regiment in the chief sorties, the affair of Bourget, etc., and, just as the siege was over, fell ill with small-pox, escaped with half-a-dozen pimples (he was revaccinated a few weeks before), rushed back to London, committed this wonderful book to the press, and has given it to the world, as he says, without revision.

We call it a wonderful book, for we never before met with so rich a variety of matter between two covers. We have heard of an *olla podrida*, and of the dish which the Parisian beggars in "*Les Mystères de Paris*" call a *harlequin:* scraps of broken victuals, where every man can find a bit to his liking—the drumstick of a fowl, the tail of a fish, and a bit of cheesecake mixed up with a few olives, a bit of bacon, and the claw of a lobster. So in this wonderful book, philosophy, poetry, music, hymns to Victor Hugo, solid arguments in favour of hereditary monarchy, the air of a Breton melody, prophecies (which our author claims to make by virtue of being seventh son of a seventh son, and a second-sighted Highlander to boot), disquisitions on the origin of evil, hair-breadth 'scapes, foolhardy adventures (such, by-the-bye, as a soldier ought to have been put under arrest for indulging in), private conversations, praises of beauty, and the statistics of Parisian mortality during the siege, are to be found in the 141 pages between the two covers brilliant with the tricolour flag, and embellished with the figure of a handsome girl said to have been cut in two by a Prussian shell during the bombardment. In one page, if we dip at random, we shall light on our author's firm belief in the dual or Manichean doctrine of two eternal beings—one good, the other evil—with the assertion that God is not omnipotent! He says he is a Roman Catholic, and so, we hope, will meet with a *mauvais quart d'heure* next time he goes to be shriven. He says that the reason the Catholics so venerate the Madonna and child, is that they represent the Deity as having mercy, but not power. This is curious, but we doubt whether Catholics will accept it as true. He was educated at the College Bourbon, in Paris, and tells a capital story of the *conférence* which one of the Professors used to deliver on the subject of Celtic names. He gives a dissertation on the guillotine, with a new plan for the summary execution of criminals the moment they are found guilty. *MM. les condamnés* will not thank him. He tells a touching story of a poor dog that licked the hand that soon made him into soup. "*La soupe fait le soldat*" is a proverb to which he gives the *démenti*. "Soup," he says, "is the ruin of the French army; it takes four hours to make, at the least. Hot coffee, steaks, chops, or cold cooked meat" are the things for marching-days. "Horse," he tells us, "is excellent when stewed or boiled for quite *eight hours*. It is unpalatable when roasted or broiled. It is purplish when underdone, and the fat has an ochre tinge. I steadily improved in health on the full rations, but the diminished rations soon brought me down again. We felt exhaustion rather than hunger after a few days; for the appetite at last failed from the depression of continued hunger." He denies that the French acted like cowards; it was simply *esprit de corps*, discipline, organisation, and confidence in their leaders and in each other that they lacked.

His account of the attempted revolution by the Reds in November is amusing; so is his anecdote of the orator who began his speech by saying, "Citizens, thank God, I am an Atheist!" The account which our gallant author gives of the *cantinières* is most enticing. He believes they raise the *morale* of the troops, and we believe so too. His hatred of the Germans, and his vituperation of their cruel and fruitless bombardment of Hospitals are most intense. But unless we were to reprint the book, we could not come to the end of the jolly, incoherent, reckless effusions of our author. We should think that no mess can be a dull one where he exists.

Having been educated in Paris, and knowing a large circle of friends, he evidently was a social favourite, and we may take leave of him by quoting the acclamations which he tells us on one occasion greeted some of his amusing egotisms:—"Brigand de Macdowall, va!" "Voyez vous ce Stuart!" "Bravo, Mac! bravo, Major!" "Champagne round, gentlemen!" "To thy health, O Scotchman of my soul!" "Trinquez!" "Trinquons!" "Vive le Macdowall!" etc., etc. The siege of Paris was not without its hardships; but where Macdowall shone, there must have been some fun, too.

(a) Parisiana (the Real Truth about the Bombardment); or, the Volunteer with the Besieged Armies, 1870-71. Adventure, Anecdote, and Active Service. By Cameron Stuart Macdowall, M.R.C.S.L., etc., Indian Army, 3rd Bombay Light Cavalry; author of "Via Dolorosa; or, the Half-Sin of Lady Margaret." London: Provost and Co., 36, Henrietta-street, Covent-garden. 1871. Pp. 141.

CENTRAL AMERICA.

At a time when the triumphant establishment of a railroad across Honduras marks the epoch of a new period in our Transatlantic navigation, little excuse need be made when we direct attention to the probable amount of disease which the emigrant, the traveller, or the resident may encounter in the little-known and much-misrepresented districts of Central America. Two theories have always been thrown out by capitalists whose interest it is to promote emigration to the tropics. One, that the climate is entirely salubrious, is thoroughly free from the distribution of zymotic diseases, and that unparalleled longevity is attained with ease by the residents in the "Paradise of Mohammed." The other, and diametrically contrary statement, is that the European, when passing over the plague-smitten spots of Central America, is doomed to sudden and to certain death from fevers or cholera. It so happens that the absolute truth lies between the two extreme statements. We shall briefly pass over what appear to be the leading epidemic and other diseases of Nicaragua and Honduras, and we shall endeavour to point out such obvious causes of disease as may induce the white conquerors and occupiers of the fertile districts of Nicaragua and Honduras to "stamp out," to a great extent, certain prevalent zymotic affections.

Much confusion has been unnecessarily imported into our consideration of the subject by the inaccurate maps of the distribution of disease which appear even in our best and most trustworthy authorities. If, *e.g.*, we turn to the celebrated map of the "Fever Districts of the United States and the West Indies, on an Enlarged Scale" (plate 35 of Johnston's "Physical Atlas"), we find conditions laid down of the distribution of disease in those localities which are quite at variance with actual fact. We shall take yellow fever. This fearful scourge is there laid down as on a narrow belt fringing the Atlantic Ocean and the Gulf of Mexico, and being entirely absent on the western or Pacific slopes of the land. Now, everyone who has travelled in Central America knows that this statement is precisely the reverse of the actual and absolute fact. It is the Pacific ports of Realejo and of Panamá that, so far as regards yellow fever, have produced a far greater amount of absolute deaths, in proportion to the population, than have the admittedly unhealthy, but less dangerous ports of the Atlantic seaboard. It is doubtless a source of great sorrow that there do not exist any trustworthy nosological statistical accounts of the distribution of death in Central America. Where there is no stable or permanent government, and no authentic census, accurate figures cannot, of course, be given; yet a residence in the tropics affords one opportunity roughly to gauge the relative amount of disease, and to indicate the individuals of the white, coloured, and black races who are especially liable to attack. The yellow-fever zone appears to be chiefly, in Central America, confined to the volcanic range of the west of the country. West of the Lake of Nicaragua, the volcanic hills, which belong to a later geological period than the granitic slopes between the lake and the Atlantic, and throw a light, tufaceous ash over the whole soil, include the chief yellow fever districts, like Realejo, Granada, Masaya, or Rivas. A traveller who enters Nicaragua from the east, and lands, say, at San Juan del Norte (named, by a dyspeptic invalid, Greytown—an absurd name, which has become unenviably famous in the annals of British and American diplomacy), first encounters a low marshy country, in which the chief and most important disease is the low remittent fever, analogous in its course to the "jungle fever" of India.

This disease, locally termed *calentura*, may be said to be the chief and most common affection of Central America, commencing with dryness of skin, giddiness, and acute pain in the back; it results on the second day in partial delirium, and on the third, if the patient is likely to survive, in coma. Everybody suffers from this affection more or less, and the term *fiebre* is only applied to the more violent cases of this disease. There appears, however, to be not the slightest real distinction between the *fiebre* and the *calentura*, although the Indians are fond of using the former word for the fatal cases, and rather object to the idea that anybody could die of the *calentura*, which is merely the "custom of the country." The natives, however, draw the most definite distinction between the *calentura* and the *vomita amarilla*, or yellow fever. The *calentura* seems equally distributed over the whole of Nicaragua and Honduras. Its distribution seems to bear no relation whatever to climatic influence, to the altitude of the affected district above the sea, or to the race of the individuals who may be attacked. It appears, in fact, to be endemic over the whole country. Its sequelæ are often excruciating rheumatic pains, accompanied with giddiness and acute pains in the back. The remedies universally employed are diaphoretics and sudorifics. Ipecacuanha always, and calomel where possible, are exhibited in enormous doses, which apparently produce very slight effect upon the *dura ilia* of the Nicaraguan peasant. The practice of Medicine, as it is confined to the mixed-breed, barefooted Doctors, is naturally at a low ebb. An instance has been recorded in which the enormous dose of forty grains of "blue mass," or blue pill, were boldly and deliberately administered to a stout Costa Rican without any particular evil result having followed. Tartar emetic has been employed by English Doctors with great success in the case of the *calentura*.

For the yellow fever, the natives of Honduras and Nicaragua appear to possess no remedy whatever. Their ideas of disease are purely in the first stage of Comte's process of the evolution of the human mind. They regard yellow fever as a scourge of the Deity, and when patients are attacked with it they make no attempt whatever either to palliate the agonies of the patient, or to effect a cure. They allow the excreta from yellow-fever infected persons to lie unremoved in the roads and in the dwelling-houses; they render themselves liable to infection in every possible manner by the use of the blankets and clothing of patients infected with yellow fever; they sleep without the slightest fear in huts and on hammocks in which a yellow-fever patient has just died, and whose excreta are within a few feet of them. The highest civil and religious authorities (in Nicaragua, at least) have no scruple in appropriating to their own use, and using with signs of jubilant exultation, the blankets of some deceased white man who may have died of yellow fever. They, at the same time, have the most abject terror at going near anyone who may be thought (often without reason) to be suffering from yellow fever.(a)

The yellow fever appears rarely to be developed on the Atlantic seaboard, and never on the highlands of Chontales, usually about 1200 feet above the level of the sea. These heights are well wooded, chiefly on a granitic formation, and are almost impassable during the wet season, which lasts from September to March. During the wet season of 1867-68, the hills of the Chontales district were ravaged by an epidemic of cholera, resembling in its essential characters the true Asiatic cholera. The Wulwa Indians and mixed-breeds of the district did not possess any tradition of the previous existence of any similar epidemic attack. In one locality, inhabited by seven whites and 152 coloured people, the mortality was one white and forty-eight coloured population in December and January, 1867-68. The remedies employed (Board of Health mixture of chalk and opium) were very successful, but the filth in which the natives lived, coupled with the fact that the patients were often left to die in the wet mud, covered with their own excreta, and abandoned by all nurses, precluded the attainment of a very high percentage of cures.

Skin disease is very common in Nicaragua. Elephantiasis and leprosy are frequent, the former usually attacking the negro, and the latter the Indian population. A kind of psoriasis also frequently attacks Europeans who have resided in the country only a few weeks. The Indians attribute it to the water; but however this may be, there is no question that it is aggravated by the low and starvation diet common to both Europeans and Indians in the wet season. It is, however, significant that the disease only attacks Europeans, and that there is not a single case on record of either an Indian, a negro, or a mixed-breed being a victim. Syphilitic and gonorrhœal affections are very common, especially amongst the mixed-breeds. Nearly the whole stock of the solitary chemist's shop in Granada de Nicaragua consists of remedies for syphilis, and drugs which are supposed to act as aphrodisiacs amongst the Indian population. The goodwill of most individuals amongst the aborigines can be bought by the trifling donation of some drug which is supposed to act either as a prophylactic against fever, or as an aphrodisiac. The Indians have the most superstitious reverence for anyone who professes to be a Medical man, and who may be able to combine a slight knowledge of the properties of European drugs with a cool head amongst the often hostile Indians.

(a) The common tapeworm of the Indians is indistinguishable from the *Bothriocephalus latus* of Eastern Europe.

It is, of course, hardly necessary to say that the number of deaths from gunshot and incised wounds is very great, especially amongst the Indians and mixed-breeds. The negroes are too quiet and too much persecuted by the Indians to have the opportunity of much quarrelling with others, or amongst themselves, and their ultimate extinction as a race is an affair almost immediately to be expected.

THE WEEK.

TOPICS OF THE DAY.

The Fellows of the Royal College of Physicians, at the Comitia on Monday, the 3rd inst., elected Dr. Burrows their President for the ensuing year. Dr. Burrows' tenure of office as President of the General Medical Council afforded full proof of his high qualifications for presiding over the discussions of a Professional assembly. He will fill the President's chair with dignity, and discharge the duties of his office with ability. But whilst the Profession will thoroughly approve the choice made by a majority of the Fellows, they will also not forget that the late President, Sir James Alderson, has filled the President's chair with the greatest courtesy and no lack of ability during his four years' period of office, and they will at least sympathise with the motives which led a considerable number of the Fellows to record their votes in Sir James Alderson's favour. Sir William Jenner, who is one of the Censors of the College, obtained also a sufficient number of votes to prove that at some future time the President's mantle will rest on his shoulders.

The Committee of the Council of the Royal College of Surgeons have drafted a new scheme for a Conjoint Board, which will be submitted to the Committees of the Royal College of Physicians and the Apothecaries' Society. It would be premature to discuss the provisions of this amended scheme. It is sufficient at present to say that it proposes the representation of the Universities in the Conjoint Board by assessors or examiners, on condition that the Universities shall not grant degrees admitting to the Register to those who have not passed the examinations of the Board; and also that it indicates a pecuniary arrangement which shall insure to the Royal College of Surgeons a sufficient permanent income to maintain the Hunterian Museum and Library of the College at a proper standard of utility and excellence. We showed last week that it was absolutely necessary for the College to make provision for the support of these great collections, and that in doing so they are benefiting, not merely the College of Surgeons, but the whole Profession.

There is a vacancy in the Senate of the University of London, which will be filled early in the month of May. We understand that Dr. Parkes is likely to be brought forward as a candidate. It is really superfluous for us to say one word as to the claims of Dr. Parkes to the highest honours and trust which his University can bestow. One of the earliest graduates and exhibitioners of the University of London, Dr. Parkes's subsequent services in the cause of science have not merely fulfilled the promise of his brilliant career as a student, but have reflected honour and enhanced the fame of his University. If it be considered desirable that the Senate of the University should illustrate in the persons of its members the branches of learning which the University was founded to foster, no more representative man, not merely in Medicine, but in the collateral sciences, could be chosen than Dr. Parkes.

The case of Briggs' Administratrix *v.* the Lancashire and Yorkshire Railway, and that of Richard Hill, tried for the manslaughter of Edward Briggs, two cases tried last week on the Midland Circuit, and both originating in the same accident, are not without Medico-legal interest. In the first, which was tried in the Civil Court, the plaintiff was a young woman, whose husband, a young farmer, named Briggs, had been killed at the Bradford terminus, where he was standing on the platform, when a train dashed into the station at the rate of fifteen miles an hour, tore up the fixed buffers at the end of the line, and carried the deceased through the window of the porters' room. He died soon after from his injuries. His widow was pregnant, and an action was brought against the Company both on behalf of the unborn child and of herself. The guard of the train, Richard Hill, which caused the accident, was, according to the plaintiff's witnesses, drunk. His own statement went to show that he had been ill for several weeks, and that he had only returned to work a week before; that he had been suffering from an abscess in the thigh, which had not yet healed, and that he had taken twopennyworth of whisky on an empty stomach to relieve his feeling of illness; that he afterwards became dizzy, and recollected nothing till an hour after his accident. Medical evidence was given to the effect that the man had been ill, and had not entirely recovered. The counsel for the plaintiff contended that the Company was liable, whether the guard was wilfully drunk or was ill; in the latter case the Company ought to have known it, and have prevented him from working the train. The judge and jury took the same view, and gave the widow £600 damages, but the judge would not allow the claims of the unborn child, on the ground that it might be still-born. The guard was then tried for the manslaughter of Briggs. The jury, in the Civil Court, had found "that Hill was under the influence of drink caused by carelessly taking more than was right in his weak state of health, and that such drinking caused him to go to sleep, and that such conduct was negligence." Baron Cleasby, who tried the criminal case, directed Hill to be acquitted, on the ground that, although the guard was guilty of sufficient negligence to make the Railway Company civilly responsible, the evidence was such as to make it quite unsafe to ask a jury to find that he was guilty of negligence so great as to be criminal. "As he understood the jury who tried the case, their verdict meant the same thing. They believed that the man was ill, and that in order to alleviate his illness he incautiously, but with a quite innocent intention, took so much liquor as, acting on his illness, had an unfortunate influence on him. This cannot be so culpable as to be criminal." To prevent these accidents it would be a good thing if the railway companies were obliged to maintain a Medical officer at each of the principal stations, whose duty it should be to inspect the guards and engine-drivers before the starting of each train.

The answer given by Mr. Stansfeld, the new President of the Poor-law Board, to a deputation which waited on him in reference to the Baby-farming Bill now before the House of Commons, makes it probable that the Government will consent to refer the Bill to a select committee. At least, Mr. Stansfeld said that he would support an application that the Bill should be so referred before his colleagues. There is, no doubt, force in Mr. Stansfeld's remark—"that there are grave objections to the very extensive system of registration and supervision involved in the licensing of nurses, and in making the system applicable to all women who took children to nurse, in order to prevent abuses by bad women." But after the case of Margaret Waters, we maintain that the Government of the country is bound to interfere in this matter. Inaction on the part of Parliament holds out a temptation to the commission of a crime, which, whilst it is generally ignored or winked at, is punished with the utmost rigour when public opinion seems to demand an example. This is neither wise policy nor justice.

Mr. Julian Goldsmid, M.P., has offered to the University of London the sum of £100 per annum to be expended in the purchase of books for the library, and we understand that he proposes to make provision for continuing a like grant after his death. We need hardly say that the authorities of the University have gladly accepted his offer.

We recently noticed that Dr. Kidd, of Dublin, has been elected an Honorary Fellow of the Obstetrical Society of London. We should have added, that at the same meeting of the Society Dr. Keiller, of Edinburgh, and Dr. Tracy, of Melbourne, had a like honour conferred upon them.

At the next meeting of the Epidemiological Society, on April 12, the subject for discussion will be "The Epidemic of Relapsing Fever." Papers are promised by Mr. T. J. Dyke (of Merthyr Tydvil), Dr. Robinson (of Leeds), Dr. Buchanan, and Mr. Netten Radcliffe. We are requested to state that the Society invites the attendance of all who take an interest in the subject.

We see that the past and present students of Guy's Hospital are combining to present Mr. Cock with a testimonial on the occasion of his retirement from the senior Surgeoncy of that Hospital. Mr. Cock has high claims on the students whom he has instructed for his unvarying kindness and courtesy, to say nothing of his high merits as a teacher of practical Surgery. But he has also strong claims on the gratitude of those Members and Fellows of the College of Surgeons who recollect how well and wisely he presided over the discussions in the College at the somewhat stormy period in the history of the Profession during which he filled the Presidential chair.

We have lately drawn attention to the danger which may lurk in the basket of clean clothes from the wash. An instance in point is given in last week's police reports. At Worship-street, a man named Johnson, a laundry-man, was fined 5s. and 2s. costs for having taken clothes in to wash whilst his daughter was lying ill in the house with the small-pox. The defence was that there was carbolic acid placed in the room, and lime in the rooms for drying. Medical evidence was given that it was impossible to do more in the way of disinfection without an apparatus. Of course, no disinfection ought to have been trusted to in such a case. But exposing it to the fumes from burning sulphur is, we think, the best mode of disinfecting linen. Dewar's (of Kirkcaldy) sulphur cakes, and Herring's alcoholic solution of sulphurous acid answer very well.

Mr. Bailey Denton, in a letter to the *Times,* sounds a note of warning as to the water-supply in the coming summer. He writes :—

"We are now on the eve of a season which must be attended by a water famine among the rural poor, if it be not providentially relieved by the fall of more rain than usual, with special means taken to preserve it when it falls. At this moment the springs throughout the country are lower, and the surface ponds and pools have less water in them, than my memory recollects to have been the case in any former spring; and, as vegetation is getting rapidly forward and evaporation is becoming more active, it is not likely that the subterranean stores will be increased by any amount of rain which may now fall. But it is in the power of cottage-owners to collect a portion of the rain which may fall, by the provision of underground tanks, and so make up in some measure for the scarcity produced by the recurrence of several dry summers without the intervention of a thoroughly wet winter to effect a balance. A labourer's cottage and outbuildings generally cover about 2½ poles of land, and an inch of rain falling upon them would, if collected, furnish 354 gallons, which, at ten gallons a day, would last five weeks.

"But I venture to repeat the question I have so often, with your permission, already asked—When are we going to collect and store the surplus waters of winter (there is never a winter without surplus drainage and surface waters) for disposal in the summer ?"

SMALL-POX AT LIVERPOOL.

The number of deaths from small-pox in Liverpool, which had fallen from 129 in the ninth week of the year to 89 in the tenth and eleventh, rose again during the twelfth week, or that ending March 25, to 97. Dr. Trench, at a recent meeting of the Health Committee, pointed out the inadequacy of the ordinary Government arrangements for vaccination and revaccination in the present extraordinary emergency. Working-men and working-women could not be induced, he urged, to avail themselves of what appeared a gratuity, by going often to distant places during working hours. He suggested, therefore, that the vaccinator should go to them in the evening after their work was over; and, as an instance of the benefit that might be expected to accrue from this, mentioned the case of a densely-peopled block of buildings belonging to the Corporation in Silvester-street. In January there was a severe case of small-pox in the buildings, He immediately obtained permission for a vaccination-station to be opened there for one day, and in consequence of this 132 persons, not one of whom probably would have gone to the ordinary station, were vaccinated; and although the block stands in the very centre of an infected district, there had been only one case of small-pox in it since, and that in a person who foolishly declined to avail himself of the opportunity thus offered to him of being revaccinated.

HACKNEY TO WIT.

The Medical Officers of Hackney seem to be treated somewhat cavalierly by their lords and masters. The *Hackney and Kingsland Gazette* contains the following delicate *morceau* :—

"*The Doctor, par Excellence (!)*—Dr. Graham, who a few weeks since was appointed District Medical Officer for West Hackney, in the room of Dr. Jarvis, applied for an increase of 'stipend' on the ground that the time required for the performance of the duties was greater than he had anticipated. He also expressed the dire threat that, unless his request be granted, he must withdraw from the parochial service. Mr. Fradd suggested that, if that letter was to be considered as an offer of Dr. Graham's resignation, it should be accepted—a suggestion that met with the approval of more than one guardian present. Mr. Holmes said the whole tenour of the letter was of a piece with Dr. Graham's behaviour and speech when elected."

"The Hackney Board of Works" at a late meeting discussed the question of the "Convalescent Home," at which the conduct of their Medical Officer, Dr. Tripe, was somewhat severely handled. The paper above quoted thus finishes an account of the proceedings :—

"After a long discussion, it was decided, on a division, that permission be given to the Medical Officer of Health to make an explanation in respect to the establishment of the place in question; and thereupon Dr. Tripe proceeded at considerable length to answer the charge which had been preferred against him, that he had taken the initiative in establishing the Hospital in the neighbourhood. He concluded by remarking that even if he had in this instance shown an error of judgment, it was one for which he had been more severely castigated than he had a right to expect, as it was the first which had been brought against him, although he had been for fifteen years Medical Officer of Health for the district. Another long discussion took place as to the advisability of referring it to a special committee to take steps for the suppression of the Home, but no decision was arrived at, as at a quarter past ten a motion for the adjournment of the Board was carried by the casting vote of the Chairman, and the next meeting was fixed for Thursday night."

THE DUTY OF CORONERS.

The opinion is becoming more and more extensively spread that the office of coroner is a superfluity; that the inquiry into uncertificated deaths could be more easily effected by a Medical Officer of Health; and that when there is suspicion of foul play the duties should be performed by the police. The following narrative will show which way the wind blows:—

At an inquest held recently at the Bath Hotel, Union-street, Oldham, before J. Molesworth, Esq., coroner, touching the death of a child nine months old, who died suddenly, the jury having been sworn, the chief constable observed that he desired to ascertain where his duties as chief constable ended and those of the coroner commenced. The death in the present case was reported to him at the police-office, and in virtue of his authority he made investigation into the circumstances of the case, and arrived at the conclusion that no inquest was necessary, as no blame attached to anyone.

Coroner: As the law now stood he held it to be his duty to hold an inquest in all cases of sudden or violent death, whether suspicion attached to anyone or not.

Chief Constable: He held the contrary, and that the coroner had no right to invade the private house of any individual unless there was suspicion. Mr. Hodgkinson (Chief Constable) then read from "Burn's Justice of the Peace," as follows:— "The mere fact that a body is lying dead does not give the coroner jurisdiction, nor even the circumstance that death was sudden; there ought to be a reasonable suspicion that the party came to his death by violent or unnatural means."

Coroner: In half the cases on which inquests were held there was no suspicion.

Chief Constable: Then there was no need of an inquest.

The Coroner: If the view held by Mr. Hodgkinson was correct, he would supersede the coroner in ninety-nine cases out of 100.

Chief Constable: Not quite so great a proportion, but he should in sixty out of every 100. There were from 5 to 7 per cent. of the deaths recorded by the registrars which were registered without a Doctor's certificate, and if inquests were held upon all such, the number of cases upon which they were held would be an increase of 7 per cent. upon the whole number of deaths. He thought it was high time something should be done to define the matter, but it was more a question for the Legislature. The judges of this circuit had decided that when a man was committed for trial by the coroner he must also be committed by the magistrates. Now he did think that one of these was superfluous.

The Coroner: The magistrates could not inquire into a case unless there was suspicion.

Chief Constable: Neither could the coroner.

The Coroner remarked that the recent revelations in London had left a strong desire for inquiries into the deaths of children, to see that they had been properly treated. He then read the cases in which inquests were to be held, including all cases of violent or unnatural death; all cases in which the cause was not certified by a Medical man; on all persons found dead; and on the bodies of prisoners under whatever cause.

The Chief Constable: Then these were instructions which the registrars failed to carry out. If the coroner thought he ought to send all information of sudden deaths, he would send them, but there ought not to be different rules in different counties.

The Coroner: His idea was that it was the duty of the police, at least, to report the case to the coroner, and for him to make inquiries. Otherwise the superintendents of police would take upon themselves the inquiry which devolved upon the coroner.

Chief Constable: In sixty out of every 100 cases in which he sent information of a death he knew the verdict before ever the inquest was held, and he did think it a strange anomaly.

Coroner: If the chief constable were to neglect to send the information the coroner might deem it his duty to order a post-mortem examination, and have the body exhumed. It was for the coroner to say whether there was suspicion or not, and not leave it to the chief constable.

Here the matter dropped, but only to be renewed in a correspondence, which the coroner concluded by thus informing the chief constable of their respective duties:—"It is clearly your duty to report to me all sudden or violent deaths in your borough, and it is clearly my duty to make such inquiries as I think right and proper."

THE ALICE HOSPITAL AT DARMSTADT.

We have received reports up to March 9 of this Hospital, which continues to be under the direction of Dr. C. Mayo. It continues to receive the worst cases from the army in France.

"Several bad cases of gunshot fracture have been received from the neighbourhood of Orleans, and others from Amiens. The Hospital has now been open twenty weeks, and has received more than 700 patients. The deaths have amounted to 20, and have been due to the following causes:—Typhus, 1; typhoid fever, 8; ditto, with perforation, 1; dysentery, 3; acute meningitis, 1; phthisis, 2; pneumonia, 3; confluent small-pox, 1."

FROM ABROAD.—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR—THE MORTALITY IN THE PARIS AMBULANCES.

In his fourteenth letter, Professor Billroth enters upon the subject of gunshot injuries of the bloodvessels. As to the immediate consequences of injuries to large bloodvessels, with profuse hæmorrhage, neither he nor any of his Hospital colleagues had any opportunity of observing them, and in no instance did he meet with an example of a primary ligature of a large artery. This has been conjectured to have arisen from the fact that such patients bleed so rapidly on the battle-field that all aid arrives too late. Again, attention has been drawn to the frequency with which, in gunshot wounds of the extremities, and especially of the pelvis, the arteries escape from injury by balls, these sometimes coursing along the vessel without wounding it. It is, therefore, quite possible that injuries of great vessels are of not such frequent occurrence as *à priori* might have been expected. There are numerous instances, too, of vessels even of so large a size as the aorta being traversed by modern projectiles without hæmorrhage always following. Professor Billroth heard of a case at Carlsruhe, which, without an autopsy, would have seemed impossible. Hæmorrhage only occurred several days after the injury, the man, with a hole in his aorta, having borne the transport from Wörth to Carlsruhe without the occurrence of hæmorrhage.

We have not space to follow Professor Billroth in his detailed account of the cases which came under his care, but may select a few of more especial interest. He met with three cases in which the external iliac or femoral arteries were injured by projectiles without bleeding ensuing. In the first of these, the two ends of the external iliac were found, after death, widely separated from each other, within a traumatic aneurism the size of the fist. There was also a large hole in the iliac vein. No external hæmorrhage had taken place, and the patient died of gangrene. The case was also remarkable from the shot having traversed the bladder, and the orifice of entrance, which was in nearly direct communication with the wounded vessels, being completely healed. The orifice of exit, at the lower part of the bladder, was very narrow. There had been neither urinary infiltration nor bloody urine. The two cases of wound of the femoral were remarkably alike, no hæmorrhage having occurred, and the wounds being nearly healed; while, although there was communication with the vein, the circulation of the limb was in nowise interfered with, nor were any of the consequences usually attributed to varicose aneurism present.

Three cases were met with of "spurious aneurism," in which traumatic aneurism, following injury to the artery, sooner or later gives rise to hæmorrhage. In the first of these, hæmorrhage recurred three weeks after a gunshot wound of the thigh, having on prior occasions been temporarily arrested by compression. A large incision having been made into the aneurismal swelling and the coagula rapidly cleared out, an enormous discharge of blood took place from a hole plainly visible in the femoral, in spite of the vessel being firmly compressed under Poupart's ligament. It could, indeed, be only arrested by direct pressure by the finger on the aperture. The vessel was tied above and below this. The bleeding, however, did not cease, although the vessel was tied again and again, its walls being, in fact, too friable to allow the ligature to hold. As the patient, during these trials, had lost much blood, the external iliac was tied, hæmorrhage being suspended by pressure made within the wound. The bleeding was immediately arrested. It, however, recurred, both from the femoral and iliac, and the patient died worn out by the repeated hæmorrhage and pyæmic infection fourteen days after the ligature had been applied.

Professor Billroth next adverts to what he terms one of the most important and most difficult portions of the whole field of military surgery—secondary hæmorrhage. Among his 132 wounded patients treated at Weissenburg, he met with 16 serious cases of this, 13 of the patients dying and 3 recovering. Adding the cases, also, which he saw at Mannheim, there were 27 in all, 22 dying and 5 recovering. These figures sufficiently show the fearful danger of secondary hæmorrhage in gunshot wounds. Among the 16 cases at Weissenburg, in 3 (wounds of the neck, leg, and foot) compression and plugging were employed, and in 2 (wounds of the chest) the suture was tried. All the 5 died. In 11 cases the ligature was resorted to—in 1 (fatal) the subclavian, in 5 (3 dying) the femoral at the sartorius, and in 5 (4 dying) the external iliac having been tied. Of the 8 unsuccessful cases, only 3 proved fatal in connexion with the ligature itself—1 dying from gangrene, and 2 in consequence of bleeding from the tied artery. The other 8 patients died solely in consequence of pyæmia, sooner or later after the arrest of the bleeding by the ligature. As long as they lived there was no recurrence of the hæmorrhage. An interesting case is related of the ligature of the common carotid performed by Dr. Stephhani at Mannheim on account of repeated secondary hæmorrhage from a wound of the face. The patient seemed to have quite recovered, when, on the twenty-eighth day after the ligature, erysipelas appeared behind the ear, and on the thirtieth the hæmorrhage reappeared at the operation-wound, and evidently from the peripheric end of the vessel. Compression at the wound nearly arrested the bleeding for several days; but on the thirty-ninth day this returned again. Digital compression was kept up in the wound for thirty-six hours. The patient became excessively restless, so as to require morphia. The bleeding recurred, and, in spite of transfusion, he sank. At the autopsy, the centric end of the vessel was found filled with a firm, solid thrombus, which extended to the aorta, while the peripheric end only contained a loose putrid coagulum. There was also a splintering of the articulation of the left jaw, without any trace of callus.

In six individuals (five dying), Professor Billroth met with bleeding in the region of the subclavian or its branches, and in five of these he either tied or assisted to tie the vessel. Among them was a powerful young officer, who had received a wound, the ball entering underneath the middle of the right clavicle, and had passed out through the subscapular fossa, piercing the spina. The wound healed under simple treatment, and he was about to return home, when, on the nineteenth day, hæmorrhage took place from the posterior wound, and recurred again and again, in spite of compression and the other means that were employed, reducing him to the lowest ebb. An attempt at digital compression had to be given up, on account of the pain it caused, and the styptics with plugging proving useless, the ligature evidently became the only resource. The blood poured from behind the scapular wound, but its exact source could only be conjectured. An attempt to tie the vessel within the wound would require a preliminary partial excision of the scapula; and the difficulty of such an operation, even when performed by Langenbeck, and the great hæmorrhage which usually accompanies it, would naturally cause hesitation in its adoption on the present occasion. It was therefore resolved to tie the subclavian in the usual place above the clavicle, and the ligature effectually arrested the hæmorrhage. But eighty-four hours after the operation profuse hæmorrhage appeared at the seat of the ligature, the bleeding being fearful, so as hardly to be capable of restraint by means of the finger passed into the wound. So great was the pain caused by this compression, that although the patient was in an anæmic state, it was found necessary to anæsthetise him before proceeding to a new operation. This operation, performed at night, with the aid of only a few assistants, was attended with immense difficulty. While exposing the vessel behind the scalenus in order to get at the centric divided end, the internal jugular was wounded, and had to be secured. After this end of the artery had been secured with great difficulty, as some blood issued also from the peripheric end, this, too, was tied to render matters more secure. The operation, performed at midnight, took three-quarters of an hour to complete. The patient recovered his consciousness, and was well supplied with stimulants; but a few hours afterwards he finally sank.

In his next letter Professor Billroth enters into the general question of the treatment of hæmorrhage.

According to the *Presse Médicale Belge* for March 26, there are still in Paris 10,000 wounded treated in 700 ambulances. The statistics of these ambulances amply exhibit the fact so easily demonstrated at Brussels, of the great superiority of the "American" system. Thus we may compare the ambulance under the direction of Nélaton, at the Grand Hôtel, with the American ambulance established in the Avenue Uhrich, which, as regards the number of wounded, were of equal importance. At the Grand Hôtel not a single subject of amputation was saved; while in the American ambulance 2 in 10 only were lost in the worst cases. In the former, the mortality was 80 per cent.; and in the latter at first only 4·70 per cent. After the "*affaire du Bourget*" the wounded suffered from cold, and greatly from bad diet, and then the mean mortality mounted up to 13 per cent. As the siege became more and more distressing, the sick felt its effects in an increased degree, and the mortality attained its maximum of 20 per cent. Thus between these two ambulances there was the enormous difference of 75 per cent. This difference was chiefly attributable to the difference in the hygienic conditions of the two establishments. The ventilation was excellent in the American ambulance, while in the rooms of the Grand Hôtel it was quite insufficient. Moreover, there the great imprudence had been committed of leaving the carpets and curtains, and hospital gangrene furnished a large contingent to the mortality.

PARLIAMENTARY.—MADRAS MEDICAL FUND—CONTAGIOUS DISEASES ACT CORRESPONDENCE—LICENSING BILL—LOCAL GOVERNMENT AND TAXATION—EXCESSIVE MORTALITY AMONGST INFANTS—REMOVAL OF DESTITUTE PAUPERS DURING THE SMALL-POX EPIDEMIC.

In the House of Commons, on Friday, March 31,

In reply to Mr. Barclay,

Mr. Grant-Duff said no decision had been arrived at with respect to the course to be adopted in reference to the annuity branch of the Madras Medical Fund. Unavoidable delay had occurred from the necessity for fresh reference to the actuary, but the hon. member might rely upon there being no avoidable delay.

On Monday, in reply to Mr. Gilpin, Mr. Gladstone intimated his willingness to produce certain correspondence that had passed between himself and the Honorary Secretaries of the Association for the Extension of the Contagious Diseases Act, and also correspondence between himself and the Chairman of the National Association for the Repeal of the Contagious Diseases Act.

Mr. Bruce brought in his Licensing Bill. He commenced by stating certain defects in the present system, which it was essary to cure—viz., that more licences are granted than necessary, and the mode of issuing them is unsatisfactory; that there is no security for the orderly management of public-houses, nor for the prevention of adulteration, and that the hours of opening are too long. And the remedy would proceed on these two principles: that the public have a right to have a sufficient number of respectably conducted refreshment-houses open, and that all vested interests shall be fairly considered. Dealing first with houses for consumption "off the premises," Mr. Bruce stated that the change in the law would be very slight, chiefly consisting of an abolition of the Table Beer Licence, and the requiring of a justice's certificate previous to the Excise licence in every case except that of wholesale dealers and wine licences. Then passing to the larger class, houses for consumption on the premises, Mr. Bruce stated that the existing districts will be considerably subdivided, and that it will be left to the local magistrates in the first instance to decide in each district, without appeal, how many licences shall be allowed. But if they go beyond a certain proportion to the population, the ratepayers may challenge their decision, and demand a poll. The certificates will only be for a certain period, liable to revocation; and the Excise licences which are to follow on them will be of two sorts—a general licence corresponding to the present publican's licence, and a limited licence corresponding to the beer licence; and there will also be a special description of licences issued for hotels and eating-houses. As to the hours of closing, the Bill proposes to equalise public- and beer-houses, and to close all at midnight in London, at eleven in the country towns, and ten in the rural districts, but with power to the magistrates, with the consent of the ratepayers, to shorten that time by one hour. The opening hour is to be seven o'clock in the morning, with special arrangements for districts where there are markets and the like cases. The hours on Sunday will be from one to three and from seven to nine o'clock. In explaining next the penal clauses of the Bill, Mr. Bruce laid great stress on a proposal that all the penalties shall be endorsed on the back of the licence, and if they amount to £65 in three years, or £100 in five years, the licence will be forfeited—the disability to attach not only to the house but to the manager. A traveller is defined as a person five miles from his home; the fine for drunkenness is raised to 20s., or imprisonment with hard labour, with heavier punishment for persons in charge of horses, steam-engines, or dangerous weapons. The penalties against adulteration are very severe—heavy fines with imprisonment, ending in forfeiture of the licence; and the £130,000 a year which Mr. Bruce expects to get from the sale of licences and the licence rents is to be applied in maintaining a special force of inspectors, who will be empowered to visit the public-houses all over the country, to take samples of the liquor sold, and to have them analysed.

Mr. Goschen introduced his two Bills for the remodelling of our system of local Government and taxation. At the end of a long and able speech, he thus summed up the objects of his measure:—It was proposed to consolidate all rates; to have one universal system of deduction; to have one parochial system of elections instead of two; an audit covering the whole of the country; to organise the parish; to establish a civil head which would represent the parish in all parochial affairs; to limit the powers of the vestry to deliberate functions, and to transfer the executive functions to a simple parochial Board; to utilise the chairman of the Parochial Board in order to elect the representatives of the County Financial Boards; to extend the provisions of the Sanitary Acts so as to provide for Hospitals and other matters not sufficiently provided for at present; to give greater coercive powers to the central authority to carry out the Sanitary Acts; to combine in one department all the business relating to local government, and to provide for the simplification of areas. With regard to finance, they proposed to make all hereditaments, both visible and invisible, liable to rates; to improve the mode of valuation by making owners and occupiers each liable for half the rates, and to surrender the house-tax in relief of the local rates. Her Majesty's Government trusted, notwithstanding the large amount of business to be transacted in the course of this session, to carry through Parliament the measure, the provisions of which he had sketched, because it was not only important in itself, but would provide the means for still further legislation, which was at present almost at a standstill for the want of powers necessary to carry it out. The right hon. gentleman concluded by moving for leave to bring in the Bills which he had described in his speech.

Sir M. H. Beach moved the adjournment of the debate.

After some discussion, the motion for the adjournment was carried.

On Tuesday,

Mr. Charley gave notice that on Friday, May 5, he would call attention to the excessive mortality among infants, and move for a select committee to inquire as to the best means of preventing this destruction of infant life.

Mr. Downing asked the President of the Poor-law Board whether any steps had been taken or advised to guard against the removal of the destitute from unions in England and Scotland, where the small-pox had prevailed, to Ireland; and, if so, the nature thereof.

Mr. Stansfeld said the Poor-law Board had no power to suspend any removals; but he had addressed a circular letter to those unions from which removals to Ireland most frequently occurred, advising the suspension of such removals while the epidemic prevailed.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	Feb. 25.	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.	April 1.	April 1. Sent to Hospital.
WEST—							
Chelsea	12	10	6	6	5	?	—
St. George, Hanover-square	14	16	7	19	10	11	9
St. Margaret and St. John, Westminster	47	30	27	?	?	?	—
St. James, Westminster	8	3	3	8	4	4	1
NORTH—							
St. Pancras	64	62	69	63	65	41	?
Islington	31	62	23	34	49	26	9
Hackney	30	36	41	31	24*	?	—
CENTRAL—							
City of London	20	22	17	13	13	13	3
St. Giles-in-the-Fields	10	5	10	?	5	8	6
Holborn	5	2	3	3	2	3	2
St. Luke's	?	20	27	18	12	?	—
EAST—							
Whitechapel	31	34	32	15	33	?	—
Poplar	?	9	?	?	?	11	5
SOUTH—							
St. Mary, Newington	8	16	19	?	28	23	18
St. Olave, Southwark	4	2	9	1	11	5	1
St. George-the-Martyr, Southwark	3	?	17	5	?	9	8
Bermondsey	20	15	?	?	?	?	—
Lambeth	28	12	28	33	33	?	—
Clapham	5	28	17	29	22	13	7
Battersea	14	?	13	?	?	?	—
Wandsworth	5	4	?	3	5	10	3
Putney	—	—	1	?	?	?	—
Streatham	?	1	?	2	3	3	?
Camberwell	5	26	14	13	4	4	1
Greenwich	—	2	?	?	—	—	—
Lewisham	2	1	16	2	?	2	—
Plumstead	4	1	1	4	6	4	—

* Return imperfect.

HYDROPHOBIA IN CHESHIRE.—At the meeting of the Northwich Local Board, on Saturday, several cases of hydrophobia were reported, and it was said that cases were of daily occurrence in the neighbourhood. A farmer at Marston had had to shoot two heifers, and other animals had had to be destroyed through the disease. The Board decided rigidly to enforce the law that owners of dogs should have them muzzled.

THE *New York Druggists' Circular* informs us that borax is superior to everything else for exterminating the cockroach. The smell or touch of borax is said to be certain death to them.

THE ARMY MEDICAL SCHOOL AT NETLEY.

The twenty-second session of the Army Medical School was opened on Monday, April 3, by an address from Dr. Maclean, the Professor of Military Medicine. Sir Galbraith Logan, K.C.B., Director-General of the Army Medical Department, and Dr. Armstrong, C.B., Director-General of the Medical Department of the Navy, came down from London to be present at the address. Colonel Evans Gordon, the Commandant, and all the staff of the Hospital and School were also present.

Dr. Maclean, in bidding the candidates for the Army Medical Department welcome to Netley, referred to the fact that for two years the Service had been closed, and that the Indian Medical Service had also for the last year received no recruits. Now, he hoped, the stream would flow again. The present session was also distinguished by an important step which had been taken by the Director-General of the Naval Medical Service. He thought the sending of the young naval Assistant-Surgeons to Netley was a wise proceeding, which his colleagues and himself had had pleasure in aiding as far as they could. They were all delighted to welcome the Naval Assistant-Surgeons, and he had no fear but that there would be the most cordial feeling between the two Services. They had never had at Netley any Service distinctions, and between the army and the Indian candidates there had never existed other than the most friendly feeling. He did not doubt it would be the same with the navy. He then pointed out how desirable it was to use the means of tuition already provided at Netley, instead of forming a fresh school for the navy Surgeons, and in how many ways the same teaching which was useful to army Medical officers would equally benefit their brethren of the navy. In future wars, also, the precedent of the Crimean, Chinese, and Abyssinian wars would no doubt be followed, and we should see large employment made, both of marines and blue-jackets, for land service. After enlarging on this topic and stating that, when the exigencies of the Service would permit, a naval Medical officer of great reputation and acquirements would be added to the leading staff at Netley, Dr. Maclean referred to the great war just ended, and glanced at various questions which it raised in respect to the action of Medical officers and to the voluntary Medical and other assistance which is now so freely offered by every nation during war. He expressed an opinion that the peace establishment of an army could never suffice for war, and that the proper course was so to organise in time of peace the volunteer assistance which would be wanted for war, that when necessary it could be set in motion without delay or difficulty, and be brought into complete co-operation and regulation by a proper union with the regular Medical staff of the army. He then turned to the work of the coming session, impressed on the gentlemen who were about to enter the two Services the necessity of gentlemanlike and correct behaviour, as the honour of the Hospital and of the Services were in their hands, and concluded a very telling and eloquent address amidst loud applause.

The Commandant (Colonel Gordon), after thanking Dr. Maclean for his excellent lecture, congratulated his hearers on the union at Netley of the two Services, and expressed his earnest hope that the four months at Netley would be not only a profitable but a pleasant time.

Sir Galbraith Logan and Dr. Armstrong then made a few observations. The former urged on the candidates the importance of making the utmost use of the opportunities at Netley, and stated how important he considered it to be that the specialities of army Medicine and Surgery should be thoroughly acquired at the outset of a Medical officer's career. He referred to an alteration in the London examination which he had introduced by the establishment of a voluntary examination in modern languages. He had been very much pleased to find that, out of fifty-seven candidates, no less than twenty-seven had undergone a voluntary examination in French, and several in German. He impressed on them the importance of keeping up these languages. In connexion with this subject he referred in very feeling terms to the death of Count Wollowicz, whose knowledge of languages was so remarkable, and who in all other ways was one of the most promising young officers he had ever known. After a few words of kindly welcome to the navy Medical officers, Sir Galbraith Logan expressed the pleasure he felt in seeing the School again in full work, and in hearing the admirable address from the Professor of Medicine.

Dr. Armstrong said it had been his strong desire for some time that all gentlemen entering the Medical Service of the navy should go through the Netley school. He anticipated great benefit to the Service, and he hoped that the naval Assistant-Surgeons he had now sent would endeavour to their utmost to profit by the instruction, and to do honour to the Service they had entered.

THE HEALTH OF THE NAVY.

The practice of publishing a statistical abstract of the health of the navy in a separate form as soon as compiled, leaving the Medical observations and reports, when selected and duly elaborated, to follow in a larger volume, puts us in possession, at an earlier date than would otherwise be the case, of the numerical results of the year's contest with disease at various stations. The period embraced by the statistical abstract, however, being from July of one year till June of next, while that treated of in the larger volume is from January till December of the same year, gives rise to a certain amount of confusion in the study of these reports.

During the twelve months from July 1, 1869, till June 30, 1870, inclusive, a trifling increase in the ratio of cases entered on the sick-list, and of invaliding, and a comparatively high increase in the death-rate, occurred. The latter was altogether occasioned by the prevalence of yellow fever in the West Indies and on the south-east coast of America, causing fifty-one deaths on the former, and ten on the latter station, and by the loss of the gunboat *Slaney* in China, whereby thirty-four lives were lost.

It is satisfactory to learn that the system of transferring vessels employed on the west coast of Africa to other stations, after a comparatively brief period of service, continues to be attended with good results. The rate of admissions on that station was 1724 per 1000, an increase of 164 as compared with the preceding year, but more than 200 below the average of fourteen years, while the death-rate was only 7·8 per 1000, a decrease of 2 per 1000 as compared with the previous twelve months, when the mortality was the lowest on record, and 17·6 per 1000 below the average mortality for fourteen years.

The efficient manner in which the Contagious Diseases Act has been enforced at the Cape of Good Hope has borne fruit in the fact that from January till June, 1870, during which the *Gladiator*, with a crew of 240 men, was moored in Simon's Bay, although the men had free access to the shore, abundant leave being granted them, only one case of syphilis occurred.

On the East Indies station, on the other hand, venereal diseases caused a very considerable amount of inefficiency. In the *Forte* great loss of service was occasioned, while the vessel was at Bombay, by syphilis contracted there, and most of the cases of rheumatism which subsequently were placed on the sick-list had a syphilitic origin. In the *Daphne* the greatest loss of service was from venereal diseases contracted at Bombay. The *Dryad* suffered similarly, at the same station. In the *Nymphe*, syphilis contracted at different ports, Bombay among the number, caused more loss of service than any other form of disease, the cases, as a rule, being exceedingly tedious in their progress.

During the stay of the iron-clad ship *Ocean* in Japan, the greatest loss of service was from syphilitic diseases, contracted at the Yoshiwarra, the great public brothel of Yokohama. The disease was exceptionally virulent, and in many cases symptoms of constitutional syphilis of a most malignant type ensued. The crews of other vessels on the same station suffered in a similar manner. Small-pox broke out among the crews of a considerable portion of the vessels employed on the China station. On board the *Zebra*, with an average strength of 190, twenty-three cases presented themselves, being more than 12 per cent. of the strength. Fortunately all made good recoveries ; but a marine drafted from that ship to the *Icarus* is supposed to have imported the disease among the crew of the latter, of whom two died. The impracticability of complete isolation on board ship, particularly while at sea, renders the appearance of any form of infectious disease a matter of very grave anxiety, and so much the more necessary is the adoption of all preventive measures, among which in the case of small-pox the rigorous vaccination or re-vaccination of all ranks on entering the service should be universally enforced. We believe that the present epidemic of small-pox in this country has caused greater attention to this point as regards the crews of vessels on home stations ; but the practice of vaccination of those on foreign stations, and especially of all men of the coloured races, even while only temporarily employed, should be established as an inviolable rule.

It is remarkable that in almost all vessels passing more than a few weeks at sea, boils, abscesses, and ulcers, "attributable to the nature of the diet," caused a very large amount of inefficiency. On the cadet training-ship *Bristol*, which, while attached to the flying squadron, had been 169 days at sea, and had been necessarily victualled very much on salt provisions during that time, the loss of service from boils, etc., amounted to 2607 days—or, in other words, more than seven men were daily incapacitated for duty from these causes alone.

Only three deaths by suicide are reported in the total force, but seventy-seven men were drowned, a considerable number of whom most probably must have committed suicide. The death-rate for the whole force was 10·3 per 1000, varying from 7 on the home and Mediterranean stations, to 23·1 on the North American and West Indies stations, and 24·2 on the China station. Omitting the deaths caused by the loss of the *Slaney*, the death-rate from disease alone was 7·5 per 1000. During the preceding twelve months it was only 5·8 per 1000.

The iron-clad ships held a favourable position in comparison with the other vessels on the same stations; and of all sea-going vessels they presented the lowest ratio of cases placed on the sick-list, or 12·66 per 1000 of the total force, their death-rate, 8·2 per 1000, being 2·1 per 1000 below the average mortality of the total force.

REPORT OF THE ROYAL SANITARY COMMISSION.

No. IV.—Central Authority.

The Commissioners having affirmed the proposition that there must be local administration of sanitary affairs, lay it down as indispensable that there should be, in addition, a central authority. Of this authority, the function should be to keep the local executive everywhere in action; to aid it when higher skill or information is needed, and to carry out numerous matters of central superintendence.

The Report attributes the present inefficiency of the central authority to three causes—viz., want of concentration, want of central officers, and the want of constant official communication between central and local offices. The want of concentration is evidenced by the fact that, at present, questions of local government are referred to the Local Government Act Department of the Privy Council; measures for diseases prevention to the Privy Council; and certain other matters to the Board of Trade.

Turning next to the question of the particular department to which should be intrusted the various functions thus spread abroad, the Commissioners find ready to hand the Poor-law Board. The Privy Council presented itself, but the Commissioners failed to discover any especial reason why regulations bearing upon disease should emanate from that department. The Home Office, too, was found to have no means of ascertaining sanitary wants; no officers of health; no inspectors to report; no knowledge of the amount of sickness in the country, and, indeed, no officers who could furnish such information. But in the Poor-law Board (say the Commissioners) was found a department in the closest relation with every parish in the kingdom upon matters intimately connected with sanitary measures, possessing a staff of inspectors widely acquainted with the condition of every district, and having also a complete and efficient body of Medical officers, who could be made available for many purposes of sanitary inquiry and information. The Commissioners state that on these grounds, amongst others, they "are led irresistibly to the conclusion that the various branches of sanitary administration could best be superintended by a Minister, who should, at the same time, be charged with the administration of the Poor-law."

Their conclusions appear to be supported by the consideration that the subjects of public health and poor relief are necessarily cognate. Sanitary law must bear a constant ratio to poor-laws—the one making provision for health, the other for that destitution of which sickness is both the cause and effect. Hence, all sanitary and poor-law administration seem naturally capable of being arranged in two sub-departments, under one common head. But upon the necessity for two sub-departments the Report lays great stress, alleging that it would lead to great misconception were we, even apparently, to subordinate the care of health to the provision for infirmity, and the economy of public wealth to the relief of destitution. They therefore propose that the title of the Minister under whom these two heads of administration should be placed should clearly signify that his charge is of two distinct, though correlative, departments. That title, as is now generally understood, will be that of "Minister of Health and the Poor."

For the provision of inspection under the new ministry, the Commissioners recommend that the three inspectors of the present Local Government Act Office and those of the Medical Department of the Privy Council should be amalgamated with the present poor-law inspectorate. To the numbers of these, such additions should be made as the amount of work or the technical nature of the inquiries to be conducted may render necessary, considerable discretion being left to the central authority as regards this particular point.

On one point the Commissioners express themselves with much decision; and, as their opinion is directly at variance with the recent policy of the Poor-law Board, which has been to introduce a class of sub-inspectors, we commend it to the notice of the present President. The Commissioners admit that they "prefer putting additional inspectors over reduced areas to giving to the inspectors assistants, and thus making two inspectors travel over the same ground, and introducing an inferior class of men into the central service."

Another advantage which the report discovers will arise from the coupling of sanitary and poor-law administration, will be the union of the Medical staff for both purposes, thus making Mr. Simon, Dr. Smith, and Dr. Bridges available for the superintendence of public health and poor relief indifferently.

But while proposing fully to equip, both generally and Medically, the central authority, the Commissioners wish it to be understood that it must avoid taking upon itself the actual work of local government, but should assume only the task of direction. This, at least, is the general tenour of the remarks, though—with some apparent contradiction—they recommend that power should be given to the central authority, in case of necessity, to enter and execute works. This is probably, however, merely intended to be "power in reserve," of which they elsewhere speak as being a useful stimulus to local authorities, —in fact, a sort of "rod in pickle," intended more for purposes of intimidation than for actual use.

The Report does not overlook the possible, though not very probable, case where the local authority miscarries not by default but by excess, and suggests that, were the check exercised by ratepayers over extravagant representatives to prove insufficient, it would be well that the general superintendence of the central authority should be extended to such cases also. But, as a general rule, the interference of the central authority will be required in the reverse direction—that is to say, not to check excess, but to forbid default. Therefore it is that the Commissioners consider that there should be one recognised and sufficiently powerful Minister, not to centralise administration, but, on the contrary, to set local life in motion—a real motive power, and an authority to be referred to for guidance and assistance by all the sanitary authorities for local government throughout the country. Great is the *vis inertiæ* to be overcome; the repugnance to self-taxation; the practical distrust of science; and vast is the number of persons interested in offending against sanitary laws, even amongst those who must constitute chiefly the local authorities to enforce them.

Under such a scheme as the Report sketches, the Commissioners anticipate that "all the powers of local government will acquire new strength and meaning from their completion on a national system. When pollution of water, for instance, is made universally and practically penal, it will have to bear the brunt of national condemnation as a nuisance. Local prejudice and apathy cannot long resist established public opinion. More uniform practice will range national habit on the side of the law. The advance of practical science, no longer discredited by the scoffs of ignorance, will have the means of wide illustration to carry conviction. The community will first learn, and then demand, their right to protection from preventible diseases and death, in return for rates levied on them by a local authority responsible everywhere for public health."

The brutal fellow who bit off a portion of his brother's tongue, in the neighbourhood of Rhyl, has been sentenced to five years' penal servitude, at Flintshire Assizes.

BARON MUNDY'S REPORT ON THE AMBULANCE DE L'ANCIEN CORPS LEGISLATIF.

This Ambulance was established on September 19, 1870, in the Palace of the President *de l'Ancien Corps Legislatif*, and closed on January 31, 1871. M. le Baron Dr. T. Mundy was the Medical Director; Dr. Mosetig, of Vienna, the Surgeon-in-Chief; and Messrs. Christensen and Nissen, Norwegian Surgeons, were the Resident Medical Officers. The subordinate staff was composed of foreigners and Frenchmen, and all its members are mentioned with honour in Dr. Mundy's Report. Dr. Mundy had ample funds placed at his disposal, and appears to have expended them with judicious liberality. He esteems success in treatment rather than minute accuracy in all the details of expenditure, per patient daily, to be the most desirable end of Hospital administration. He regretted, however, to observe that the Finance Committee was animated by a too scrutinising spirit, which evidently clashed no little with his more liberal views, but in order to satisfy all its demands he reduces, with ironical minuteness, the daily expenditure of 5 fr. 12c. per patient to its equivalent by the hour, minute, and second! Considering a good *cuisine* to be the most important element in modern hygiene, he applied nearly the half of the total funds of the Ambulance to this purpose, and is justly proud at having managed, notwithstanding the famine and its innumerable difficulties, to have a choice and varied bill of fare daily.

The number of beds, at first 50, was increased to 100 towards the end of October, with a room for officers, containing five beds. To the non-Professional eye the imposing exterior of the building conveyed a very deceptive impression as to its suitability for the purpose of a Hospital. When judged on hygienic principles, its radical defects were many, and to a great extent irremediable. The magnificent ball-room, with its contiguous gallery and seven *salons* opening into one another, with windows of colossal dimensions, all on the same side, and with walls covered with tapestry, was incapable of thorough ventilation, and formed a veritable focus for materials of infection of all sorts. It was only by the most scrupulous maintenance of cleanliness in every particular—the frequent transference of the wounded to fresh beds (as far as possible two beds for each patient were calculated on), unremitting disinfection, a constant supply of fresh dressings, the plentiful use of carbolic acid and Condy's fluid, and a perpetual change of air and of all materials employed—that the outbreak of hospital gangrene and other infectious diseases was prevented.

The original intention of reserving the ambulance for Surgical cases, notwithstanding the protests of Dr. Mundy as to the injurious results of promiscuously introducing sick into an ambulance exclusively established for the treatment of wounded men, was departed from, and during the first three weeks in January 104 patients suffering from typhus and typhoid fever, diphtheria, dysentery, and small-pox were admitted for treatment. The result proved the truth of Dr. Mundy's warnings; eight of the newly-admitted patients died in less than three weeks; one of the wounded was attacked by small-pox during his convalescence, and had his life again imperilled. The service of the Ambulance was accordingly suspended on January 27, the wounded and convalescents were transferred to other ambulances, and measures taken for the thorough cleansing and disinfection of the building and all the Hospital material.

Ninety-one wounded were admitted directly from the field, and 45 from other ambulances. No case of bayonet or sword wound was admitted. Among this number, 7 primary and 18 secondary operations of varying degrees of importance were performed. The primary operations were—amputation of the thigh, 2; exarticulation of the hip, 1; resection of the lower jaw, 2—the injury of the bone in both cases being complicated with laceration of the tongue and perforation of the œsophagus; amputation of fingers, 1; and resection of metacarpal bone of thumb, 1. The secondary operations included—ligature of the femoral artery, 1; elevation and removal of portion of parietal bone, 1; amputation of the arm, 2; excision of head of humerus, 1; of astragalus, 1; and of metatarsal bones, 2; resections in the shaft of tibia and fibula, 4; and of the elbow and radius, 2; re-amputation of stump of thigh, 1. No deaths occurred after any of the secondary operations, but four of the primary operations—namely, the two amputations of thigh, the exarticulation of hip, and one of the resections of the lower jaw—terminated fatally. Seventeen other deaths occurred among the wounded—namely, 2 from typhus attacking patients suffering from wound of the head and arm, 1 from wound of neck complicated with fracture of base of skull, 2 from penetrating wound of chest, 1 from fracture of vertebræ, 4 from penetrating wounds of abdomen, 1 from wound and fracture of hip, 2 from wound of thigh complicated with laceration of large veins, and 3 from same cause with fracture, 1 from wound and fracture of knee, 1 from gangrene, 1 from fracture of leg, and 1 from wound of bones of hand. The total mortality among 247 wounded and sick was 29, or a little more than 11 per cent. It will thus be seen that, considering the nature of the operations, the severity of the wounds, and the circumstances of the siege, the practice of Dr. Mundy and his colleagues was attended by a very gratifying degree of success; there was not a single case of hospital gangrene, and there was only one case of purulent absorption, consequent upon abrasion of the leg and gangrene from frost-bite, in which the patient declined amputation. But it should be remembered that the history of the 96 convalescent wounded transferred to other ambulances remains incomplete, and that only 19 were discharged as cured and fit for duty with their corps.

CLINICAL EXPERIENCES OF CHOREA.

By Professor STEINER, of Prague.

This work embodies the results of the author's observation of fifty-two cases of chorea treated in the Childrens' Hospital, at Prague. Of this number three cases were fatal. *The first case*, a boy, of 8½ years, was seized with chorea after falling down a cellar step, and the autopsy pointed to a growth of cellular tissue in the substance of the spinal marrow as the probable cause of the disease. Chorea came on *in the second case*, a little girl of 9 years old, a few days after she had been playing, and with back to back and hands over her head had been swinging her companion. She died, and an abundant extravasation of serum fluid into the spinal cord, with hyperæmia of the cord and its meninges, was found after death—changes which appeared to be the result of her violent exertion, and the cause of the chorea. This conclusion was confirmed by four other similar cases resulting from the same cause, which recovered. *In the third case*, a boy, of 6 years old, it was proved that the chorea was the expression of an inflammatory exudation into the spinal canal, following an attack of articular rheumatism with consecutive peri-and-endocarditis. The patient was improving, when sudden serous effusion into both pleuræ with acute œdema of the lungs supervened. Out of 252 cases the author has only seen four cases occur *in the course of acute articular rheumatism*. He regards the frequent coincidence of the two diseases in France as due to some local influences, but comes to the conclusion that acute rheumatism, with or without endocarditis, may cause chorea *in a certain number of cases*. He does not agree with those French authors who look upon acute rheumatism and chorea as but one disease expressing itself in a two-fold way, though it is easy to see the connexion between the two diseases. Its clinical course, no less than its anatomical appearances, proves that acute rheumatism has a great tendency to affect the serous membranes, and in certain cases the disease localises itself not only in the joints, but also in the spinal membranes, the irritation of which produces the symptoms of chorea. In other cases the author considers chorea to depend essentially *upon a disturbed nutrition and an increased excitation of the spinal marrow*. The cause of this spinal irritation is, in the majority of cases, anæmia and a faulty condition of the blood, a conclusion borne out by the consideration of the following facts.

1. Children who suffer from chorea have generally grown rapidly; are of tender build; weakly; anæmic. 2. Certain acute infectious diseases—viz., scarlet fever, measles, typhus—often cut short the chorea altogether, or temporarily. 3. A nutritious diet and tonics have a beneficial influence upon the disease. 4. Blowing murmurs are audible over the heart and in the veins, which disappear as the patient improves.

This condition of anæmia is frequently associated with irregularities of growth and development. Chorea generally occurs between the ages of 5 and 11 years, or during the period in which the teeth and the sexual organs become developed, and in many cases might be called, the author thinks, a disease of development.

In a smaller number of cases, the spinal irritation seems to arise from changes in the spinal cord and its membranes; as, for instance, in the case related above, in which a growth of cellular tissue was found in the substance of the cord. It is possible that in many cases similar recent growths have been present without being discovered; hence, a thorough microscopical examination of the spinal cord is most essential to the right understanding of the true nature of chorea. The growth may be small, circumscribed, or diffuse; may cause slight or serious mechanical irritation; and the symptoms vary accordingly. In short, the author regards chorea as an irritation of the spinal cord, induced and maintained—(1) by anæmia, (2) hyperæmia, (3) serous and hæmorrhagic exudations, (4) by new growths and organic changes in the region of the spinal marrow and its membranes. This spinal irritation may have a traumatic or a rheumatic origin, or may result, as above, from some anomalous conditions of development and growth. The author therefore classes chorea amongst affections of the spinal cord.

The course of chorea is generally chronic. He has only seen one acute fatal case. In some instances chorea has been cut short by the supervention of one of the acute infectious diseases. In a little girl, 6 years old, a severe attack of scarlet fever cut short the chorea, which never returned. In another case, an attack of measles cured chorea of long standing; it returned, however, after the measles had left, but in a milder form. Chorea often returns. Of fifty-two cases, the author saw it return in five children *twice*, in one child *three* times, in two children *four* times; the interval varied from four months to two years. *With regard to treatment*, on the principle that chorea is, in the majority of cases, associated with anæmia, he gives iron alone, or in combination with nervine tonics, as zinci oxyd. If it be associated with rheumatism, he gives quinine and digitalis, but the most successful remedy in his hands has been Fowler's tincture, which he has rarely found fail, especially if iron be given first. The largest dose in one day was eight drops, but he begins with a dose of one drop, and gradually increases it. Its use is not continued after fourteen days, if no benefit results. He also uses cold water in many cases, in the shape of wet sheets.

Upon Vascular-Motor Disturbances of the Extremities in some Febrile Diseases, especially in Pneumonia.

By R. LEPINE.

Much attention has been paid to the congestion of one or other cheek that occurs in pneumonia, but comparatively little to the vascular-motor disorders that take place in the extremities in febrile diseases, especially in the case of old people.

The chief symptom of these vascular-motor disorders is a very important increase of the temperature of the extremities of the one side of the body. The difference of temperature may be perceptible in one part, or over the whole of the extremity, or even over the upper and lower extremity, but it is more frequent in the upper limb. It is occasionally accompanied with increased redness of the skin. The author has found the difference of temperature to vary from 1° to 3° centigrade. In cases where the upper extremities exhibited a great difference of temperature, the thermometer in the axilla *only* indicated an increase of some tenths. As a rule the increase of temperature of the extremities was found on the side of the body corresponding to the affected side of the chest.

The symptom does not appear to have any great prognostic importance; the cause is not yet quite clear, but it is conjectured that it is dependent upon a functional derangement of the hemispheres of the brain, and is analogous to pneumonic hemiplegias. Though in no case, as yet, has any apoplectic symptom been noticed, yet some alteration in the cerebral condition of those suffering from this complaint has been remarked. The author has more than once seen slight hyperæmia of the medulla and the sympathetic. It remains for pathology to explain this very interesting symptom.

Acute Atrophy of the Liver.

By Dr. BUDESPITZ, Physician to the Wiedner Hospital.

S. A., aged 18, single, workwoman, admitted May 29, 1869. For eight days before admission complained of headache, giddiness, vomiting of bilious matter. Previously always healthy. Menstruation began at 16 years of age; then ceased for a year. For two and a half months the menses had returned every fourteen days. She had lost much blood at the last monthly period. No other cause but great mental depression and anxiety could be found for her illness.

Present Condition.—Patient well developed; body of icteric colour; sclerotic yellow; pupil somewhat dilated; lungs and heart normal. *The liver dulness reached from the fifth to the eighth rib.* Stomach distended; abdomen tympanitic; left inguinal glands swollen; slight blenorrhœa vaginæ. The patient complained of retching, sickness, and giddiness. Pulse 84; temperature somewhat increased; tongue coated; *stomach* and *liver region* tender. Ordered ice to the head, warm fomentations to the liver; alkaline mixture.

May 30. — The giddiness had ceased; slight retching; pulse 84; tongue coated; no stool.

31st.—Two stools; pulse 90.

June 1 to 6.—During these days she was free from headache; much exhausted; pulse 80—90; a water injection brought away stools, partly coloured partly colourless.

7th to 11th.—Severe headache suddenly came on, with night sweats, vomiting, retching; the colour of skin more yellow; tongue coated; pulse 84—96; great thirst. "Quinine was now given; an enema daily; and ice to the head and by mouth."

12th.—Headache and retching less; pulse 86; night sweats; greater thirst.

13th.—A very restless night. The patient was very delirious, tossing to and fro in bed, and shrieking; could hardly be kept in bed. *The very slightest touch in the region of the liver caused severe pain.* Muscles of face distorted. Abdomen distended and very tender to the touch. Night sweats; unconsciousness; trismus. Percussion of the liver gave a resonant sound between the *sixth* and *seventh* rib; everywhere else percussion clear and tympanitic. On account of the trismus medicines could not be swallowed. Morphia was injected subcutaneously.

14th.—She was quiet one hour after the injection. Unconsciousness continued. Urine and fæces passed involuntarily. The patient groaned whenever the liver region was touched; the jaws tightly clenched; pupils insensible to light; extremities cold; pulse hardly perceptible. She died convulsed at 8 in the evening.

Analysis of the Urine during Life.—Urinary sediment contained much mucus, some lithates, and epithelium; slightly acid; sp. gr. 1012; odour of bile; colour yellowish brown. The urea, chlorides, sulphates, phosphates, uric acid, all diminished in quantity. Pigment matter, carbonate of ammonia and lithates present, and much cholepyrrhia.

Post-mortem Examination.—Body well-nourished; skin of icteric colour; brain membranes tinged yellow; brain œdematous. Left lung adherent in lower lobes; hypostatic congestions; in pericardial cavity half an ounce of yellowish fluid; ecchymoses on surface of heart. *Liver weighed* 1 lb. 9½ oz., and had all the appearance of acute yellow atrophy. The gall-bladder contained tenacious mucus; stomach distended, its mucous membrane swollen; ovaries enlarged.

REVIEWS.

◆

The Treatment of Surgical Inflammations by a New Method, which greatly Shortens their Duration. By FURNEAUX JORDAN, F.R.C.S. Eng., Surgeon to the Queen's Hospital, etc., Birmingham. London: J. and A. Churchill. 1870.

"THE great majority of diseases which the Surgeon treats are of an inflammatory character." Mr. Jordan wisely makes this the opening sentence of his book, for it at once reminds the reader that a plan for the treatment of the great majority of Surgical diseases by a new method which greatly shortens their duration would be perhaps entitled to a place in the first rank amongst the benefits conferred upon the Profession. How far the fair promise of the title is borne out by the subsequent chapters we will endeavour to show. As evidence of the earnest manner in which our author has gone about his work, we quote from a passage in which he attempts to give the train of reasoning which ultimately led to the discovery of the new method:—

"To logical minds no remedy is the worse if it is capable of intelligent explanation. To such minds, if any select class of remedies are not only in practice the best, but are also the most consistent with physiological and pathological laws, their value is not diminished. If two minds, or one impartial mind at two different periods, started on two different routes in search of the best remedies, and both hit on exactly the same remedies, the grounds for using such remedies would not be weakened. I have attempted to do this. I sought with a single desire for truth (and the usefulness of truth) to discover the best remedies for inflammation on theoretical grounds. . . . I then, and entirely without bias, I believe, endeavoured to discover the most rapid cures of inflammation, and under what circumstances, and by what means."

After this preliminary stimulation, it is not a little disappointing to find that the plan of treatment of inflammations laid down in this volume merely includes attention to the following rules:—(1) Remove the cause, (2) secure rest, (3) elevate the part, (4) apply pressure, and (5) employ counter-irritation. And this rule of treatment Mr. Jordan, "discarding for the time authorities, books, teachers, and friends," endeavours to apply to all inflammations alike. But we venture to suggest that, in this wholesale renunciation of all external advice, Mr. Jordan erred, inasmuch as a careful reference to authorities would have shown him that similar principles of treatment, founded upon similar observations, had guided others before him, and that those former workers had quite intentionally modified and varied the treatment, simply because they saw that the complex series of phenomena included under the term "inflammation" produced very different manifestations as they affected different parts of the body, and in different degrees of intensity.

In the pursuit of his great inquiry, the author tells us that he had observed that a mustard poultice will often cure a bronchitis; that pressure will ensure the speedy relief of an inflamed synovial membrane; and that rest will sometimes allow an inflamed part to heal, which it will not do whilst in constant motion; and he was accordingly led to the conviction that counter-irritation, pressure, and rest are important principles in the treatment of inflammation. There can be no doubt that Surgeons have not been sufficiently impressed with these matters of every-day observation, and it may be true that, in endeavouring to adapt the treatment of a given inflammation to its special manifestation, they have risked losing sight of the practical truth insisted on by the author, that inflammation being everywhere the same, the same principle of treatment will always be successful; and certainly Mr. Jordan's experience seems to justify his position in this regard to an extent which, without his numerous confirmatory cases, we should have been slow to recognise.

We have no wish to be misunderstood. Although no new remedy is brought forward, yet the manner in which Mr. Jordan insists upon the unity of the inflammatory process wherever occurring, and the consequent expediency of a uniform rule of treatment in all cases, is something sufficiently novel in Surgical practice. It is assuredly too much the fashion to speak of pressure, for instance, as being an excellent remedy for certain inflammations, as orchitis, or synovitis, and yet to hesitate about its universal application, although it seems to us obvious that, as Mr. Jordan says, a necessary condition of inflammation being increased space, a judicious limitation of space—in other words, *pressure*—suggests itself at once as an appropriate remedy. Not that we very cordially approve of the shot-bag recommended by the author as a specially good way in which pressure is to be applied. Anyone who has had much experience in the treatment of inflamed breasts must be aware of the difficulty encountered in the endeavour to secure *equal* pressure on such a part, and any such clumsy or unequal pressure as is too apt to be afforded by the shot-bag only increases the pain, which uniform pressure as certainly and immediately relieves. In the same manner, Mr. Jordan no doubt does good service by his enthusiastic praise of counter-irritation, which seems to constitute the "new" method referred to in the title. After a very careful perusal of what is stated on this head, however, we fail to discover anything novel beyond, indeed, the universal application of the remedy, and its exaltation at the expense of other well-recognised methods of treatment. For the rest, Jenner, Clutterbuck, Higginbottom, and other well-known writers on the subject have been nearly as loud in praise of irritants as Mr. Jordan himself. It is, perhaps, the most serious defect in the book that, in order to invest counter-irritation with the *prestige* of being *the* remedy for inflammation, other highly important aids are disregarded or condemned. Thus, we meet with such passages as this:—"Cold, locally, is in most cases very painful, and I have never seen any rapid result from its use. It would seem that, directly applied to an inflamed part, it ought to diminish vascular action, because it is the one agent which depresses all action of whatever kind. The probable explanation of its comparatively practical inutility is that its action is only superficial. To cool or freeze the skin merely over an inflammation, even where the skin is involved, tends to aggravate the inflammation." And, in like manner, no mention is made of other modes which have been practised, with striking results, for cutting off the blood-supply from an inflamed part, as deligation of the main artery of the limb.

In Mr. Simon's article of inflammation in Holmes's "System of Surgery," under the head of Treatment by Counter-irritant Measures, the following suggestive remarks are made:—

"But besides this antagonism effected through the general circulation, there probably are antagonisms of a local character; and parts which are respectively supplied by different contiguously rising branches of one arterial trunk, seem specially able thus to antagonise each other. For, assuming the flow through an arterial trunk to remain the same, one branch or set of branches can only transmit more blood, if simultaneously another branch or set of branches transmit less; and we may well conceive it to be an important function of vaso-motor nerves to provide for the adjustment of this antagonism, by establishing such inter-arterial sympathies that the relative opening of one branch shall determine the relative closure of another. As the claim of each part to receive less or more blood is measured by the degree in which it is indolent or active, so to stimulate a part is the sure way of determining blood to it. *Ubi stimulus, illuc affluxus*; and thus, by artificially stimulating one part, we may, it is believed, divert blood from another. The irritated part, attracting blood to itself through arteries which open wider to facilitate the process, is supposed to become increasedly antagonistic to all parts which are in arterial sympathy with it, including, of course, any inflamed part which is thus circumstanced."

It is upon this special method of employing counter-irritation that Mr. Jordan lays so much stress, and nearly all the illustrative cases, which form the bulk of the volume, are instances of its application.

These cases, admirable in their brevity and surprising in the support which they give to the doctrines enunciated in the text, form the most interesting part of the volume, whilst the simple outline sketches which illustrate them are all that could be desired for the purpose.

As instances of what can be accomplished by the treatment which Mr. Jordan has so heartily adopted, we may mention that the list of over 180 cases quoted includes examples of acute orchitis cured in twenty-four hours by painting nitrate of silver over the scrotum, and stripes of blistering fluid over the femoral arteries; of acute gonorrhœa cured in three or four days by blistering the perineum and femoral regions; of chronically enlarged cervical glands, which had resisted every other known treatment for three years, cured in three weeks by iodine irritation at the back of the neck; of immediate relief of pain and rapid subsidence of nodes round which a belt of irritation was traced; and of hosts of other inflammations of all kinds cured with apparently marvellous celerity by the simple process of irritating the surrounding skin and blistering over the neighbouring main vessels.

As to abscesses, we are told that, "*with this treatment, as a general rule, it is not necessary to open abscesses*;" but "incisions are often an excellent form of counter-irritation, and in this way they are beneficial in the great majority of abscesses. . . . . But the counter-irritation of incisions is tardy in its effects;" and hence it is better to employ some more active remedy, as a stripe of cantharides or iodine.

Finally, as examples of the preventive efficacy of counter-irritation, we have a case reported in which a woman lived seven days after an injury of the intestine, and then died rather suddenly from shock, with escaped fæces spread freely over the bowels, but with no sign of peritonitis—a result ascribed to vigorous applications of iodine to the skin on the onset of any pain. Of course, it is possible that here the fæces escaped only shortly before death; but the case is striking enough. In another case, in which recovery followed ovariotomy performed during peritonitis, the result is also ascribed to counter-irritation at the groins, and it is specially pointed out that there could be here no *post-hoc propter-hoc* delusion, although it is not the first recorded case of recovery under such untoward circumstances.

In order to estimate the value of Mr. Jordan's book fairly, it is necessary that one should dismiss from one's mind any claim to novelty which is suggested by its title and the general handling of the subject, and to regard it merely as an earnest plea for the more general recognition of the usefulness of a measure which, perhaps, has not been duly estimated, and which certainly seems to have lapsed too much into desuetude of late years. As a text-book for students, the work is gravely defective; but as the record of enthusiastic industry in pursuing a special line of treatment, and as a catalogue of cases most convincing in their results, the book will, doubtless, effect great good in securing more general attention to the frequent excellent effects of counter-irritation. With such uniformly favourable experience in the hands of Mr. Jordan, it is indeed surprising that the treatment has not been long since adopted by all his colleagues in the Queen's Hospital; but we have no doubt that this publication will induce them, as well as other Hospital Surgeons, to make a fair trial of this therapeutic agent, and the result will probably be that this remedy will be once more generally used, although it may be not so exclusively employed as Mr. Jordan thinks expedient.

First Medical and Surgical Report of the Boston City Hospital. Edited by J. Nelson Borland, Physician, and David W. Cheever, Surgeon. Boston: Published by the Board of Trustees. Pp. 688.

In a former notice, we drew attention to a certain portion of the contents of this volume; the remainder we now proceed to consider. An article on the Treatment of Acute Rheumatism is communicated by Dr. John G. Blake; the cases (300 in number) have been selected from over 500 admitted during the five years of the Hospital's existence. The treatment was partly alkaline, partly by means of iodide of potassium, colchicum, opium, and guaiacum, as well as syrup of lime-water. Alkalies were used in 125 cases, of which eighteen became complicated with heart affection, even after being some days in the Hospital, but within a week or thereby of the onset of the disease; and of these two died. Of the rest, the endocardial murmurs disappeared in one-half before leaving the Hospital. The results are hardly so pleasing as the advocates of the alkaline mode of treatment would have us believe. Blisters were tried in a certain number of cases: pain was relieved for a time, but was apt to return. The average stay in Hospital of the patients treated with alkalies was twenty-four days, by other means thirty-five.

An interesting article on the Treatment of Skin Diseases, by Dr. Damon, follows. He compares his statistics with those of Professor Erasmus Wilson. A valuable contribution to Medical science, by Dr. J. Baxter Upham, comes next in order. He gives, in a tabular form, the results attained in the Hospital in the treatment of typhus and typhoid fevers. Of typhoid, 152 cases were treated, of typhus, only 38. In 148 cases of typhoid, forty-three of the patients were between 10 and 20, and eighty-three between 20 and 30. Of the 152, 131 recovered and twenty-one died, but the ages of the patients who died are not given; nevertheless, the facts just stated tend to show that typhoid is a disease of early rather than advanced life. In six fatal cases, the average highest temperature was 105·7. Of thirty-five cases of typhus, the disease occurred in eight between 10 and 20, fourteen between 20 and 30, six between 30 and 40, and four between 40 and 50, the other three being under 10. Of the thirty-eight, ten died. A good many points of interest are overlooked in these reports, but the materials seem to have been rather imperfect.

The next paper is by Dr. Cheever, and deals with reproduction of the tibia. The cases given are two in number. The first patient was a little girl, aged 13, who, after suffering from small-pox and measles, was left in very bad health. Her right leg became painful, pus formed, and by-and-bye dead bone was discovered. In operating, the bone was cut across just below the junction of the epiphysis to the shaft above, and the whole of the lower portion of the bone removed, thus exposing the ankle-joint. The periosteum was very loosely attached, and was removed without difficulty. By the eighteenth day bone could be felt; in eight weeks it had attained considerable consistence, but it was not till five months had elapsed that she was allowed to put her foot to the ground. During this time the continuous action of the muscles had drawn the head of the fibula half an inch higher than usual. This is common in excisions of the body of the tibia. The second case also occurred in a girl, 8 years old, who had suffered from suppurative periostitis. Five inches of the shaft were removed, and the patient did well. A third case was in Hospital at the date of the above writing.

There is not much to be said with regard to the ophthalmic report by Dr. Henry W. Williams, or of that on the aural department by Dr. J. Orme Green. Next come two cases recorded by Dr. Cheever; one of encephaloma of the tonsil, another of occlusion of the vagina. The former disease is very rare; in this case there seems to have been no doubt as to the malignancy of the tumour; but the microscopic appearances as here detailed leave some doubts as to its anatomical nature. The mass was removed from without, as it projected considerably, and the operation was entirely successful. In the other case a *cul de sac* only existed. In dissecting to reach the uterus the peritoneum was opened, and the patient sank and died. The uterus was bipartite.

Dr. A. D. Sinclair contributes a very fair article on "Peri-uterine Inflammation"—if we can call a collection of upwards of twenty cases, without any specific comment, an article. Some of the cases occurred in Hospital; one, it would seem, in private practice. Under the above title the author comprehends more than one form of disease, which have more commonly been known as varieties of pelvic cellulitis.

The last regular article in the volume consists of an abstract of the Surgical work of the Hospital, by Dr. Cheever. Four aneurisms of large arteries have been treated—three popliteal, one innominate. One popliteal was treated successfully by flexion; in another this failed, whilst acupressure succeeded. The third case terminated fatally from erysipelas, the vessel having been occluded by acupressure. In the operation for the innominate aneurism, the patient died almost on the table. It was a case in which no such operation should have been attempted. For other reasons than aneurism, the common carotid was tied four times: thrice unsuccessfully. The lingual was three times tied—in all successfully. The femoral was once tied for hæmorrhage; the patient died of pyæmia. The brachial was once tied (successfully) for hæmorrhage. The external iliac vein was twice tied—once for a wound penetrating the vessel, when the patient survived; and again for hæmorrhage from the femoral vein, but too late to save the patient. The femoral vein was once tied for a gun-shot wound in the groin; the patient died in three hours. A number of cases of cut throat are next recorded. Next, cases of tracheotomy and œsophagotomy, of perineal section, and operations for the radical cure of hernia and for strangulated hernia. Finally come fractures and amputations. The general Medical and Surgical tables of the Hospital conclude a volume which, if not deserving the high-flown encomiums paid to it, is yet highly creditable to the industry and intelligence of the staff of the Boston City Hospital. Above all things, it proves that Hospital reports may be something better than the useless records of amputated fingers too common among ourselves.

Annuaire de l'Université Catholique de Louvain. Trente-cinquième Année. Louvain. 1871.

The Calendar of the Catholic University of Louvain. Thirty-fifth Year. 1871.

We are indebted to Dr. Lefebvre, Dean of the Faculty of Medicine in the Catholic University of Louvain, for the little volume whose title stands at the head of this article. Although many of our readers may know that there is such a University from the fact of Van Beneden, the celebrated naturalist, being a Professor in it, they probably have little idea of its completeness as a school for students of theology, law, Medicine, philosophy, and literature, and of technology, civil engineering, and mining. In the faculty of theology there are eleven Professors: in that of law, twelve; in that of Medicine, thirteen; in that of philosophy and literature, fifteen; and in that of technology, etc., fifteen. From a catalogue of the works written by the members of this academic body during the five years intervening between January, 1856, and December, 1860, we see that the Medical Professors have been by no means idle; Dr. Hubert, Professor of Midwifery, having published fifteen memoirs, and his son, Dr. Eugene Hubert, *Prof.-agrégé*, three memoirs, and a "Cours d'Accouchement," in two volumes; Dr. Lefebvre, Professor of General Therapeutics and Pathology, three special works (one of which we shall take an early opportunity of reviewing), and three memoirs; and M. Van Kempen, Professor of Anatomy, having brought out a second edition of his "Traité d'Anatomie Descriptive et d'Histologie Spéciale," in two volumes, containing nearly 1000 pages, a third edition of his "Manuel d'Anatomie Générale," and two reports, one on the last epidemic of cholera in Belgium, and the other on the encephalic functions. In the other departments, and especially in the faculty of technology, civil engineering, and mining, the Professors have been fully as active, M. Henry, Professor of Chemistry, and M. Van Beneden, Professor of Zoology, being especially deserving of honourable mention.

The University contains four colleges—that of *The Holy Ghost*, for the study of theology; that of *Pope Adrian VI.*, for the study of philosophy and law; that of *Marie-Thérèse*, for the study of the sciences and of Medicine; and that of *Juste-Lipse*, for the study of the classics (*les humanités*). In some respects this University sets an example that our own older and better endowed universities might imitate with advantage. It possesses a laboratory for general chemistry, another for analytical chemistry, and another for chemical manipulations, besides a museum and laboratory of industrial chemistry; there is a botanical garden presided over by Professor Martens, a botanist of European fame; and there are special museums of mineralogy, of metallurgy and of mining, of zoology and comparative anatomy, of human anatomy, of experimental physiology, and of archæology.

Each year is divided into two academic terms, besides which there is an Easter vacation of about three weeks, and a summer vacation extending from July 11 to October 3. During his first year the Medical student attends lectures on anatomy, physiology, comparative anatomy, and pharmacology, and at the close of the session is examined on these subjects. During the second year he attends courses on special pathology and therapeutics, general therapeutics, general pathology and pathological anatomy, and passes his *Premier Examen de Docteur*. His third year is devoted to the study of forensic Medicine, midwifery and diseases of women and children, midwifery operations, public and private hygiene, Surgical pathology, and mental diseases, and at the close of it he passes his *Deuxième Examen de Docteur;* while his last year is devoted to the study of clinical Medicine, Surgery, and midwifery, of operative Surgery, eye diseases, syphilitic and cutaneous diseases, to attending outdoor Hospital patients, etc., and his final examination is on these subjects. The amount of Hospital practice that is required is not clearly stated, but it is obvious that the curriculum is of a very efficient character.

Lists of the successful candidates are given, from which it appears that during last year twenty-six passed the third and final examination for the Doctorship, five of them *avec la plus grande distinction*, and nine *avec distinction.*

As the subject of university expenses is one that is still agitating the public mind, it may be worth while to mention that students are received into the Colleges of Pope Adrian VI. and Marie-Thérèse on payment of 600 frs., or £24, annually. Each student has a study and a bedroom, which are furnished by the College for a fee of 8 frs. yearly!

GENERAL CORRESPONDENCE.

TREATMENT OF NASO-PHARYNGEAL POLYPUS BY ELECTROLYSIS.

Letter from Dr. Julius Althaus.

[To the Editor of the Medical Times and Gazette.]

Sir,—I shall feel obliged if you will kindly give a corner of your valuable journal for the following case of naso-pharyngeal polypus, which has been successfully electrolysed by Professor Von Bruns, of Tübingen:—

A male patient, aged 23, suffered from a large fibrous polypus of the pharynx, which the Professor removed with Maisonneuve's *constricteur*, in December, 1866, after previous division of the velum palati. The tumour, however, soon after the operation, began to grow again. In April, 1869, the polypus filled up not only the whole pharyngeal cavity, stretching forth into the cavity of the mouth, between the edges of the artificial cleft palate, and reaching down to the lower end of the velum, but also clogged the left nasal cavity, close down to the nostril; whilst, by further but invisible ramifications, it displaced the left eyeball outwards, downwards, and forwards. In May, 1869, electrolysis was resorted to, one needle being inserted into the pharyngeal and another into the nasal portion of the polypus. The treatment was continued, with a few interruptions, up to March, 1870, when the polypus had been so far destroyed that nothing more could be seen of it, and only a small remaining trace could be felt by the finger introduced into the pharyngeal and nasal cavity (two inches farther into the latter). The improvement commenced as soon as electrolysis was resorted to.

The time required for the electrolytic destruction of this tumour was certainly long; yet it is satisfactory to find that the treatment ultimately proved successful in a case in which so bold and skilful an operater as the Professor of Surgery of Tübingen declined to undertake a second operation by other and more rapidly-acting Surgical procedures.

I am, &c., Julius Althaus, M.D.

18, Bryanstone-street, Portman-square, W.,
March 18.

THE WATER THEORY OF CHOLERA, AND THE INDIAN SANITARY COMMISSION.

Letter from Mr. De Renzy.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the "Sixth Annual Report of the Sanitary Commission with tho Government of India," there are some errors and omissions in the statement of the facts bearing on the question whether contaminated water was the principal means by which cholera was spread in Upper India in 1869, which I deem it important to correct. After reviewing the history of the epidemic in the country at large, Dr. Cuningham comes to the conclusion that the facts do not favour the water theory of propagation, and he adduces the cases of the Amritsar gaol, and of the cantonments of Peshawur and Kohat, in support of this opinion. I shall examine these cases separately.

In the Amritsar Gaol, "the water," says Dr. Cuningham, "was reported to be of good quality, and the civil Surgeon is of opinion that it could not have been contaminated by any cholera discharges." Now, as a matter of fact, the water was extremely bad. Its composition, as ascertained by an analysis made for the Amritsar Cholera Commission by Assistant-Surgeon Whitwell, was as follows:—Total solids per gallon, 49 grains; volatile matter, 7 grains; sodium chloride, 12·6 grains; ammonia, present; nitrous acid, present. "But," says Dr. Cuningham, "to make sure that any danger arising from this quarter might be obviated, all the drinking water was boiled and filtered before being used." There is no doubt that the water was purified by these processes, but there is good reason to suppose that the water, as it came fresh from the well, was largely used by the prisoners; they had free access to the well for ablution and other purposes, and it is a matter of universal experience in Punjaub gaols that prisoners are induced with the greatest difficulty to use water which has undergone any sort of manipulation. In fact, in gaols where the Hindoo element predominates, as it does at Amritsar, prisoners will only use such water when water in its natural state is altogether unprocurable. There are facts which lead me to think that in the caso under consideration water was not the medium by which the cholera virus was introduced; but the history of the case is not by any means so incompatible with the water theory as Dr. Cuningham's report represents.

As regards Peshawur, Dr. Cuningham admits that the principal source of water-supply—the Bara River—"was subject to every form of pollution." But he argues that, as some of the troops who took their supply from a comparatively pure well suffered equally with those who took their supply from the stream, the part which water played in the dissemination of the disease was of very secondary importance. But as the troops are situated at Peshawur, it is quite impossible to be sure what water the men drink. They may have pure filtered water in their barracks, but when they go out for a walk they may have to drink cholera-tainted water in the bazaar, which takes its supply from one of the Bara cuts, this same cut being, like other cuts, subject to every kind of pollution from latrines, wash-houses, etc.

A further argument advanced by Dr. Cuningham is, that a great part of the cases in H.M. 36th and 104th Regiments occurred in camp, when the regiments were away from their ordinary sources of supply, and separated from each other by a number of miles. Now, in connexion with this fact one most important circumstance has to be stated. The camps into which the infected troops were removed were almost entirely dependent for their water supply on irrigation cuts, which, like those in the station, were exposed to every kind of pollution; and, further, the villages in the vicinity of the camps were themselves infected with cholera at the time. The bearing of this fact on the question at issue is obvious.

At Kohat, again, Dr. Cuningham admits that the water-supply "was liable to pick up all forms of impurity in its course." It is conveyed into the station in an open channel, into which a portion of the plain, used as a latrine and urinal, drains. "But," he says, "there is no evidence that the water was the cause of the disease, much less that the dangerous element which it diffused had been derived from cholera evacuations." Demonstrative proof is not to be expected in such a case; but when we find that the Kohat gaol, which has an independent and comparatively safe water-supply, has preserved an immunity from four cholera epidemics, in which the troops and the people of the town, who live within a few hundred yards' distance (the gaol is actually within the town boundary), suffered most severely, it is difficult to resist the conclusion that the water was the medium of contamination in the case of the troops and town population who used the stream water, especially when this conclusion accords so well with the results of experience elsewhere.

In describing the outbreak at Subâthu, Dr. Cunningham speaks of "the sanitary condition of the station as good, the water wholesome, and not liable to contamination." Now, water is obtained from several sources, not one of them being entirely safe, but some of them are so situated that it is hardly possible for them to escape contamination. One of the sources is a very shallow well, sunk in the gravelly bed of one of the watercourses which serve as the drains of the station. It is obvious that here, too, the facts of the case are not incompatible with the water theory. Subâthu is the most unhealthy of the hill sanitaria, fever and diarrhœa being the prevailing diseases. This fact has hitherto been referred to the comparatively low altitude of the station; but it will be advisable to reject such an explanation until measures have been taken to place the water-supply beyond the possibility of contamination. Beautiful barracks have been built, and large sums spent in improving the conservancy and general sanitary condition of the station, but the water-supply is so bad as almost entirely to nullify the advantages which might have been expected from these measures.

Dr. Beatson, the Inspector-General of Hospitals H.M.'s British Forces, and other high Medical authorities, despair of its being possible to effect any substantial improvement in the health of the troops quartered in the plains of India. They maintain that as regards barrack accommodation, conservancy, and other important arrangements affecting health, there is little further scope for improvements. I can only speak for the Punjaub, with every station of which I am now familiar. In that province, at least, nothing has as yet been done to insure a pure supply of water to the troops, and I will not despair of its being possible to secure them against the epidemics which prove so destructive to them until this great reform has been effected. I might mention other reforms, of secondary importance, which are still needed, but, in the present state of the province, the reform of the water-supply is the one which presses most urgently for attention.

The statements of the Sanitary Commission with the Government of India are calculated to damp the energy of the Government in carrying out this reform, by weakening the motives for undertaking the work with vigour and completing it without delay; but, as regards the Punjaub at least, his conclusions are, I think, based on an erroneous or an imperfect conception of the facts. I am, &c.,

Kingstown, March 18. A. C. C. De Renzy.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, March 8.

Dr. Braxton Hicks, F.R.S., President, in the Chair.

Walter Rigden, M.R.C.S., and George Eugene Yarrow, M.D., were elected Fellows of the Society. The following gentlemen, recommended by the Council, were elected Honorary Fellows of the Society:—Alexander Keiller, M.D., of Edinburgh; George H. Kidd, M.D., of Dublin; and Richard T. Tracy, M.D., of Melbourne, Victoria.

Mr. **Times** exhibited a Fœtus, the subject of Encephalocele. The child presented by the face, and was still-born.

The **President** exhibited for Mr. D. Johnson a specimen of Deformed Fœtus, with the placenta adherent to it, there being no funis. Referred to a committee.

Dr. **Westmacott** showed a remarkable specimen of "Cork-screw Funis."

Dr. **Granville Bantock** showed the Vaginal Speculum of Professor Neugebauer, of Warsaw, which he thought was not sufficiently known. It consisted of two parts, the inferior or posterior, and the superior or anterior, exactly similar, and introduced separately. Dr. Bantock considered the instrument more generally useful than any other with which he was acquainted, and he exhibited one made for him, which was longer and smaller than the original pattern.

A paper by Drs. **Braxton Hicks** and **Phillips** was then read, entitled "Remarks on Tables of Mortality after Obstetric Operations." It commenced by some general remarks on the subject of statistics, pointing out that to be of any value in Medicine it was highly important that the data upon which they were founded were reliable. Strictly speaking, they should be absolutely correct. Statistics derived on an extensive scale from incomplete data, though in some instances valuable to a certain extent, were not to be made use of as proof against the truth of another opinion resting on a more sure though less broad basis. The palpable vitiating causes of statistics were incorrect data, whether resulting from unreliable sources or from incorrect grouping and incorrect mode of application. The importance of these considerations was evident when conclusions derived from statistics were brought to bear as a guide to practice. The paper had been suggested by analysing the tables of mortality after operations quoted by obstetrical authors, and its object was to draw attention to the imperfect mode in which these had been drawn up, and to the delusive conclusions to which they consequently lead. The plan adopted in the paper was that of tracing back to their original sources a large number of the cases which made up the ordinary tables of mortality recorded by almost every obstetrical writer. This was done in reference to craniotomy, the use of the forceps, and version; and, so far from these operations having a mortality as stated in books, the cases were found to be very few in which the operation could with any show of probability be made accountable for the fatal event. In seeking to discover the relative danger of midwifery operations, the authors stated that it should be clearly borne in mind that they were especially performed to counteract the effects of some one abnormal condition, or more than one, occurring simultaneously or consecutively. Extracts of several of the cases were read, and in reviewing the reports death could in the great majority be clearly traced to the disease for the alleviation of which the operation was undertaken, or to the lamentable neglect leading to the too long postponement of it. Cases of every degree of complexity had been grouped together in the tables, and many a death attributed to an operation which probably would not have happened had the operation been sooner performed.

Dr. **Cleveland** was willing to admit that the authors had clearly made out a case showing the dangers that were likely to accrue from the use of imperfect statistics, but, on the whole, he was disappointed that they had suggested no remedy. He thought such accuracy of judgment and skill in operating as would insure data for perfectly reliable statistics on a comprehensive basis were scarcely obtainable.

After some remarks by Dr. Aveling,

Dr. **Playfair** said that the abstracts of the cases just read showed beyond doubt that the fatal result was in almost all of them to be traced to the unnecessary and culpable delay in resorting to artificial delivery. The whole tendency of modern midwifery seemed to him to show the importance of early interference in suitable cases. The truly scientific practice was, not to dread the operation, but to know when and how to resort to it.

Dr. **Heywood Smith** thought the paper one of great practical usefulness, inasmuch as by drawing attention to the existence of fallacies in the statistics of mortality after obstetric operations, it opened the way to a more scientific method of operating —viz., when it is determined that an operation is necessary, the sooner it is proceeded with the safer for the patient. He suggested the drawing up of a form for circulation, so arranged as to facilitate the more accurate and ready registration of all cases of difficult labour.

Dr. **Madge** would have been glad to hear from the authors the result of their own practice and experience. In a large midwifery practice, during the last sixteen years, he had been fortunate enough not to meet with a single maternal death after craniotomy or the use of the forceps. The principle advocated in the paper against delay in employing instrumental or other aid in cases of difficulty was a sound one, and should be strongly enforced.

Dr. **Rogers** appreciated the labour expended in examining the original cases, and his experience quite agreed with the results deduced, that the great mortality in operative midwifery resulted from delay in interfering.

Dr. **Hicks** and Dr. **Phillips** replied.

Dr. **Brunton** read the particulars of a case in which the entire ovum was expelled at the seventh month of gestation, and the child rescued alive, although it must have been born at least fifteen minutes before being taken out of the membranes. Dr. Brunton thought the case supported Sir James Simpson's practice in placenta prævia of extracting the whole placenta before the birth of the child.

Dr. **Madge** said, with regard to the absence of hæmorrhage from the placental surface, the case was only an additional proof of the correctness of the views he held on the subject. The mere separation of the two layers of decidua—serotina and uterine—did not necessarily give rise to hæmorrhage. This only occurred when those membranes from various causes commenced to break up. The probable explanation of the child being alive was, that as the fœtus in utero had somewhat of an aquatic existence, it was still in its own element, and for a while not far removed from intra-uterine conditions.

Dr. Heywood Smith said the child's circulation continued as if it had been still in utero, with the substitution merely of aëration by the atmosphere, acting directly upon the uterine aspect of the placenta, for the maternal blood.

The President agreed with the explanation given by Dr. Heywood Smith, that as the placenta was exposed to the oxygen of the air the circulation was kept up. The exposure to cold might, at the same time, have lessened the demand for oxygen.

Dr. Wiltshire said the case had Medico-legal bearings.

Dr. Cleveland had within the last fortnight been called to a lady at full term whose child and placenta were expelled with scarcely more than a hæmorrhagic stain on the bed-linen.

Dr. Grigg said that the practical lesson from Dr. Brunton's case was to take care, should the placenta be expelled before the birth of the child, to expose its uterine surface to the air.

MEDICAL SOCIETY OF LONDON.

Monday, March 13.

Dr. Andrew Clark, President, in the Chair.

Dr. Andrew Clark, on taking his seat as President, delivered an Address which was listened to with great interest and attention.

A vote of thanks was then given to Mr. Gay, the retiring President, for his activity and zeal during his year of office, and also to Mr. Barnes, the Secretary, whose term of office had expired.

Dr. Richardson then read the paper of the evening, entitled "Some Further Additions to Therapeutics: Organic Bromides, Metachloral; with a Note on Sulphur Alcohol." The author first described the methods of research in therapeutics, which consist in following up modification of certain organic compounds by modification of the elementary composition of the compound. He then introduced some new medicinal bromides —viz., bromide of quinine, bromide of morphine, and bromide of strychnine—together with combinations of the same. Bromides are best administered in the form of syrups, each drachm of the syrup containing—in the syrup of the bromide of quinine, one grain of the bromide of quinine; in the syrup of the bromide of morphine, one-eighth of a grain of morphine; and in the syrup of the bromide of strychnine, one thirty-secondth of a grain of bromide of strychnine. Compounds of the syrups of the bromides of quinine and morphine, and of quinine, morphine, and strychnine were also useful. In each drachm of these the same proportion of dose—viz., one grain of quinine, one-eighth of a grain of morphine, one thirty-secondth of a grain of strychnine—was maintained. Dr. Richardson had found the bromide of quinine of great service in syphilitic ulceration. He had obtained most valuable results from frequently repeated doses of syrup of bromide of quinine and morphine in cases of neuralgia; and in a case of diabetes the syrup of quinine, morphine, and strychnine had been signally successful. The bromide of quinine he believed the best preparation in cases of remittent or intermittent fever. Dr. Richardson next brought forward bromal hydrate; it was less soluble than chloral hydrate, and produced more convulsive action, and, on the whole, he did not think it could at all replace the last-named substance. He then passed on to anhydrous chloral, placing before the Society a specimen of pure anhydrous chloral, and, by the addition of pure water, it produced chloral hydrate. Chloral itself is a fluid caustic; it abstracts water rapidly, and might, he thought, be usefully employed as a caustic in some cases where soft fungous growths required to be removed. Chloral hydrate absorbed would be found to exert an after sedative influence. A specimen of metachloral was then shown, an insoluble white substance made by exposing chloral hydrate to sulphuric acid. This substance is isomeric with chloral, and when treated with alkali is resolved into chloroform and chlorate of the alkali employed. Administered to inferior animals, it seemed to act as a gentle narcotic; being probably slowly decomposed in the body, it may yet prove of service in practical Medicine; lastly, Dr. Richardson exhibited a specimen of mercaptan, sulphur alcohol (C_2H_6S), in which sulphur replaces the oxygen of ordinary alcohol. He detailed a number of interesting facts bearing on the action of this agent, dwelling especially on the mental depression it produces even when taken in very minute quantities. The alcohol is exhaled by the breath as it passes from the bodies of animals, and communicates to the breath peculiar odours like the odour met with in wasting diseases. From this fact the author drew a suggestion for a new line of research in diagnosis—viz., the detection of organic sulphur compounds derived from the blood in the air expired from the lungs by diseased persons. Sulphur compounds liberated in the alimentary canal seemed harmless—*i. e.*, were not absorbed —but it was now quite certain that when some of them are actually introduced into the circulation, even in minute quantities, and are diminishable by exhalation from the lungs, they produce muscular debility, feebleness of the heart, and mental depression. We may, therefore, infer that the formation of sulphur compounds within the circulation from disease might account for some examples of excessive temporary prostration, for the cause of which we have as yet no satisfactory explanation.

Mr. Gay called the attention of the Fellows to a very ingenious contrivance made by Bower, for allowing a patient with injury of a lower limb to take exercise; it is called the "invalid bicycle." It consisted of a frame on wheels, with a movable rest for the unsound limb, crutches, etc.; the patient progressed readily by pressing onward with the sound limb.

LEGAL INTELLIGENCE.

SPITTLE *v.* WALTON.

(Before Vice-Chancellor Bacon.)

Evidence—Witness of Unsound Mind.

On December 9, 1870, one Joseph Beddoe, on a Medical certificate, was placed as a person of unsound mind in a private lunatic asylum at Sutton Coldfield. An affidavit was sent to a Commissioner for swearing of affidavits in the Court of Chancery, and residing at Sutton Coldfield, requesting him to see the Doctor who kept the asylum and find out if Beddoe was in a fit state to be sworn. The Doctor being of opinion that Beddoe was, the Commissioner went to the asylum, saw Beddoe, went over the affidavit with him, asked him if he understood the facts, and could speak to the facts as there stated. Beddoe answered that he could, and volunteered a statement in addition to some of the particulars mentioned in the affidavit, and he was accordingly sworn.

The affidavit was stated to be "sworn at Sutton Coldfield, in the county of Warwick, the 9th day of January, 1871, before me, ——, a Commissioner to administer oaths in Chancery in England."

The Vice-Chancellor held that the Commissioner had not discharged his duty properly in taking the affidavit and describing it as sworn at Sutton Coldfield, without calling attention to the fact that it was sworn by a person of unsound mind on some points, in a lunatic asylum. Both here and at common law, some preliminary inquiry was necessary for the purpose of ascertaining the capacity of a person tendered as a witness, but alleged to be of unsound mind, before his evidence could be listened to. In this case, an affidavit cut and dried was taken to the deponent and assented to by him during a lucid interval without the application of any test. The affidavit, which was wholly irregular and improper, must be taken off the file, and plaintiff must pay the costs; but liberty to the plaintiff to produce Beddoe at the hearing of the cause to give evidence *vivâ voce* was granted.

IN RE WIDDOWE'S TRUSTS.

(Before Vice-Chancellor Malins.)

Possibility of Issue—Presumption of being Past Child-bearing—Spinster, aged 53¾.

This was a petition for payment out of court of two sums of money to which the petitioners were severally entitled, absolutely in case they left no issue, but only for their lives in case of their leaving any children.

The Vice-Chancellor held that it might be presumed that both the petitioners—one of them being a widow aged 55¼, who had never had any children, and the other a spinster, aged 53¾—were past the age of child-bearing, and directed the fund to be paid out accordingly.

Cholera has been prevalent in Madagascar, Vellore, and Bangalore.

OBITUARY.

GEORGE WOOLLEY, M.D.,

Was born at Dunkeld in 1813, and spent the early years of his life in that place, until the time of his entering upon his Medical studies at Edinburgh. Here he continue until qualified as a Surgeon, and then returned to his native place, and practised there for a short time; but, finding a want of scope for his energies, he determined upon coming to London, which he did about the year 1838, and commenced practising shortly after in the neighbourhood of Camden-town. His perseverance, zeal, and ability soon obtained for him the confidence of its inhabitants, and he became established in this locality. Here he remained several years, until a severe fall from a railway-bridge compelled him to leave London, completely broken in health, his right thigh and arm being severely crippled from several fractures they had sustained. He remained in the North recruiting his health for two years, and during his sojourn there married a daughter of the late Dr. Dyce, of Aberdeen. Having taken the degree of M.D. at Edinburgh, he again came to London about 1859, and resumed his practice, meeting with a hearty welcome from his many friends. Here he continued to labour, till the pressure of domestic anxiety and the death of his wife broke his spirit and his health. Symptoms of heart disease soon appeared, and compelled him to discontinue his duties. These symptoms increased in severity, and at last terminated fatally on the 30th ult. Dr. Woolley was characterised by many high qualities, his honourable, just, and upright mode of living gaining the confidence of all who knew him, while his warm, sympathising, and generous heart won him many friends, and obtained for him the affectionate esteem of the old and young alike. His removal will be felt in many a home, and his name and memory will retain lasting respect.

MEDICAL NEWS.

Royal College of Physicians of London.—The undermentioned gentleman passed his First Professional Examination on April 4:—

Fowler, Breame Weston, of St. George's Hospital.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 4th inst., and, when eligible, will be admitted to the Pass Examination:—

Ashley, Henry, of Guy's Hospital.
Bateman, Lewis P., of the Birmingham School.
Bell, G. Pearson, of the Hull School.
Bennett, William H., of St. George's Hospital.
Birch, E. Arnold, of the Manchester School.
Coleman, W. Franklin, of the London Hospital.
Colley, Thomas Henry, of Guy's Hospital.
Counsellor, W. Parkinson, of the Manchester School.
Dodson, Andrew, of the Birmingham School.
Hallowes, M. Coleman, of St. Bartholomew's Hospital.
Hetley, Henry, of Guy's Hospital.
Hicks, Edward J. W., of Guy's Hospital.
Hudson, John, of the Leeds School.
Jordan, Frederick W., of the Manchester School.
Joynes, Francis J., of King's College.
Kitchen, C. F. Hewick, of the Manchester School.
Lambert, John, of the Leeds School.
Lewis, Frederick W., of the Middlesex Hospital.
Mahomed, F. Akbar, of Guy's Hospital.
Pickles, J. Jaggel, of the Leeds School.
Price, Edwin, of the Birmingham School.
Price, T. Decimus, of Guy's Hospital.
Roeckel, J. Waldemar, of St. Bartholomew's Hospital.
Simmonds, W. Allason, of Guy's Hospital.
Slack, George F., of the Charing-cross Hospital.
Webber, W. Littleton, of St. Bartholomew's Hospital.
Williams, Leonard, of St. Thomas's Hospital.

The following gentlemen passed their examinations on the 5th inst., viz.:—

Andrews, Samuel, of St. Bartholomew's Hospital.
Batterbury, George H., of King's College.
Brodribb, Francis B., of St. Bartholomew's Hospital.
Cooke, E. Marriott, of King's College.
Dakeyne, Thomas E., of the Westminster Hospital.
Davis, J. Hopkyn, of the Middlesex Hospital.
Dyson, Wm., of University College.
East, George E., of St. Mary's Hospital.
Evans, Francis M., of St. George's Hospital.
Garrard, William A., of Guy's Hospital.
Granger, F. Marsden, of the Leeds School.
Green, James, of the Manchester School.
Griffiths, A. Vavasour, of the Birmingham School.
Hall, James T., of the Manchester School.
Hansell, Wm. C., of Guy's Hospital.
Ilott, Herber J., of St. Bartholomew's Hospital.
Joseph, George W., of the Liverpool School.
Lascelles, Arthur, of the Leeds School.
Laver, Arthur H., of St. Thomas's Hospital.
Leftwich, R. Winnington, of St. Bartholomew's Hospital.
Mackinlay, J. E. Harrison, of St. George's Hospital.
Morris, John H., of the Manchester School.
Murphy, Robert W., of Guy's Hospital.
Orian, Arthur W., of the Charing-cross Hospital.
Shapley, Harry T., of the London Hospital.
Stansfield, G. Sutcliffe, of the Manchester School.
Stericker, William, of Guy's Hospital.
Sunderland, William, of the Birmingham School.
Trevor, F. Wallastan, of Guy's Hospital.
Williams, Harry, of Guy's Hospital.

Nine candidates on the first day and six on the second having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Anatomical and Physiological studies for three months.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, March 30, 1871:—

Clark, Frederick, Park-place, Brixton.
De Lisle, Frederick Irving, Guernsey.
Frean, Richard, Middlesex Hospital.
Haines, Alfred Henry, Notting-hill.
Lloyd, William, Carmarthen.
Male, Henry Davis, Yeovil.
Morison, Bentham Paynter, Portclew, Pembroke.
Ward, Walter Alfred, Witney, Oxon.
Wilks, Charles Benjamin, Gloucester.
Wimberley, Frederick William, Louth, Lincolnshire.

The following gentleman also on the same day passed his First Professional Examination:—

Elam, Shrofield, Guy's Hospital.

MILITARY APPOINTMENTS.

Royal Artillery.—Assistant-Surgeon William Creyk, M.B., from the 4th Foot, to be Assistant-Surgeon, *vice* Frederick Joseph Byrne, who resigns.

4th Foot.—Staff Assistant-Surgeon John Livingstone Power, to be Assistant-Surgeon, *vice* William Creyk, M.B., appointed to the Royal Artillery.

7th Foot.—Surgeon John Hendley, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

14th Foot.—Surgeon John Edward Moffatt, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

19th Foot.—Surgeon Henry Bolton Hassard, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

Medical Department.—Staff Assistant-Surgeon William Collis, to be Staff Surgeon, *vice* William Alexander Davidson, M.D., placed upon half-pay.

BIRTHS.

Charles.—On March 25, at Calcutta, the wife of Dr. T. E. Charles, of a daughter.

Dempster.—On March 27, at Rosemount, Tramore, co. Waterford, the wife of J. Carroll Dempster, M.D., Deputy Inspector-General of Army Hospitals, of twins, a son and daughter.

Evans.—On April 2, at Acacia House, Finchley-road, N.W., the wife of Evan Evans, M.D., of a son.

Hammond.—On April 1, at Ipswich, the wife of C. W. Hammond, M.D., of a son.

Hopgood.—On April 1, at 130, Portsdown-road, Maida-vale, the wife of Joseph Hopgood, M.R.C.S., of a daughter.

Peacocke.—On March 29, at Mill House, North Chichester, the wife of Dr. George Peacocke, M.A., Surgeon H.M.'s 63rd Regiment, of a son.

Pearson.—On March 26, at Bury-street, Stowmarket, the wife of Dr. T. R. Pearson, of a daughter.

Theobalds.—On March 5, at Jubbulpore, the wife of Surgeon-Major J. R. Theobalds, Madras Army, of a son.

MARRIAGES.

Bonavia—Osborne.—On March 31, at Christ Church, Marylebone, E. Bonavia, M.D., Surgeon Bengal Army, to Lucy Mary, eldest daughter of G. A. Osborne, Esq., 22, Dorset-square, London.

Morphew—Balls.—On March 31, at St. Mary's, Bury St. Edmunds, Suffolk, A. Morphew, Surgeon 1st Battalion the Royal Regiment, to Harriott, third daughter of H. Balls, Esq.

Pickburn—Mestre.—On January 4, at St. John's Church, New Terara, New South Wales, Dr. Pickburn, M.B., L.S.A., etc., son of J. T. Pickburn, of Stamford-house, Stoke Newington, to Emily Melaine Wason, eldest daughter of the late Prosper de Mestre, Esq., of Millbank, Terara.

DEATHS.

George, Robert Villiers, M.D., at Malaga, after a short illness, on March 26.

Hodges, Edward, M.D., on April 1, at Redland, Bristol, aged 67.

Pigot, J. M. B., M.D., at Ruddington, Notts, on March 26, aged 86.

Woodfall, Jane, widow of the late John Ward Woodfall, M.D., at Maidstone, on April 3, aged 64.

Woolley, George, M.D., native of Dunkeld, at 143, Camden-road, on March 30.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Aysgarth Union.—Medical Officer and Public Vaccinator for Askrigg District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Geo. Winn, Esq., jun., Clerk to the Guardians, on or before April 17.

Dental Hospital of London, 32, Soho-square.—Dental-Surgeon; must be Licentiate in Dental Surgery of Royal College of Surgeons in England. Applications and testimonials to the Secretary on or before April 13.

Essex and Colchester Hospital.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Committee at the Board-room, on or before April 13.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.—Assistant-Physician; must be M.D., or M.B., or M.R.C.P. Applications and testimonials to the Secretary, on or before April 19.

Lincoln County Hospital.—House-Surgeon and Apothecary; must be M.R.C.S.E. and L.S.A. Applications and testimonials to the Secretary, or or before April 10.

Lincoln General Dispensary.—House-Surgeon; must be M.R.C.S. Eng., and be also either L.S.A. or L.R.C.P.L. Applications and testimonials to the Secretary, on or before April 10. Election on the 15th.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, on or before May 9. Election on the 12th.

Middlesex County Lunatic Asylum, Colney Hatch.—Assistant Medical Officer for the Female Department. Candidates must be duly qualified and registered. Applications to be made on printed forms, which can be obtained of the Medical Superintendent, on or before April 15, after which date no applications will be received. The election will take place on the 18th.

Norwich Dispensary.—Resident Medical Officer. Candidates must be duly qualified. Applications and testimonials to the Treasurer on or before April 20.

Parish of St. Pancras.—Public Vaccinator. Applications and testimonials to D. Fildew, Clerk, at the Vestry-hall, on or before April 10. Election on the 13th, at 12 p.m., at which time candidates are expected to attend.

Queen's College, Birmingham.—Medical tutor; must be a Member of the College of Surgeons of England, Ireland, or Scotland, or a Graduate of a University of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before April 8.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

Royal United Hospital, Bath.—Honorary Physician; must be a Graduate of a British University, and be a Fellow or Member of a College of Physicians. Applications and testimonials to the Committee, on or before April 10.

South Staffordshire General Hospital, Wolverhampton.—House-Surgeon; must be a Fellow or Member of the Royal College of Surgeons of London, Edinburgh, or Dublin, and a Licentiate of the College of Physicians, London, or be L.S.A. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29. Election on May 9.

Swansea Hospital.—Resident Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before April 12. Election on the 20th. The duties will commence on May 1.

West London Hospital.—Junior Surgeon; must be a Fellow of one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Secretary, on or before April 12.

Westminster General Dispensary.—Honorary Physician; must be M.D. or M.B., and be registered. Applications and testimonials to Mr. J. Potter, Secretary, on or before April 24. Election on the 27th, at 11 a.m.

Westminster Hospital (opposite Westminster Abbey).—Resident House-Surgeon; must be qualified to practise under the Medical Registration Act of 1858. Applications and testimonials to the Secretary, on or before April 15. Election on the 25th.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

East Ward Union.—Mr. Charles C. Mayne has resigned the Brough District; area 34,100; population 2787; salary £16 10s. per annum.

APPOINTMENTS.

Alderbury Union.—William Lait, M.R.C.S. Eng., L.S.A., to the Third District.

Coventry Incorporation.—Wm. Dresser, M.R.C.S. Eng., L.S.A., L.R.C.P. Lond., to the First District. Charles E. V. Goate, M.D. Univ. Edin., L.R.C.S. Edin., L.S.A. Lond., to the Second District. John Overton, M.R.C.S. Eng., L.S.A., to the Third District.

East Preston Union.—Thomas H. Willan, M.R.C.S. Eng., L.S.A., to the Third District.

Skipton Union.—Joseph W. Hilles, L.R.C.P. and S. Edin., to the Gargrave District.

Wigan Union.—Richard S. Smallman, M.B. Dub., L.R.C.S. Ire., to the Wigan District and the Workhouse.

SUPERANNUATIONS.

Hackney Union.—Mr. George H. T. Jarvis, late Medical Officer for the West Hackney District; allowance £45 per annum.

Strand Union.—Mr. James Leonard, late Medical Officer for St. Martin's District; allowance £120 per annum.

Dr. Roberts, of St. Asaph, who was thrown from his carriage, as we recorded last week, has since died.

In the news by the West India mail we find that cattle plague had broken out in Chili.

One of the old hulks at Devonport has been lent to the Civil authorities at that port, for a Hospital for patients suffering from infectious diseases.

Waterworks in connexion with the collection of springs have just been commenced at Bath. The reservoirs will be about five miles from the centre of the city, and the sources which will be utilised are spread over some distance.

An important meeting has just been held in Newcastle, for the purpose of forming a College of Physical Science in that town. Several handsome subscriptions were promised, and it is to be hoped the scheme will meet with the general support of the public.

The annual report of the University College, London, just published, shows a highly satisfactory condition of affairs. The most important event recorded is the establishment of a new faculty (science), which, says the report, "marks a distinct stage in the development of the College."

Miss Rylands, a lady whose name is associated with many noble works of benevolence and charity, has contributed £500 to the Committee of the Working-men's Fund for the extension of the Queen's Hospital, Birmingham.

The result of the Poor-law Board inquiry as to certain charges preferred by the managers of the Central London Sick Asylum District against Mr. R. Roberts, their clerk, has been his dismissal by the Poor-law Board.

The Poor-law Board having displaced two of the Medical officers of St. Pancras, in consequence of their not residing within their districts, the Board of Guardians last week appointed, from among seventeen candidates, Mr. John Hall, of Chalk Farm-road, Medical officer for district No. 3, and Mr. J. Mitchell, of Euston-square, Medical officer for district No. 4.

While labouring to extinguish the fire caused by the Prussian artillery in the Civil Hospital on August 25 last, M. Emile Hepp, the well-known pharmaceutical chemist, of Strasbourg, and one of the most illustrious men of science that France has lost by the war, received an injury which has caused his death, at the early age of 52.

Small-pox has made its appearance at Lagos, but its ravages had, up to the last accounts, not been severe.

According to the latest information, small-pox is prevailing in China and Japan among the civil population, and to a slight extent among the troops.

The *New Zealand Herald* reports that a supply of animal vaccine lymph has been forwarded to the colony from the Belgian government. It has been extensively employed by the Practitioners of the Island, and by order of the government the public vaccinator is strictly to conform to the wishes of the public as to the employment of either human or animal lymph.

The Sanitary Commissioner of the Punjaub draws attention to the loss of life by small-pox which occurs annually in the Punjaub, a country which is yet practically unprotected by vaccination. In that province, with a population of 18,000,000, the deaths from small-pox are never less than 20,000 a year. In 1869 they were 53,195. The amount of physical disfigurement caused by small-pox in the Punjaub is enormous. Any person walking through the streets of a Punjaub city is struck by the immense proportion of persons blind of one or both eyes, a calamity caused in 99 cases out of 100 by small-pox. Europeans, who, as a rule, are tolerably well protected by vaccination, suffer very little, though they live in the midst of a never-ending epidemic.

An additional illustration of the effectiveness of vaccination as a preventive of small-pox comes from Wrexham. Two deaths have occurred there. In the house where they took place, there were father, mother, and seven children, the latter being of the following ages, viz.:—18, 16, 10, 8. 5, 3 years, and 5 months. All but the one who was 5 years old and the one who was 5 months old had been vaccinated, and these only were attacked by the disease. They were taken ill on Friday night week; the elder died early on the following morning, and the younger in the afternoon, the illness being of the most virulent character.

The Metropolitan Water Companies.—The necessary alterations for a constant water-supply—alterations of mains and services to adapt them for a general constant supply—are calculated to involve an outlay of from one and a half to two millions on the part of the metropolitan companies.

The Metropolitan Board of Works have undertaken to defray the whole cost of converting the waste land contiguous to Stepney-green into a recreation-ground.

The Value of Revaccination.—A few weeks ago small-pox appeared in the Glasgow Industrial School. Dr. Dunlop, the Assistant Medical Officer of Health, was instructed to inspect the children, numbering 150 girls. Seven were found with small-pox fully out. On the following day seven others were taken ill. One hundred and ten girls were vaccinated, and five ladies. Since then there has not been a single case.

Westminster District Board of Works. — At a special meeting of the Board on Friday, the Hon. A. Ponsonby presiding, a report from the Street-cleansing and Sanitary Committee was submitted, recommending the use of Mr. Cooper's patent salts for watering the whole of the district during the ensuing season, which was carried unanimously.

Greenwich Hospital Naval Medical Pensions.—The *London Gazette* reports that, in addition to one Deputy-Inspector-General's pension of £80 per annum, and fourteen Staff-Surgeons' and Surgeons' pensions of £50 per annum, another pension of £100 per annum, for an Inspector-General, and two additional pensions of £50 per annum, for Staff-Surgeons and Surgeons, are to be established.

The Baby-farming Case at Manchester.—Frances Rogers, the baby-farmer, who was arrested by the Manchester police a few weeks ago, was on Monday committed to the assizes on distinct charges of murder, attempted murder, obtaining money by false pretences, and misdemeanour for having neglected to provide proper nourishment to the children under her care.

Punishment for Filthy Housekeeping.—At the Salford Police-court, last week, Dr. E. S. Syson, Medical Officer of Health, charged William Robinson, 119, Hodge-lane, with keeping his house in so filthy a condition as to be prejudicial to the health of the inmates. Dr. Syson said that he had brought this case before the Court as a warning to filthy housekeepers generally. The defendant was fined 2s. 6d. and costs.

Dr. Mary-Durand, writing in the *Siècle*, observes that the experience of the garrison of Metz is nearly conclusive that salt meat does not play so great a part in the production of scurvy as is generally supposed. The defenders of Metz were deprived of salt from September 4 to October 17, and yet suffered severely from scurvy. Dr. Mary-Durand attributes this disease to cold and damp, to the want of fresh vegetables, to compulsory drill, and, above all, to insufficient food. He also considers nostalgia a powerful adjunct to these cases. The bearings of this mental affection on the disease have been plainly visible in the Prussian army, and among the Breton Mobiles, who often suffer from *mal-du-pays*.

Manchester Medical Mission.—The first annual meeting of the Manchester Medical Mission was held at the offices, 176, City-road, last week. The distinctive character of the Mission was the combination of the healing of the body and the presentation to the afflicted of spiritual consolation. Dr. Smeal, the Medical Superintendent, submitted a report of the operation of the Mission during the year. It was established February, 1870. The funds went to provide medicines and dispensing requisites. The number of patients who had visited the dispensary during the year was 4566; the visits to houses by the Medical Superintendent, 5094; total visits, 9660. Devotional services, numbering 104, attended by patients and others, had been held in connexion with the Mission, at which 2017 had been present.

Dr. E. W. Murphy.—The hand of sickness and poverty has fallen upon the late Professor of Midwifery at University College. For a considerable time past he has been unable either to lecture or to practise. A committee of influential members of the Profession has been formed for the purpose of raising a sum of money sufficient to procure him an annuity of £50, to keep him, in his declining years, in something like comfort. About £450 is required, of which nearly half has been subscribed. We have no doubt it will be forthcoming. It would, indeed, be a reflection upon us as a Profession if we allowed a man who occupied at one time so high a position as Professor Murphy to sink for want of pecuniary aid. Dr. Arthur Farre is the treasurer to the fund.

Mortality in India.—In the central provinces during the month of October the number of deaths in a population of 6,732,447 was 12,819. Of this total, no less than 9688 were due to fever, bowel complaints 1434, and snake-bites and wild animals 70. There was not a single death from cholera, and but few from small-pox, but the total rate is still high. Amongst the towns, Jubbulpore gives the worst return, the deaths being 4·8 per 1000; whilst in ten others it was above 3 per 1000. The cattle disease continued in some districts, but it was not spreading. In the north-western provinces the death-rate for October was, per 1000—Cholera, ·02; small-pox, ·01; fevers, 2·22; bowel complaints, ·30; injuries, ·02; all other causes, ·20: total, 2·80. There were 85 deaths from suicide—24 males and 65 females—122 from wounds, 483 from accidents, and 140 from snake-bites and wild animals. Population about 30,000,000.

Royal Institution of Great Britain.—At the general monthly meeting of this Institution, on Monday, April 3, 1871, Warren De la Rue, Esq., D.C.L., F.R.S., Vice-President, in the chair, the following gentlemen were elected Members:—William Cubitt, Esq.; William Gould, Esq.; Robert Hannah, Esq.; John Henry Mackenzie, Esq.; Rev. John Macnaught, M.A.; Joseph Reynolds Masters, Esq.; George Berwick Robertson, Esq., F.C.S.; George Wilson, Esq. The special thanks of the Members were returned for the following donation to the "Fund for the Promotion of Experimental Researches":—T. William Helps, Esq. (sixth donation), £10. The presents received since the last meeting were laid on the table, and the thanks of the Members returned for the same.

Royal College of Surgeons. — At the primary examinations for the diploma of Membership, which were brought to a close this day (Thursday), there were 108 candidates, to whom the following questions in anatomy and physiology were submitted, viz.:—1. Describe the atlas and axis, with the articulations and ligaments connecting them with each other and with the occipital bone. 2. Describe the structure of the capillaries and veins, and the mechanism of the systemic, capillary, and venous circulation. 3. Give the origin, course, and distribution of the following nerves:—(1) glossopharyngeal, (2) hypoglossal, (3) internal pudic. 4. What is meant by excito-motory action? Describe how the excito-motory circuit is completed, and give instances exemplifying this action in health and disease. 5. Give the dissection required to expose the internal mammary artery and its branches; noticing (but not otherwise describing) the parts brought into view or removed in the process. Then state the course, relations, distribution, and anastomoses of the trunk and its branches. 6. Enumerate the various kinds of cartilage, give examples of each kind, and a description of its minute structure and properties.

Royal Sea-bathing Infirmary, Margate. — The annual general meeting of the above institution was held on Friday last at the offices, Cheapside. The report stated that the Hospital has now 250 beds, and remains open all the year round for patients afflicted with scrofulous diseases. The number of patients in the Hospital during 1870 was 666, of whom ninety-five were discharged cured, 204 greatly benefited, 158 benefited, forty-nine unrelieved, and seven had died; the remainder (153) were still in the Hospital. The out-patients during the year had been sixty-nine. The total income for the year had been £6776 1s. 7d., and the expenditure had been £7984 0s. 1d. The report concluded with an earnest appeal for extended pecuniary support.

Sanitary Disposal of the Bodies of the Sedan Battle-field.—In a letter from Sedan, dated March 19, the combustion of the bodies, as conducted by the Commissioners of the Belgian Government, is described. They employed very simple measures for preventing any ill effects from the deleterious miasmata which might arise when the heat became great. The pits having been opened, and the bodies stripped naked without deranging them, tar was poured in in proportion to the number of bodies buried, so as to cover them with a very thick layer of this liquid. When this had infiltrated in every direction, petroleum oil was poured over the bodies, and set fire to, the flames being rendered more fierce by larchwood. They spread in every direction, penetrating even to the bottom of the pits, so that at the end of three hours nothing remained of the bodies but the bones in a state of complete reduction. While all this was going on, fumes of chlorine were abundantly disengaged, and the workmen declared that they did not perceive the slightest cadaveric odour. After this calcination of the bodies, a solid layer of dry tar had formed over the pits, which was quite capable of preventing any exhalations, but, in addition to this, dry chloride of lime was thrown into the pits, and they were filled up with earth and lime so as to form very good *tumuli*. According to the Commissioners, with the exception of those which had been conducted under the *surveillance* of the French authorities, the interments had been made in the most detestable manner, pits containing 160 bodies having been covered only with ten centimètres of earth.—*Presse Méd. Belge*, March 26.

"The beer bill at several of our county asylums," says the *Manchester Examiner*, "has formed the subject of conversation at the Lancaster annual general sessions. During the past year no less than 48,480 gallons of beer were consumed at the Prestwich Asylum; 23,688 gallons at Lancaster; 22,779 gallons (including porter, which is described as the favourite beverage) at Rainhill. The difference in the consumption at the two first-named institutions is more apparent, when we are told that, while Prestwich drinks twice as much beer as Lancaster, it has only about half as many patients. But it is said that this is only another illustration of the difference between town and country: Prestwich draws its patients from our crowded manufacturing districts, while Lancaster is favoured with a rural constituency. The consequence is that, while Prestwich may want four times as much beer, Lancaster consumes three times as much milk. Last year Prestwich put up with 369 gallons of milk, while Lancaster appropriated 1027 gallons. The question naturally arises how far beer is suitable for the ordinary consumption of lunatics. One magistrate observed that at the small asylum at Ribchester the inmates were found to be better without beer than with it; and presumably similar results might accrue elsewhere. Anyhow, the subject is one which may fitly be taken up by Medical Practitioners."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

The Secretary of the State Board of Health of Massachusetts is thanked for his courtesy. Both copies have arrived.

Dr. A. G. Bartley, Moolton.—Your letter, with enclosure, has come safely to hand.

A Constant Reader.—This journal is the organ of no corporation or institution. It is conducted on independent principles; but its principles in Medical politics are those held by moderate reformers, not by revolutionists.

The Milk Journal.—We are glad to find our young contemporary continuing its useful work, and still more to find that the honest men selling good milk, whose names we made famous last January twelvemonth, appear in the highest part of the *Milk Journal's* list of honest milk-vendors.

The Harmattan.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Could any of your readers inform the subscriber whether or not an analysis of the properties contained in the periodical wind on the Western Coast of Africa (called by the natives "harmattan"), long ago described by Matthew Dobson, M.D., has been made by any of our modern analytical chemists or by others. They will oblige your obedient Professional servant,

Harmattan.

Beta.—Different people attach different ideas to the term "represent." Five gentlemen on the staff of a Medical contemporary, the other day, walked into the Home Office, and told Mr. Forster they represented the Profession of Medicine!

L.S.A.—The Court of Examiners of the Apothecaries' Society includes Doctors of Medicine of the Universities of London, Edinburgh, Aberdeen, and St. Andrews; Members of the Royal College of Physicians, both by examination and election; and Fellows of the Royal College of Surgeons, by examination and election.

The Graduated Chloroform Bottle.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you allow me to correct an erroneous impression under which Mr. J. Astley Bloxam labours with regard to the graduated chloroform bottle. I fully believe that the idea was original with Mr. Bloxam, insomuch that he was not aware that such a thing had been in existence previously, but it is due to Messrs. Maw, Son, and Thompson, of Aldersgate-street, to say that twelve months ago they made a graduated chloroform bottle for me, which I have had in use ever since; nor was the idea original even then, for about three years ago I saw with Mr. W. Stokes, of Dublin, a similar bottle enclosed with an inhaler in a neat case, the bottle being flat.

I am, &c., J. Alexander Ross, M.D.

North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent, April 3.

A Sufferer.—The Spinal Hospital is at 22, Great Portland-road.

D., Plymouth.—The criticisms of that infallible oracle need not make anyone very sore. We make it a rule not to comment on the criticisms of our contemporaries Every tub on its own bottom. The phrase in question is like a bank-note: in itself it is a mere flimsy bit of paper, worth nothing, but civilised man uses it for convenience sake to represent a value. Your expression is a convenient metaphor, and it is mere pedantry to find fault with it.

Out-patient Hospital Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The committee which was appointed to inquire into the practicability of effecting any reform in the out-patient administration of our metropolitan charities have at length completed their report, which is now in the hands of the printer. They have also agreed upon certain resolutions to be submitted to a meeting of the Profession, which is to be held, by the kind permission of the President, at the rooms of the Royal Medical and Chirurgical Society on Thursday, April 20, at 8 p.m., when Sir William Fergusson, Bart., will take the chair.

The Committee have further decided to reprint the reports of the several sub-committees on General Hospitals, Special Hospitals, Free and Provident Dispensaries, and Poor-law Medical Relief. These documents together form a pamphlet of nearly sixty pages. They contain a great deal of most valuable information in regard to the abuses of our present system, or systems, of Medical relief, and the means by which these abuses have been, or may be, remedied.

I need hardly say that, in endeavouring to do their work as completely as possible, and to put the Profession and the public in possession of this information, which has been collected with great trouble and labour, the Committee have incurred considerable expense, and I venture to ask you once more to allow me to make this further appeal for help from those especially who have not borne the burden of the work which we have willingly done; and I would especially appeal to the mass of General Practitioners, inasmuch as the abuses which we seek to remedy affect them far more than they do the staffs of Hospitals and Dispensaries. The total liability of the Committee at present amounts to about £25, and in order partly to meet this expense, the Committee hope that gentlemen wishing for copies of the collected reports and resolutions will not object to send a dozen or more of postage stamps.

The reports may be had by applying to Dr. Stallard, 7, King's-road, Bedford-row; to Dr. Heywood Smith, 2, Portugal-street, Grosvenor-square; or to

Yours, &c.

27, George-street, Hanover-square. Alfred Meadows.

A Foreigner.—There is no institution of the kind in existence in this country.

Aqua.—The Metropolis Water Act came into operation in 1852 and 1853.

Lymph from Revaccinated Persons.—Whilst some of our correspondents advocate the use of this lymph in time of need, we find that Dr. Trench, the Medical Officer of Liverpool, stated on Thursday, the 30th ult., at a meeting of the Health Committee, that he looked upon it as a great crime, at a time like the present, to use lymph taken from a revaccinated person. He would not say that true cow-pox might not be thus obtained; but it was very rarely so. To make vaccination effective, the lymph must be taken from a primary case. This we believe to be the best general rule, though, like all other rules, it may have exceptions.

Influence of Maternal Imagination on Fœtus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—With great reluctance, and fully alive to the absurdity of reviving theories proved by time and science to be wrong and ridiculous, a few instances bearing on the supposed influence of the imagination upon the symmetrical development of the fœtus in utero are briefly recorded:—

1. In early pregnancy, frightened by deformed man. Coincident result: Her child deformed.

2. Frightened, seeing a cat's eyes knocked out. Her child imbecile.

3. Fright of fire. Child had nævus.

4. Fell, bruising her left arm. Child's left arm for months discoloured.

5 and 6. Severe fright. Children had imperforate ani.

7. Received blow from a hammer on the right thumb. Child born with two right thumbs.

8. Fell, bruising her right knee. Child born with clubbed feet.

9. Fright, noticing nævus. Child born with nævus.

10. Fell on the ice, bruising her nose. Child's nose permanently marked.

11. Had a monkey thrown in her lap. The still-born child much more resembling a monkey than a man—the legs covered with hair. (Would have delighted the heart of Darwin.)

12. Whilst returning into a bathing-machine, was ungallantly nipped by a gigantic crab—probably a soured old bachelor, a hermit crab. The child for a long time attracted attention by his crab-like method of progression, and will probably find himself some day a gold stick-in-waiting at Court.

13. Frightened whilst being photographed; the artist (arranging her head in a sentimental position becoming to a lady about shortly to become mother) had a deformed hand. The child's right thumb was crooked. Always in her second pregnancy brooding over this, the second child had one finger imperfectly developed.

As that excellent comedian Toole would remark, these things are "extraordinary—most extraordinary."

I am, &c.,

April 2. Francis R. Hogg, M.D., Royal Horse Artillery.

Public Spirit.

The *New York Times* states that Mr. Sol. Sanborn, of Medford, Massachusetts, described as a hatter by trade, has made and recorded a will by which he bequeaths his body to Professors Louis Agassiz and Oliver Wendell Holmes, of Harvard University, with a request that it shall be prepared "in the most scientific and skilful manner known to the anatomical art," and placed in the museum of anatomy attached to the aforesaid institution. Of his skin, however, Mr. Sanborn requires two drum-heads to be made, which are to be presented to his "distinguished friend and patriotic fellow-citizen, Warren Simpson, drummer, of Cohasset," on condition that he shall beat, or cause to be beaten, on the said drum-heads, the national air of "Yankee Doodle," at the base of the monument on Bunker's-hill, "at sunrise on the 17th of June annually." Moreover, on one of the drum-heads is to be inscribed "Pope's Universal Prayer," and on the other, "the Declaration of Independence," as it "originated in the brain of its illustrious author, Thomas Jefferson." The parts of his body useless for anatomical purposes Mr. Sanborn desires, to quote his own words, to be "composted for a fertiliser for the purpose of nourishing the growth of an American elm, to be planted or set out in some rural public thoroughfare, that the weary wayfaring man may rest, and innocent children playfully sport beneath the shadow of its umbrageous branches, rendered luxuriant by my carcass."

W. C. T., Maidstone.—The University of Melbourne was founded in 1853, and has had a Medical school in connexion with it since 1862.

Human Phosphorescence.—An authenticated instance is recorded in Hardwicke's *Science Gossip* for April. An old lady has the privilege of exhibiting luminous spots on her face. The phenomenon ranks with the phosphorescent light emitted by decayed fish, wood, and fungi. *Query:* Are the luminous spots on the human skin the habitat of cryptogamic growths, as in pityriasis? The hair of persons who have allowed it to grow long, and tangled, and filthy is said to be at times luminous, and the neglected hair of hermits to have emitted the light which is represented by the *aureole* around the heads of saints. Sparks of electricity are quite a different thing; they are common enough when dry hair is brushed. The popular theory is that these phenomena indicate bad health; and this is probably true.

COMMUNICATIONS have been received from—

Dr. Kraus; Dr. J. C. Dempster; Mr. Charles Rose; Dr. Tinnion; Dr. E. Long Fox; Dr. Attfield; Dr. A. Meadows; Dr. W. Dale; Dr. F. R. Hogg; Dr. Francis L. Gault; Dr. G. Buchanan; Mr. H. Harris; Mr. G. B. Black; Dr. J. A. Ross; Mr. F. H. Hodges; Mr. E. C. Shoppee; Mr. J. Chatto; Mr. H. Arnott.

BOOKS RECEIVED—

An Analysis of Cases of Organic Urethral Stricture, by John D. Hill, F.R.C.S.—Parisiana (the Real Truth about the Bombardment), or the Volunteer with the Besieged Armies—Radcliffe's Dynamics of Nerve and Muscle—Birch's Examples of Labourers' Cottages—Report of the Wilts County Asylum—Dr. William Richardson on Diabetes—Beard and Rockwell's Medical and Surgical Electricity—Diseases of the Lungs affecting those who Work in Dusty Atmospheres, by J. A. Ross, M.D., etc.—Vaccination: as it Was, and as it Is, by W. Webber, F.R.C.S.

PERIODICALS AND NEWSPAPERS RECEIVED—

Pharmaceutical Journal—Journal of Mental Science, April—Monthly Microscopical Journal, April—Indian Medical Gazette, March—New Zealand Herald—Quarterly Journal of Microscopical Science, April—British and Foreign Medico-Chirurgical Review, April—New York Medical Gazette—Bayswater Chronicle—Edinburgh Medical Journal, April—Practitioner, April—Quarterly Journal of Science, April—Monthly Homœopathic Review, April—Westminster Review, April—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

April 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

11. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Medical and Chirurgical Society (Ballot, 8 p.m), 8½ p.m. Dr. Silver, "On a Case of Retrogressive Labio-glosso-laryngeal Paralysis. Dr. Robert Lee, "On Amputation of the Cancerous Breast."

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Mr. T. J. Dyke (Merthyr Tydvil), Dr. Robinson (Leeds), Dr. Buchanan, and Mr. J. Netten Radcliffe, "On the Epidemic of Relapsing Fever."

Society of Arts, 8 p.m. Meeting.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

14. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Clinical Society, 8½ p.m. Dr. Broadbent, "On Phosphorus as a Remedy in Skin Diseases." Dr. Sims, "Case of Left Hemiplegia, with Total Loss of Right Eye." And other Papers.

Medical Society of London, 8 p.m. Meeting of Council.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 1, 1870.

BIRTHS.

Births of Boys, 1145; Girls, 1139; Total, 2284.
Average of 10 corresponding weeks, 1860-69, 2221·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	784	780	1564
Average of the ten years 1860-69	780·2	754·1	1534·3
Average corrected to increased population	...	...	1687
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	11	2	10	3	8	...	3	2	1
North ...	618210	74	1	2	...	9	2	3	4	3
Central ...	383321	11	...	5	...	1	1	2	...	1
East	571158	37	3	4	...	9	2	1	1	3
South	773175	59	7	12	3	14	2	4	4	6
Total	2803989	192	13	33	6	41	7	13	11	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·985 in.
Mean temperature	43·8°
Highest point of thermometer	67·4°
Lowest point of thermometer	31·2°
Mean dew-point temperature	36·3°
General direction of wind	N.N.E.
Whole amount of rain in the week	0·03 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 1, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending April 1.	Deaths Registered during the week ending April 1.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2284	1564	67·4	31·2	43·8	6·55	0·03	0·08
Portsmouth ...	125464	13·2	77	38	64·0	29·2	45·9	7·72	0·00	0·00
Norwich	81787	10·9	59	27	64·0	32·0	40·6	4·77	0·12	0·30
Bristol	173364	37·0	133	70	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	45	22	64·5	28·5	42·3	5·73	0·08	0·20
Birmingham ...	378574	48·3	284	149	67·0	30·0	43·4	6·33	0·00	0·00
Leicester	101367	31·7	87	45	67·5	29·7	42·8	6·00	0·02	0·05
Nottingham ...	90480	45·3	80	37	70·4	30·4	44·7	7·06	0·52	1·32
Liverpool	526225	103·0	379	363	65·0	30·3	42·9	6·06	0·01	0·03
Manchester ...	379140	84·5	267	198	68·0	31·0	43·6	6·44	0·00	0·00
Salford	123851	23·9	108	64	70·5	28·0	42·3	5·73	0·01	0·03
Bradford	148030	22·5	158	52	64·0	32·0	43·5	6·39	0·05	0·13
Leeds	266108	12·3	266	119	66·0	33·0	44·2	6·78	0·00	0·00
Sheffield	255247	11·2	244	94	58·5	32·4	42·4	5·78	0·09	0·23
Hull	135195	38·0	89	51	57·0	29·0	39·6	4·22	0·15	0·38
Sunderland ...	103037	31·2	130	44	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	125	62	55·0	31·0	39·7	4·28	0·13	0·33
Edinburgh	179944	40·6	158	104	63·7	37·0	46·5	8·05	0·00	0·00
Glasgow	477627	94·3	432	318	55·4	27·0	42·5	5·84	0·00	0·00
Dublin (City, etc.†)	322321	33·1	279	154	57·2	27·0	43·0	6·11	0·05	0·13
Total of 20 Towns in United Kingd'm	7336941	34·4	5684	3575	70·5	28·0	43·0	6·11	0·07	0·18
Paris—Week ending April 1	1889842	98	...	...	...	...	...	...	...	...
Berlin—Week ending Mar. 30 ...	800000	52	...	...	...	...	...	...	...	...
Vienna—Week ending Mar. 25 ...	622087	68	...	...	...	...	...	...	...	...

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·99 in. The highest was 30·28 in. on Tuesday morning, and the lowest was 29·75 in. at the beginning of the week.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers of the population of these cities and boroughs, as enumerated at the Census in April next, will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

ON ORCHITIS FROM IRRITATION IN THE PROSTATIC URETHRA.

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON,
Surgeon to the Hospital, and Lecturer on Surgery.

Gentlemen,—There is an elderly man at present in Mellish Ward who was admitted on account of an old stricture of the urethra, with half-a-dozen urinary fistulæ. I succeeded in introducing large-sized instruments, but his fistulæ were very troublesome, and showed no tendency to close. I advised, therefore, that he should have the urethra freely opened in the middle of the perineum, and a catheter passed through the wound and retained. This was done, and with very good results. The man improved in health, and his discomfort from the fistulæ much diminished. At the end of a month, however, we were still compelled to keep a catheter in the wound, for if it was removed some urine at once escaped by the fistulæ. This was probably explained by the great length of his stricture, and the fact that it passed back to the membranous part of the urethra. Being disappointed that our new opening did not suffice of itself for the spontaneous escape of the urine, I suggested to my House-Surgeon to use a larger catheter (we had hitherto employed No. 10), and he, determined not to fall short of what was wished, introduced with some difficulty No. 15. I now come to the part of the case which is of special interest in reference to the subject of our present lecture. A few days after the larger catheter had been put in, I found the man somewhat feverish, and complaining of deep-seated pain in the left iliac region. There was nothing to be seen or felt, but the pain had kept him awake the whole night. He reminded me that he had complained of a similar pain about a fortnight before, and that it had passed off after a dose of opening medicine. I ordered his side to be fomented, and prescribed a dose of castor oil. His pain, however, continued, and two days later his scrotum was so much swollen that he was reported to have "erysipelas." The swelling was, however, consequent upon inflammation of the testicle, and, bearing in mind that he had first complained of pain in the iliac region, and that this pain had followed the introduction of a large catheter through his prostate, I had no hesitation in suggesting that the whole was due to inflammation of the vas deferens, followed by implication of the epididymis, testis, tunica vaginalis, and cellular tissue of scrotum. A few days later we found fluctuation over the testis, and as his pain continued very severe, I made a free incision, let out a quantity of turbid serum from the tunica vaginalis, and then incised the inflamed testis. The testis was very much enlarged, and its substance intensely congested and very soft; the tunica albuginea, which we had freely exposed by the incision, was stretched until it was as thin as paper, and it gaped widely as soon as it was cut. We did not find any pus in the gland itself. The relief given by this incision was immediate and most marked. The man has been quite comfortable ever since; there has been no actual gangrene of the testis, but it still projects into the wound.(a)

The next case that I will mention is that of an old gentleman from Bath, who consulted me yesterday morning. He had been sent to me by his Medical attendant, on account, as he said, of inflammation of one testicle; he was using a suspender, and by its aid was still able to walk about. On examining the inflamed part, I found that the cellular tissue of the scrotum was not in the least involved, nor, indeed, when we came to handle it, was the body of the testis itself found to be swollen. The epididymis was enlarged and tender, all the structures of the cord were swollen, and the vas deferens especially could be easily traced into the inguinal canal. I said to him "Did not this begin by pain in the body above the groin, before the testicle swelled?" "Yes," he replied, "there was deep-seated pain for several days before there was anything to be seen." I next inquired as to the use of catheters, and learnt that for five years past he had never voided a drop of urine excepting through an instrument. He was in the habit of using a flexible catheter, which he introduced for himself about four times in the twenty-four hours. He was 70 years of age, and on examination by the rectum I found that he had an enormous prostate. Here, then, the case was explained: irritation to the prostatic urethra by the continued employment of instruments, inflammation of the vas deferens, which had travelled outwards through its entire length and involved the epididymis, but which had thus far not reached the body of the testis or its coverings. We must note in reference to the catheter that our patient was not in the least aware that it had irritated him; he had had no difficulty whatever in using it; his attack of inflammation of the vas deferens had existed only about ten days. Let me add another very interesting fact which his case supplied; he told me that two months ago he had had a similar attack of deep-seated pain on the opposite side, which was not, however, ever attended by inflammation of the testicle, and which ended in the formation of an abscess, which presented at the root of the penis near to the external ring. From the swelling about the cord at present I should not be at all surprised if he yet has an abscess in that position on the right side.

Two or three years ago I saw, in consultation with Dr. Appleton, of Hackney, an old gentleman of nearly 80, in whom the right testicle had passed into gangrene; it had been exposed by a sloughing abscess of the soft parts, and when I saw him it hung quite loose, excepting for its attachment to the cord. Having put a ligature round the cord as a precaution against hæmorrhage—probably, however, not necessary—I cut the gland away. As to the cause of the gangrene of the testis, and the abscess which attended it, it seemed probable that they were due to prostatic irritation. Our patient was the subject of enlarged prostate, and had voided prostatic calculi.

I have next to mention a very important case. A distinguished member of our own Profession, whilst in the enjoyment of good health, became the subject of stone in the bladder. Lithotrity was practised, without ill-result, on five or six occasions, and many fragments of calculus were removed. At length, however, after what was believed to be a final sitting, he had a very violent rigor, followed by much vesical irritation; He recovered from this, and, although still suffering a good deal of inconvenience about the prostate, was able to go a short distance into the country, and to take drives in his carriage. One day, after a drive, he was attacked by inflammation of the right cord and testis. I saw him for the first time about three weeks after this occurrence. He was then very ill, liable to frequent rigors, with a dry tongue and quick pulse. I detected fluctuation over the inflamed testis; the scrotum was not very greatly swollen, but it was dusky and œdematous, and, taking all the symptoms into account, I did not doubt that pus was present. He readily consented to the use of a knife, and on the following day we laid the tunica vaginalis freely open, and let out a couple of ounces of stinking pus. The testis itself was not much enlarged. All his symptoms were greatly relieved by the incision. We kept the tunica vaginalis syringed out daily for about a week, but it rapidly took on healthy action, granulated, and closed. Unfortunately, however, just as it got well, the other testis was attacked; great swelling resulted, with severe pain and acute febrile symptoms. In this instance I watched the inflammation from the beginning, and at the end of ten days having detected fluctuation, I made an incision, expecting to find pus; the fluid, however, was serum only, and of this we let out about an ounce and a half from the tunica vaginalis. Again the incision was productive of most marked relief; the parts healed well, and on neither side was the testis damaged. During the next two months our patient had, however, a succession of abscesses in the abdominal wall in each iliac region. These began in each instance by deep-seated pain, great swelling, and induration, and in each case we had to cut through a great thickness of tissue to evacuate the matter. I have no doubt that these abscesses had their starting-point in the inflamed vas deferens. After they were all healed, our patient having continued to suffer severely throughout from vesical irritation, and being in the worst possible health, lithotomy was practised; a large abscess in the prostate itself was opened, and some sharp-edged fragments of calculus removed from the bladder. I should add that during his illness with the abscesses, etc., he had more than once voided fragments of stone. After the lithotomy, no more abscesses occurred, and his Profession and the public now enjoy the advantage of his complete restoration to health. The operation was performed by the distinguished lithotritist who had commenced the treatment of the case. My reason for mentioning this case in conjunction with those which have preceded it, is because I think it affords a good example of a succession of abscesses about the vasa deferentia and testes due to prostatic irritation. I think it very probable that a small fragment was throughout impacted in the prostatic urethra, and quite certain, even if that were not the case, that fragments frequently passed temporarily into that part of the canal. The urethra was in no way blocked, for a full-sized instrument could always be passed.

(a) Subsequent to the delivery of this lecture, this patient made a perfect recovery. The wound in the scrotum closed over soundly. He has now for some months returned to his work, and is in good health. He still keeps a flexible catheter in the perineal wound, but his fistulæ have, I believe, all closed.

In the last case which I have narrated to you, a very important question of diagnosis was frequently discussed during the several months that the succession of abscesses was forming. We had to ask ourselves with the utmost anxiety—Were they the result of pyæmia or some blood-poison allied to it? The constitutional symptoms were quite severe enough to warrant such a suspicion; rigors were frequent, and sometimes of extreme severity. The fact that all the abscesses were in connexion with the genito-urinary apparatus, and that none were ever threatened in joints or in cellular tissue at distant parts, enabled us, however, to feel confident that they were not pyæmic, and it is well known that urethral irritation may cause rigors quite as severe as those of pyæmia. It may be worth while to note that we never had two abscesses in progress at the same time, and that the testis first attacked had got quite well before the other was involved.

Having just quoted a case in which irritation of the prostatic urethra from calculous fragments was the cause of inflammation of the testes, I may suitably allude to the general subject of operations for stone in connexion with this occurrence. I have never, in my own practice, seen orchitis follow lithotrity, but then I have performed lithotrity in but a very limited number of cases. I well recollect, at St. Bartholomew's Hospital, many years ago, seeing a case under the care of the late Mr. Stanley, in which abscess of the body of the testis, with gangrene of its structure, followed lithotrity. In three cases of my own, after lithotomy, I have known inflammation of the testis occur; two of these were in boys, and one in an old man. In each, suppuration of the tunica vaginalis occurred; but in none was there sloughing of the testis; in all the vas deferens was involved.

You must not understand from this that inflammation of the testis is common after lithotomy; on the contrary, it is decidedly rare. My own proportion is, I believe, not more than one in about forty cases, and I suspect that it is considerably in excess of the average. I cannot attribute its occurrence to any peculiarity in my mode of operating, for in all three cases I had performed the lateral operation, and only in one, that of the old man, had a tube been retained in the wound. My suspicion is that in each instance it was due to some small fragment which had been crushed off from the surface of the stone and remained impacted, possibly in the orifice of the ejaculatory duct.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

DRUNKENNESS AS MODIFIED BY RACE;

WITH AN ANALYSIS OF THE REPORT ON DRUNKENNESS IN VARIOUS PARTS OF THE WORLD, ISSUED BY THE MASSACHUSETTS STATE BOARD OF HEALTH.

By ROBERT DRUITT, M.R.C.P. Lond., F.R.C.S., etc.

THE well-meaning and philanthropic personages who employ themselves in restraining the national scourge and disgrace of drunkenness, would do well to take a lesson from the method which Physicians employ in investigating any intractable bodily disease. They ought to get a comprehensive view of its phenomena in the most distant times and countries, to study the conditions under which it flourishes, or the reverse, and the various complications which surround it. They may then find it not a simple vice inherent in the human race, always springing up where drink is to be had, and capable of cure by some one single nostrum. On the contrary, they may discover that there are some races and soils in which it refuses to take root; and hence, instead of the absurd *teetotalism*, and the ravings at the "poison" alcohol, they may find that it would be more profitable to study the conditions under which the people either have no appetite for alcohol, or, if they have, can indulge it without fear of ill consequence.

The articles of the teetotal creed are by this time pretty well known by means of the numerous orators and tract-writers of that sect. It is held that alcohol is a poison *simpliciter* and absolutely in all forms and quantities, insomuch that it is criminal to use it as food or medicine; that it is a poison so seductive that no one can taste it without the wish to take more and more, till the craving for it becomes an overwhelming necessity; that "moderation" is impossible, or, if possible, that it is more villanous than drunkenness itself, inasmuch as it not only leads the moderate drinker himself to the pit of destruction, but operates as a baneful example to others. It is asserted, further, that alcohol ought to be destroyed as Dr. Cobbold would destroy tapeworms; that the whole population ought to abstain entirely, and that there is no safety in any other course. These heresies, like other ill weeds, are growing; they began with itinerant spouters by the wayside; now they are creeping into churches; clergymen are found so indolent as to give over the teaching of their flocks to teetotalers, on the ground that they themselves cannot stem intemperance by legitimate argument. The first article in the Nicene Creed is set aside on the theory that no one but the devil could have invented fermented liquors. The moral effect is that converted drunkards, instead of being ashamed of themselves, and drinking their watery fluids abashed in silent penitence, revenge themselves for their privation by the Pharisaic doctrine that they are the true regenerators of the age, and that the moderate and sober part of the community, who thankfully use their wine and beer as good gifts from the Creator, are really more culpable than themselves, who began by misusing these gifts, and then turn to abuse the Giver, the gifts, and those who have the grace to enjoy them like reasonable beings. Moreover, the heresy is beginning to infect Physic; we have not only religious temperance, but Medical temperance publications, containing the few worn-out and superficial statements paraded on temperance platforms.

I have, on a former occasion, pointed out the necessity of a more searching and philosophical treatment of the whole subject; and in especial, with regard to knowledge of causes and remedies, have pointed out the necessity of marking off the solitary, secret drinkers from the open, noisy, gregarious drinkers. The former are chiefly women of advanced life, bad health, and worse prospects, who have arrived at a time when possibly their past life has been unhappy, and there is little or no ground for hope in the future. Men, too, of indifferent health, or unsettled minds, or bad circumstances, fall notoriously into the same habit. These are cases, not for noisy preachments and moral truisms, but for the kind, cautious, searching diagnosis of the Physician, and such treatment as shall support the strength, mitigate the cravings of weakness and disorder, and soothe the mind. Religious consolation would be of immense service, but, unluckily, the teetotal and other clergy, whilst damning drunkards and drunkenness in the mass, forget to soothe and heal the poor broken reeds and half-extinguished vital lamps, if so we may symbolise the unfortunates who resort to this mode of oblivion of their miseries.

On the other hand, there are the open, noisy, notorious, rollicking drinkers, often forming a mass that stamps its character on the population, thronging the taverns and filling the streets. The existence of such as these shows some peculiarity in the race—some tendency which the politician and philosopher ought to take into account, and counteract, although they do not. Yet, as it is not the whole of the earth's population that drinks in this way, but only certain races, and as amongst those races there are some that preserve their sobriety, it surely were well worth while to reckon up the points in which those who do not get drunk and violent differ from those who do. It is a case, not for preaching, but for study and work. What races drink, and what do not? What differences in mental and bodily character, in climate, diet, and occupation, go along with differences in drunkenness? Are temperate races virtuous, chaste, industrious, averse to fraud, theft, violence, and bloodshed? Amongst the races who drink, does drunkenness prevail most amongst the rich or the poor?—amongst those who have unlimited access to food and drink, or those who have difficulty in procuring it? What difference does exposure to cold and damp, malaria, and fatigue make? Are all forms of alcoholic liquor equally prejudicial? Have the drinking classes fair play, as regards the being able to find comfort, warmth, food, and innocent amusement where there are no temptations to drink? In fact, take the drinkers and the sober classes, can you anyhow find in the surroundings of the former an excuse for drink, and can you alter them, so as to put the drinkers more on a level with the classes that can withstand drink?

I have in former communications affirmed, and affirm again, that the ordinary *dicta* about the connexion of insanity, sickness, crime, and poverty with alcoholic drink require to be taken with a good deal of correction. We often hear in sermons and speeches that half the poverty, one-third the insanity, and a large proportion of crime, are due directly to intoxicating drinks. Now, if this be true (which it is not), and if it be likewise true, that so long as alcohol exists man will drink, and that, as the teetotalers assert, no one can drink moderately, but that he who tastes is on the first step of a downward course of brutalising vice, and if, as the indolent clergy assert, the Gospel is hopeless as a remedy, then the condition of the human race is bad indeed. But these things are either simply not true, or partial and unfair versions of truth. There are large races who do not drink; amongst those who do, drunkenness is confined to certain classes under specific conditions. Unchaste women drink; thieves drink; rogues, ruffians, and brutally uneducated fellows drink; but it is not drink which made them whores, thieves, and ruffians, or that caused them to have no moral training. Drink is one kind of sensual indulgence which persons of no intellect and no morals resort to. Unchaste women especially do not begin their career with drink; a far stronger passion leads them first astray, and drink comes in with its fallacious comfort to stifle disgrace and remorse. True, drink will impel men of some races to crimes of violence or lust; but the first thing to blame is not the drink, but the whole social condition which shall lead a man to want drink, and to take it openly and excessively without shame. Given, a dozen drunken fellows who break each other's heads at a public-house on Sunday evening; and *quære*, where else could they have gone save to the public-house for warmth, shelter, conversation, and amusement? Again, with regard to the parrot-like cry that drunkenness is the great cause of insanity, the truth is that many madmen have been drunkards; but it was not drink that disturbed the mind, but a disturbed mind which prompted the craving for drink.

These thoughts, which run rather too lengthily from my pen, are suggested by an admirable correspondence on drunkenness in the "Second Annual Report of the State Board of Health of Massachusetts," which that body has done me the honour to send me, and of which I venture to lay a short analysis before the readers of the *Medical Times and Gazette.* If we are ever to cure the national vice of drunkenness, it must be not by merely treating symptoms, but, as I said before, by measures based upon the most extensive induction; and the State Board of Massachusetts, of which Dr. Bowditch is President, has supplied us with very valuable material for this purpose. It was made their duty, by the Act which established the Board, to take cognisance of drunkenness amongst the other causes of disease. To this end, in 1870, they issued questions to 164 competent observers in as many towns in Massachusetts, asking—"What, in your judgment, has been the effect of the use of intoxicating liquor as a beverage upon the health and lives of the people in your town, or in the region in which you practise?"

Besides this, they issued questions to the Consuls and Vice-Consuls of the United States in all parts of the world, asking:—1. What are the chief intoxicating articles used in the given place? 2. What amount of crime is produced by them, and their effect on the general health and prosperity of the people? and 3. The relative amount of intoxication in the given country compared with that in the United States?

It is to the information contained in the replies, and the Secretary's conclusions thereon, that I wish to direct the attention of my Medical brethren, as they so completely uphold the practice pursued by rational Physicians in all ages, and contravene the dogmata of the teetotalers.

The answers given by the 164 Physicians of Massachusetts exhibit much diversity, and are thus summed up:—

"Very destructive to life and health	48
Injurious in a greater or less degree	49
Public health not affected by use in their towns	16
The people of their towns very temperate	27
Intoxicating drinks not used in their towns	5
The effect is bad upon foreigners (*i.e.* Irish) in their towns, but not upon natives	4
Useful in the decline of life	1
Use promotes longevity	1
Indefinite replies	13"

The discordant results of different men's experience is seen in such extracts as these. For example, with reference to the effect of alcoholic drinks on nutrition, A says:—"I am positive that drunkards die from consumption."

On the other hand, hear B:—

"I have very few cases of sickness which I am able to trace to the use of intoxicating liquors. Many aged persons are within the range of my observation who have always used liquors as a beverage without apparent injury. I have the impression that in this region persons who habitually use spirits are less subject to lung diseases than are the average of total abstainers."

And C:—

"I have had a large practice among the Germans for twenty years, and my observation has been that they are remarkably free from consumption and chronic diseases. I have attributed it to their free use of lager-beer. I believe that the moderate use of the lighter drinks is beneficial."

Another Practitioner avers that alcoholic beverages and pork are the cause of cancer.

So far as concerns intemperance or excess, all sensible people, at all times and places, have agreed in condemning it; so I need not quote the Massachusetts Physicians when they confirm that condemnation. But, as regards the habitual use in moderation, they show nothing against it; whilst I may quote the following opinions as showing one side of the question little regarded by teetotalers:—

"*Tobacco* is doing even more than liquor to undermine the constitutions of the men of this region." Another says, "*Tobacco* is now doing more to shorten life than liquor." A third says that liquors are "unfavourable to health. The same may be said of strong *tea and coffee.*" A fourth says, "I have observed no peculiar effects on health in this town from the use of intoxicating drinks, but the habit of *opium*-eating and the use of preparations of opium demands attention."

But I must pass on to the more immediate subject of my paper—the modifications of drunkenness amongst different races in different parts of the world, as shown by the replies addressed to the Massachusetts Board. For convenience sake I present the summary facts under various headings as I jotted them down for my own private use.

As a preliminary, we may arrange the various populations, concerning whom the correspondents of the Massachusetts Board sent reports, under four categories in descending scale, beginning with—1, those who abstain; 2, those who drink, but in such moderation that drunkenness forms no feature of the place or people; 3, populations amongst whom drunkenness is pretty common, but of an innocent, jolly, and not criminal character; and, 4, populations disgraced by drunkenness, accompanied with brutality and crime.

1. Under the total abstinence head we may arrange the Mussulman populations of Constantinople, Alexandria, and Zanzibar, and the people of Hayti.

2. The population is shown to drink, but without any features of excess, by the answers received from Ancona and Florence, Athens, Cadiz, Teneriffe, Funchal, Fayal, Malta, Beirut, Geneva, Vienna, Bremen, Leipsic, Nicaragua, Pernambuco, St. Juan, Para, Trinidad, Lima, and Honolulu.

3. People are shown to drink too freely, but innocently and without violence, by the answers from Trieste, Basel, Berne, Zurich, Frankfort, Copenhagen, Elsinore, Yokohama and Hiojo, and Santa Cruz.

4. In the lowest category rank the answers from Liverpool, Manchester, Dublin, Edinburgh, Rotterdam, Utrecht, Odessa, Toronto, Cologne, Colombo.

So that, highest in the scale of temperance come the Turks and Arabs; next, the Iberians, Levantines, Greeks, and Latin races; lower down, the Japanese, Scandinavians, Belgians, and the Irish Celt; lowest of all, the so-called Anglo-Saxon of either continent.

When we come to analyse the conditions under which these people live, we find that, *with temperate races, the greatest abundance of intoxicating liquor leads to no excess. Restraining laws are unnecessary.*

Thus, Consul Tuckerman writes from Athens, and Consul Keef from Piræus:—

"The chief intoxicating article is wine, the native growth of the country. It is of pure grape-juice, fermented naturally in barrels, without any artificial aid beyond the addition to the fresh must when put in the barrels, of about 10 per cent. of common resin gathered from the bark of the pine-tree. This wine is very cheap.

"Crime cannot be attributed to this cause. Not more than one-sixteenth of the crime committed can be said to arise from intoxication. The Greeks are eminently a temperate people, and, excepting on high feasts and holidays, a drunken man is rarely seen. My own observation is not a fair test, as I am not frequently in quarters of the city where tavern brawls occur, yet it is worthy of remark that, during two years' residence in Greece, I have not seen as many as two Greeks in the condition called 'dead drunk'; while it is a not uncommon sight to see sailors from foreign ships reeling through the streets in various stages of intoxication."

"As to the Greek wines, probably they are purer than those of any other country in Europe. . . . On the high plain of Arcadia, and in the mild valley of Acarnania—in fact, in all of western Hellas—wine with bread and olives and oil makes a chief article of food; babies, even, drink it. It is the most abundant of all products, and the easiest procured. In Acarnania you will often find wine when you would hardly find bread. . . . During my residence in Greece, and my travels in it, I have scarcely seen half-a-dozen drunken men."

Consul Erni writes from Basle—

"Wine grows very abundantly, and costs retail from ten to twenty-five cents a pint only, a great deal is consumed even by poor persons and day-labourers (wood-cutters receive a bottle a day, servants from two to three bottles a week in each family). . . . Basle is one of the most orderly, quiet, and moral cities in Europe. . . . Drinking is here connected with amusements, conversations, music, etc., indoors, and outdoors; rarely leading to fighting, if ever to murder; does not take place at bars, or secretly."

Consul Horatio Fox writes from Cuba—

"Aguardiente—*i.e.*, rum—although used so freely as a drink by the poorer class of whites and the blacks, yet I must in justice add that, notwithstanding its liberal use, it is very seldom that it is drank to excess—so much so, that it is an extremely rare thing to see a person intoxicated in the streets. . . . It is a fact which has often attracted my attention, that in a country where intoxicating drinks are to be had so cheaply as to be within the reach of everyone, and, I may say, in such general use, that so very few cases of drunkenness are seen. . . . In this town, where I have resided for thirty years, the amount of crime proceeding directly from the use of intoxicating drinks is so small, that I can safely say that it does not amount to 1 per cent. of the total of crimes from all causes."

Consul Bond writes from Para, Brazil—

"The chief intoxicating article used in Brazil is 'cachaça,' (rum made from the sugar cane). . . . Habitual intoxication is rare in Brazil, and limited to the lowest class of the population. Even among these it cannot be said to be prevalent. . . . The consumption of 'cachaça' is large; there is a grog-shop at almost every corner, not limited, however, to sale of liquors. How it happens that there are so many moderate drinkers and so little drunkenness, I cannot tell."

There is an opinion prevalent—at least, we see traces of it in this week's *Saturday Review*—that intoxicating liquors are all much alike as regards their worst or maddening qualities, and that no greater crime is due to sound wholesome liquor than to that which is badly made and subsequently adulterated. But, certes, English experience shows that the maximum of brutality arises from heavy, coarse, hastily-brewed "brewer's beer," made with hops of low quality, containing, perhaps, some principle allied to that of the nearly-allied plant, Indian hemp. French writers show that each kind of liquor produces an intoxication peculiar to itself, and that, of all, the heavy, medicated liqueurs of which absinthe is the type are the worst. The œcumenical information gleaned by our Transatlantic friends is to the same purport. It shows that *the worst effects may be produced by substituting heavy, drugged, spirituous liquors for light wines or beer*, and, conversely, that *an abundance of light wine and beer may be the best aids to temperance.*

Mr. Horace Rubler, writing from Berne, says—

"The evil effects of intemperance here are chiefly visible in that class of the population addicted to the drinking of schnapps. This liquor is very cheap, and is the principal stimulant used by the poorer classes. Its manufacture and use have greatly increased of late years. . . . The general impression among those with whom I have conversed on this topic, is that the wines of the country are wholesome, and that the best method of introducing a temperance reform would be to bring wine or beer within the reach of the masses of the people, and discourage the use of stronger drinks."

Consul Hanson, from Bremen, writes—

"No alcoholic spirits are used in Bremen. Wines and beer are the favourite beverages, and are used and consumed in almost unlimited quantities. These are so cheap as to come within the means of all classes, more beer, however, being consumed by the middle and lower classes than any other. My observation has led me to conclude that no evil grows out of the use of these."

The Vice-Consul at Frankfort-on-the-Maine says—

"Twenty years ago the city and country were full of dram-shops, which, owing to the improvement of the beer and the introduction of coffee amongst the labouring class, have nearly entirely disappeared. . . . . Such was the state twenty years ago. By the improvements in making better beer, things have been changed. The drunkards have disappeared. A great deal less of cider and wine is consumed. The people now generally drink beer. Many drink to excess even now. Intoxication has decreased. . . . . Intoxication continually occurs, not habitual, and not causing crime; but it is more accidental, from over-hilarity in drinking. As a general fact in Germany, in those parts where wine grows and where the chief beverage is beer, there intoxication is less and has been decreasing. The contrary is the case where there are large distilleries and more ardent spirits are consumed."

Mr. Marsh, the Consul at Florence, says—

"Intemperance is not so prevalent in Italy as to rank among the great social evils which force themselves upon the attention of the criminal legislator, the public economist, and the philanthropist. . . . . I am inclined to the opinion that an abundant supply of cheap light wines would tend in the long run to diminish rather than increase intemperance in the United States."

Mr. J. P. Dabney reports from the Azores—

"Until the almost entire destruction of the vines in 1855, comparatively little spirit was consumed in these islands, the common wine of the country, which was freely used, costing only from eight to ten cents per gallon. At present, wine is quite expensive, and rum has taken its place, but I cannot say that there has been any marked increase of intoxication. These people, like all the Latin races, I believe, are far more temperate than the Anglo-Saxons."

Similar is the evidence given by Mr. W. H. Dabney, at Teneriffe—

"Up to 1845 this was eminently a wine-producing country, this island alone having produced as much as 25,000 pipes. The oïdium having destroyed the vines about that time, the drinks substituted have been the rum of West Indies, and gin of England and Holland. You are, of course, aware that in wine-producing countries intoxication is rare, and this was the case here while only wine was drank; since then the vice has increased, but not to any considerable degree. . . . . I don't know where you can find a soberer class of people than the peasants of these islands."

Mr. Hovey, the American Minister at Lima, says—

"Temperance societies are unknown here, and all drink who have the means to pay for it. My impressions are, that the use of light wines and "chicha" in this climate add to the cause of temperance and health, by banishing the stronger alcoholic beverages and giving tone to the stomach and circulation of the blood. Life here seems to be torpid, and stimulants necessary."

I may refer, in passing, as furnishing the same kind of evidence, to a letter from Professor Christison, who says that whisky is the only article of drink known to the working-man in Scotland; that beer is used at meals by the better classes; but that—

"Scottish workmen unfortunately use it extremely little in that way; but if they take any stimulant dietetically, it is whisky; and hence the passage to excess is too easy."

Equally pernicious is said to be the prevalent use of spirits in the Netherlands.

I might quote largely the evidence as to the innocent, hilarious character of the intoxication seen at Trieste, Basle, Copenhagen, and Elsinore, Frankfort, and Japan, depending on the characters of the respective races; but I hasten on to the proposition that the teetotal dogma which regards drunkenness as the only vice, or as the master vice, and the cause everywhere of the greatest quantity of crime, is absurd in itself, and contradicted by testimony. So mixed and complex is human nature, that it is in vain to seek one straight road to perfect virtue, or to imagine that, by weeding out one vice, we can get rid of all.

For instance, a race may drink much, and yet exhibit a high moral conduct; or it may be as temperate as Nazarites, and yet may be sensual, thievish, murderous in cold blood, or incorrigibly idle.

Consul Sheats writes from Elsinore—

"Denmark has a population of about 1,600,000 inhabitants, which will give a consumption of about four and a half gallons of wines and spirits per head, and this, added to the amount of beer consumed, will, in my opinion, give a heavy average amount of consumption as compared with other countries. Strange to say, this large annual consumption does not seem to have any injurious effects on the health of the people."

Mr. Yeaman, the American Minister, writes from Copenhagen—

"While the average consumption has seemed to increase largely, the number of cases of manifest and public intoxication has greatly decreased, which he attributes partly to improved manners, morals, and education, but mainly to improvement in the quantity and quality of food the people use.

"Here is a people evidently more prosperous than formerly, evidently using more brandy than formerly, and evidently less given to intoxication than formerly. Of course, all will admit that the diminution of drunkenness is an increase of prosperity, but I have found nobody to claim that the increase in the quantity of brandy used has increased the prosperity of the people. The people here appear so very sober, that I have been simply astonished to find how much brandy they really use."

The Vice-Consul Johnson, writing from Beirut, says of the few cases of assassination that occasionally occur that they are "never traced to the use of intoxicating liquor." He praises the temperance of the Levantines, but laments their indolence, and seems to intimate what Mr. Bowditch says of the Panama and Darien Indians, that "the less the civilisation the less the intoxication." Mr. Duffie, the United States Consul at Cadiz, says of the Spaniards that they are very temperate, and that if they use a little liquor it makes them cheerful or sleepy. He adds:—

"Now there are many robberies committed in the mountains, but the robberies and crimes which may be committed by brigands are committed in cool blood, as never or very seldom have they been found with any intoxicating liquid even in their camp."

The evidence from Dublin is given by Mr. Russell, a Permissive Bill advocate, and is full of all the common platitudes; but it contains this frequent sentence—"With the exception of the crime known as agrarian, near the whole crime of Ireland is due to drink." The evidence from Hayti shows that drunkenness is unknown except amongst foreign sailors; crime *from that source* does not exist; but the country is in perpetual commotion, and "morals and sexual intercourse are unrestrained."

Thus we see that a temperate people may be idle and sensual, and murder in cold blood.

I have now finished the abstract from the very valuable Report which Dr. Bowditch and his fellow-workers have given the world. The material they give us differs widely from the common staple of the narrow-minded teetotalers. I will venture to sum up the conclusions which I think may be drawn.

Experience shows that it is matter of public policy that the people be supplied with light and wholesome drinks in the greatest abundance. Water is not well suited to our climate, and in towns the water from the pipes is often hot, vapid, and nauseating. Anyone is a public benefactor who invents and sells cheap lemonade, gingerade, or similar drinks; *coffee*, the great and universal antidote to alcohol, should be relieved of its duty, so should tea, although this is too often a source of spirit-drinking; but, above all, pure light beer and wine ought to be obtainable, instead of the heavy and intoxicating mixture of the public-houses. What a boon a light wholesome beer would be in the Scottish cities!

The retail of spirits over the counter should be repressed by the police and Excise as much as possible. Spirits do the mischief.

The community has the right, so long as a poor-law exists, of demanding the suppression of drink-shops which can be shown to be aids and accomplices in bringing the people to poverty and to be supported by the poor-rates.

Violence, as a consequence of drink, is, as Dr. Bowditch observes, almost confined to the English and Americans. It is also confined to the lowest classes, whom education has not shown the wrong and folly of drinking. The opinion of their own class stamps drinking with no disgrace; and very often drink is the only amusement, the only way of stirring their brains, that they are acquainted with, or can get at. It is too often the only physical comfort obtainable, as a respite from hard work, bad weather, ill-cooked food, and an unhealthy home. The problem is—How far is it possible to supply, to the Anglo-Saxon who drinks brutally, the state of body and mind of the man who temperately drinks? This will never be done by an oratory which condemns all drinks as inherently poisonous.

The case of the solitary drinkers is, as I have said, one for Medical treatment.

CASE OF SUICIDE BY CARBOLIC ACID.

JOINT REPORT

By W. E. JEFFREYS, M.R.C.S.; and
JOHN HAINWORTH, F.R.C.S.

On April 1, 1871, at 10.40 a.m., Mr. Jeffreys was called to see H. C., aged 65, a retired clerk, who was discharged from Bethlem Hospital five months ago after a residence there for five months. His housekeeper stated that she had left him at about 10.20 to go to the butcher's, and on her return found him on his bed, insensible and "snorting." There was a strong smell of carbolic acid in the room, and a bottle containing some on the drawers. This bottle had been kept in the kitchen cupboard for twelve months for cleansing purposes. She went at once for Mr. Jeffreys, who was with him in a few minutes. He was found insensible, his mouth and throat filled with mucus, which was removed by slightly turning him on his side. Three streaks, stains of the acid, appeared on the chin. The pupils were contracted; pulse laboured, between 40 and 50. The mouth and throat rapidly filled again, and the viscid mucus was repeatedly removed. Mr. Hainworth was instantly sent for, and speedily arrived, but life was nearly extinct. Respiration stopped from time to time, and was several times renewed, though the heart's pulsations were inaudible. At 11.20 he expired—about fifty minutes, as nearly as can be ascertain ed, after taking the poison.

Post-mortem Examination, Twenty-eight Hours after Death.—The odour of carbolic acid filled the room. The general aspect was that of a person killed by suffocation. Brownish lines from each angle of the mouth and on the chin. The tongue, back part of pharynx, the larynx, trachea, œsophagus, and stomach were removed together. Partial old adhesions of the pleura were found at the upper part of the chest. Much fluid blood, of a deep-black colour, flowed from every divided vein. No coagula were found in any part, save in the lungs, where small nodules of black, firm coagula were interspersed. From the lungs, when incised, issued an abundant frothy mucus. The epithelium of the tongue, epiglottis, rima glottidis, pharynx, and œsophagus, was uniformly white, firm, and corrugated, hard and rough to the touch. The stomach contained four ounces of thick, turbid fluid, mainly the products of digestion, smelling strongly of carbolic acid. The epithelium here also was white, but, from longer contact with the caustic acid, was shrivelled up into little granular masses, easily scraped off with a knife. The rugæ of the stomach were unusually prominent and hard. The pylorus appeared to form the boundary beyond which the direct action of the acid had not extended. The larynx, trachea, and bronchi were literally filled with transparent mucus streaked with blood. The pericardium in front over the base of the right ventricle was covered by a white patch, an inch and a half in diameter, easily peeled off in the form of an elastic membrane. The heart was flabby, and slightly fatty; the right side empty, the left containing a little fluid blood. The liver, which smelt distinctly of the acid, was healthy. The kidneys were of full size, nodular, and fatty, exhaling, when cut, a mixed odour of urine and carbolic acid. All the viscera were congested, and of a darkened colour. The cranium was found very dense in structure, the diploë being almost filled up with solid bone; in some parts thick, in others very thin, but both symmetrically. The cavity of the arachnoid contained about ten drachms of fluid. The arachnoid covering the brain was opaque in many parts. The white substance was firm, but easily torn in the direction of the fibres. On the application of the test of the British Pharmacopœia to the contents of the stomach, the characteristic reaction of carbolic acid was observed. The housekeeper estimated the quantity taken as between one and two tablespoonfuls—*i. e.*, from half an ounce to an ounce.

From the details given, it appears that when fluid commercial carbolic acid is swallowed, the following effects ensue:

—1. All the parts over which the acid flows are whitened and hardened by the superficial cauterisation of the epidermis and epithelium. 2. That longer contact—as, *e. g.*, in the stomach—causes, in addition, corrugation of the epithelium, breaking it up into small particles. 3. That the cauterisation of an extensive secreting surface of one set of organs supplied by the par vagum, either so irritates or paralyses the nerve, that another organ, the lung, supplied by the same nerve, pours forth its secretions in great abundance, filling up the air-cells and tubes, preventing the aëration of the blood, and thus may cause death by apnœa in less than an hour.

SURGERY IN INDIA.

By A. S. G. JAYAKAR, M.R.C.S.E., etc.

Case 1.—*A Large Rapidly-growing Osteo-cephaloma in connexion with the Head of the Fibula—Amputation of the Thigh—Recovery.*

F., a married woman, aged about 30, was admitted into Hutteesingh's Hospital, Ahmedabad, on August 15, 1870, with a very large ulcerating malignant growth, situated more on the posterior aspect of the left leg than the anterior. It commenced at the lower angle of the popliteal space, and descended downwards in rather a sloping manner to within an inch of the ankle. Anteriorly it presented a hard appearance, but posteriorly it had ulcerated, and presented a fungoid look. Circumference of the tumour at its greatest breadth, twenty-six inches; length, nine inches. Left foot œdematous.

According to her friends' statement, the disease commenced only ten months before her admission into the Hospital. It presented itself first as a small swelling, situated just an inch or an inch and a half below the popliteal space, and it remained stationary till within three months from her admission, when it commenced to grow very rapidly. The patient was a cachectic, anæmic-looking person.

On August 20, antero-posterior flaps having been made, amputation of the left thigh was performed by sawing off the bone an inch and a half above the condyles. The whole tumour, together with the foot, weighed eleven pounds and a half. On making a section, the tumour was discovered to be in connexion with the head of the fibula. It presented to the naked eye, on section, an encephaloid and osseous appearance. Under the microscope, there were numerous rapidly growing encephaloid cells, minute spicula of bone, and granulation corpuscles.

After the operation, the patient progressed favourably, excepting an exfoliation of bone from necrosis, which was removed on November 19. She was discharged from the Hospital on December 2, with the stump entirely healed and her general health greatly improved.

Remarks.—Tumours of the head of the fibula are very uncommon—at all events, they are much less common than those in connexion with the head of the tibia. Certainly it cannot be accounted for on any pathological ground, unless it be the large size of the head of the tibia and the importance of the bone altogether in the mechanism of walking. Probably the most striking feature in this case was the tendency in the tumour to such a rapid growth as to measure nearly twenty-six inches in circumference within three months.

Case 2.—*Chronic Synovitis—Hydrarthrosis of the Knee—Tapping—Rapid Recovery.*

S. M. was admitted into Hutteesingh's Hospital on October 29, 1870, with a chronic, comparatively painless swelling of the left knee, which was more prominent in the popliteal space, where it had assumed the shape of a soft fluctuating tumour. One or two small enlarged glands were also felt in the popliteal space. On the internal and anterior aspects of the joint there was also some amount of swelling, but the external aspect was perfectly free from it. The patella was felt distinctly floating about in the intercondyloid space. No pulsation or bruit in the popliteal space. On puncturing the different swellings, thick synovial fluid escaped.

According to the patient's statement, the disease commenced twelve months ago in the popliteal space, apparently without any local or constitutional cause. He was a weakly, middle-aged man, with a scrofulous taint about him. No history of syphilis or rheumatism. He could not bend his knee nor walk without pain, even with the aid of a stick. Measurement round the diseased knee, 16½ inches; round the healthy one, 13½ inches.

He was for some time treated with cod-liver oil and alteratives, with the object of improving his constitution.

On November 14, the joint was tapped on its inner aspect, after the skin had been drawn to one side for making a valvular puncture, and fifteen ounces of thick synovial fluid, of the specific gravity of 1020, were removed. Collodion was applied to the wound, and emplast. hydrarg. c. ammoniaco to the joint. After the operation, the measurement round the joint was found to be thirteen inches and a half, same as in the healthy limb. The patient rapidly improved after the operation, and on November 26, some more accumulation of fluid having been discovered, the joint was again tapped, and thirteen ounces and a half of fluid removed. The second operation was followed by a rapid and complete cure, the patient leaving the Hospital on December 7, being at the time able to walk and run about easily.

Remarks.—The above case fairly illustrates the beneficial effects of tapping in cases of advanced hydrarthrosis. No fluid of any kind, or any medicinal agent, was injected into the joint; yet the pressure and constitutional treatment followed were found to be quite sufficient to give a healthy tone to the already extensively damaged synovial membrane.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE WESTMINSTER HOSPITAL.

Mr. Francis Mason has written to correct an erroneous impression conveyed by our report of the operations performed at this Hospital last week. The "stretcher," to which we referred as being used to convey patients from the theatre, is very rarely employed for this purpose, the more convenient canvas cloth with poles and cross-bars being in ordinary use, although it happened not to be brought out on that occasion.

ROYAL INFIRMARY, EDINBURGH.

CASE OF UTERINE HÆMATOCELE.

(Under the care of Dr. MATTHEWS DUNCAN.)

[Reported by Dr. J. R. Hardie.]

H. C., aged 39, is a widow, and has had no children. She was admitted to Ward 16, under Dr. Matthews Duncan's care, on February 16, complaining of pain and swelling in the lower part of her belly, and of pain at the base of the sacrum. About a fortnight before admission, after being exposed to the influence of cold and damp during menstruation, she caught a severe cold, which confined her to bed for some days. Her last monthly period began a fortnight ago; it lasted for three days only, her previous periods ending after an illness of a week's duration. On the day following this abrupt disappearance of the last menstrual flow, she noticed a swelling in her belly, at its lower part, which was hard and painful. The size and hardness of, and the degree of pain felt in, the tumour by the patient were increased next day. Her monthly periods had been previously regular.

On inspection, the belly is observed to be somewhat prominent, but presenting to the hand a natural feeling, except on the right side inferiorly, where a mass of hardness is felt, which rises as high as half way to the umbilicus. There is no particular tenderness or sensitiveness on touching this, and there is resonance everywhere over it. On examination per vaginam, the cervix is found to be nearly in its natural situation, uterus fixed. The pelvis is not occupied by the tumour, but in the plane of the brim there is felt fulness, and at the right side hardness.

The tumour above described gradually diminished in size, and on an examination being made three weeks after admission, a trace of it only could be detected.

Remarks.—It is almost inconceivable that a disease like the one at present under consideration, which must have existed as long as woman herself, should have been recognised and described for the first time within the last twenty years. Long after its description, however, ignorance as to the nature of uterine hæmatocele prevailed in this country, and it is only recently that it has become at all widely known. One might ask—What did our predecessors make of such cases? They were, in all likelihood, mistaken by them for ovarian dropsies, fibroids of the uterus, etc., and their subsequent rapid absorption and disappearance were probably attributed to the potent deobstruent qualities of certain drugs, or cited as instances of the spontaneous cure of these diseases. An intimate connexion between menstruation and the advent of a uterine hæmatocele is, in many cases, to be observed. On studying the history of the case before us, this point is well illustrated. The woman C., instead of remaining poorly for a week, as was her wont, menstruated for three days only, and it was, she tells us, on the day after the cessation of her menses that she first noticed the swelling in her belly. This fact is of importance, and holds good in the majority of cases of this nature. Another point of importance with regard to this disease is suggested by the discussion of the history of a case—namely, the origin of the blood which goes to form the hæmatocele. From whence does this blood proceed? The most common source is the mucous membrane of the body of the uterus, the place from which bleeding, in most cases of hæmorrhage in connexion with the internal genital organs, originates. Doubtless, other sources exist, but this is the commonest one. The blood, issuing from the uterus through the Fallopian tube, discharges itself into the cavity of the peritoneum; there it excites some degree of perimetritis, which also produces adhesions, which contribute to enclose it. The site of a tumour thus formed must be of necessity within the peritoneum. Post-mortem dissections of cases fully corroborate this statement. The diagnosis of uterine hæmatocele is chiefly dependent on a consideration of the previous and subsequent history of the case. Its advent is characterised by suddenness, and, as has been already shown, is closely connected in many examples with the menstrual history of the patient. When the blood is poured out in large quantity, symptoms of loss of blood are present. Pain is not a constant phenomenon, but exists more or less in many cases, and is a result of the perimetritis which follows the effusion of blood into the cavity of the peritoneum. It is a remarkable feature of this disease that the tumour which forms in the abdomen often disappears so rapidly, that a swelling which was originally of large size is reduced in a few weeks to comparatively small dimensions, and, in a short time, all that can be detected is the remains of the perimetritis. The diseases with which it is most liable to be confounded are perimetritis and perimetric abscess, and, unless the case is a well-marked one, the differential diagnosis is not a simple matter. A consideration of the history of the commencement of the disease, and of its subsequent disappearance, will, in most instances, suffice to distinguish them from one another.

CLERGY AND DOCTORS—WHAT A CONTRAST!—At the Easter vestry, held at Kingston-on-Thames, on Tuesday, a question was asked by the ratepayers as to the refusal of clergymen to read the burial service over paupers. It appeared, from the explanation given, that a woman, with two children, were attacked with the small-pox. The children were taken into the workhouse, and a woman was sent from there to attend their mother, who ultimately died. The attendant became frightened, and ran away, and the body was left in the house for two days, until it had got into a fearful state. The order was ultimately sent for the burial. After the corpse was taken to the cemetery, the Rev. A. Cornford, who generally officiated, was sent for, but was not at home. The Rev. R. Holberton was then sent for, but refused to come, in consequence of the lateness of the hour. The Doctor certified that the corpse was in such a fearful state that it must be buried at once. The coffin was lowered into the grave, and partially covered with earth. The Rev. A. Cornford was again sent for the next morning, but refused to attend; consequently, the woman was buried without any service being read over her. The Bishop of Winchester, in reply to the Burial Board, who addressed him on the matter, sanctioned the course taken by the clergy. The vestry expressed strong indignation at what had taken place.

HOUSING OF THE POPULATION OF LIVERPOOL.—In a pamphlet by Dr. Trench, the Medical Officer of Health, and the Rev. Charles Beard, it is stated as the result of a partial investigation by the Health Committee of that town that a third of the entire population live in houses let off in rooms to distinct families; 8600 of these are actually registered, and subjected to periodical inspection; and it is calculated that there are 17,000 more which ought to be ranked in the same category. The census of 1861 showed that there were 443,938 persons distributed amongst 65,781 houses, giving an average of 6·7, persons for each house.

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Medical Times and Gazette.

SATURDAY, APRIL 15, 1871.

THE SMALL-POX EPIDEMIC.

THE registered mortality from small-pox showed an increase last week both in London and Liverpool. In London the total number of deaths registered was 214, or 22 above that in the previous week. This is another instance of the apparent effect of temperature, since three weeks before—namely, in the week ending March 18—the mean temperature of the air fell nearly 5°. The 15th, 16th, and 17th were particularly cold days, and snow fell on two of them. The Registrar-General remarks upon the stationary character of the epidemic for some weeks past, but when we have regard to the districts which supply the fatal cases, it is observable that the distribution of the disease has undergone in that period a considerable change. The following table, compiled from the weekly returns, corrected for Hospital deaths, shows the fact distinctly:—

	Deaths in Districts.				
	West.	North.	Central.	East.	South.
Population (1861)	458,125	618,210	383,321	571,158	773,175
Week ending—					
Jan. 21 . .	40	30	17	72	29
,, 28 . .	21	25	20	55	36
Feb. 4 . .	41	36	22	65	32
,, 11 . .	45	39	14	80	33
,, 18 . .	41	50	20	65	42
,, 25 . .	28	45	20	75	59
Mar. 4 . .	41	39	14	63	56
,, 11 . .	24	54	19	42	55
,, 18 . .	23	37	11	61	53
,, 25 . .	37	49	18	44	57
April 1 . .	17	50	17	51	57
,, 8 . .	18	53	16	55	72

Nine weeks ago the mortality from small-pox was at its highest in the Eastern districts, which furnished 80 deaths, against 32 in the South districts, although the population of the former was 200,000 less. Taking the population into account, the disease appeared to be only a little more prevalent in the South than in the Central parts of London, and less prevalent than in the North and West districts. Since that time the epidemic has gradually declined in the East, and considerably in the West; it has increased in the North, and very remarkably in the South of London. Now it is the South districts which are furnishing the largest number of deaths, and, for their population, they are about as heavily burthened as the Eastern districts. The increase in the number of fresh cases in Lambeth, Clapham, St. George-the-Martyr, and Plumstead, as indicated by the Health Officer's return for last week, is evidence in the same direction, and serves to show that probably the epidemic has not yet attained its height south of the Thames.

The Small-pox Hospitals at Stockwell.

In their selection of a site for their Small-pox and Fever Hospitals in the south-west of London, the District Asylum Board have been more fortunate than at Homerton. These also are permanent Hospitals, and are erected upon a space of 7½ acres of land, nearly free from neighbouring buildings on all sides. Indeed, from the end windows of the Fever Hospital wards, and from the side windows of two of the Small-pox Hospital wards there is a pleasant view over grounds laid out as park and gardens which is quite refreshing. How long it will continue is another question, with the present rage for building on all available spaces about London. The soil is gravel, and the elevation good. Of the two buildings, which are under separate administration, the Small-pox Hospital has devoted to it the smaller share of the land, and between it and the Fever Hospital buildings is an old family mansion, which has been left standing, and is given over as a residence for Dr. Barbour, the Medical Superintendent of the Fever Hospital.

The plan of the Small-pox Hospital may be thus described:—Facing the east there is a long block of administrative buildings, immediately behind which, but separate from it, is a square block containing the kitchen and other domestic offices, which communicates on its western side with a corridor leading north and south to the terminal pavilions. This corridor is reached from the administrative block by a covered way. On the other side of the corridor, and separate from the rest of the building, are the laundry, disinfecting chambers, etc. These are again approached by a covered way, and are separated from the recreation-grounds on either side by a high wall. The arrangement is good, inasmuch as, in an institution of this kind, everything which obviates continuity of buildings, while providing sufficient shelter, is to be reckoned as an advantage. The central part of the corridor, corresponding and communicating with the domestic block, can be shut off from the rest of the corridor by glass doors. The corridor on the one side leads to the male wards; that on the other to the female wards. The arrangements are the same on the two sides. The reception ward, provided with a bath, is built out from the eastern side of the corridor, with which it communicates, as also with the roadway, by an opposite door; and on either side of the corridor other small rooms are built out, which are destined to serve as special or separation wards. At the extremity of the corridor is a wide space or hall, from which a staircase passes up to the upper wards, and from which the lower wards of the two pavilions, passing east and west at right angles to the corridor, are entered. Built out again to the north, and entered from the hall, is a special ward, now used as a children's ward. At the entrance of each of the wards are the nurses' room and scullery. The wards are spacious and lofty, well lit by the opposite side windows and a wide window at the end, at the upper part of which is a ventilating glass hopper, opening by a flap at the top. The warming is effected by open double fireplaces in the central line of the ward. The flues from these pass along a shaft to the roof, which, being rounded, and not square as in the other Hospitals, has a light and airy appearance, which adds to the cheerfulness of the apartments. The closets and lavatory are built out from the distal corners of the wards, and are separately and well ventilated. Beside the windows, other supplemental means of ventilation are provided by large oblong protected apertures between the beds communicating with the outer atmosphere, and at a little more than a foot from the floor. Each ward has a cubic capacity of 24,000 feet, and contains fourteen beds. The walls of the wards are covered with Parian cement, but the corridors are of bare brick. There is a lift to communicate with the upper wards, a shoot for dust, and another for foul linen, which can be removed from the outside of the building without being carried through the corridor. The Hospital is constructed to accommodate 105 patients, but by using the special wards as many as 138 have been treated at one time. Mr. McCann, the Medical Superintendent, does not separate his convalescents from the acute cases. The nursing arrangements are as follows:—Each side of the building is under the superintendence of a day head nurse, and a night head nurse, who have thus charge of two adjoining pavilions, or of four wards, together with the special wards on their side. Under them there is a day and a night nurse for each of the pavilion wards, and a day and a night nurse for each of the special wards. This arrangement seems well adapted to the construction of the building. The Hospital was opened on January 31.

The Fever Hospital was opened on March 6, and is now entirely occupied by small-pox patients. It is much larger than the Small-pox Hospital, and in its general plan is somewhat similar to the Fever Hospital at Homerton. The administrative block again faces the east, and contains the board-room, the apartments of the steward, matron, assistant Medical officer, and dormitories. Parallel with this is a long corridor, 400 feet in length, running north and south, very completely lighted and ventilated, from which the pavilions are entered. Crossing this, in the centre, is another corridor, which communicates on the east with dispensary, store-rooms, and the administrative block, and on the west with the domestic offices, kitchen, scullery, nurses' dining-hall, etc. Behind the central block of domestic offices, and separate from the rest of the building, are the laundry, disinfecting chamber, etc. Altogether, there are four pavilions, two on each side, passing westward from the long corridor. Each has an upper and a lower ward, the former being devoted to convalescents, and the latter to the acute cases. The walls throughout the wards, passages, and corridors are covered with Parian cement, and the whole building is warmed by hot water, the pipes running round the wards in such a manner that the air, entering from the outside by the ventilating openings near the floor, is warmed in its passage. There are, however, the same sort of open fireplaces as are provided in the other Hospitals. The windows are constructed in the same way as in the Small-pox Hospital. Two lifts, the one for beds, the other for coals, are provided for each pavilion, with the necessary shoots for dust and foul linen, which can be removed on the outside of the building. As in the other Hospitals, a nurses' room and scullery are situated in the short ward corridor, which latter is shut off from the main corridor by doors. The windows are similar to those in the Small-pox Hospital. The day room for convalescents in each pavilion also communicates with the short corridor leading to the lower ward. The Hospital is constructed for the accommodation of 172 cases of fever, but it now accommodates 230 small-pox patients, acute cases and convalescents being counted together. The nursing arrangements are decidedly superior to those at the corresponding institution in Homerton, inasmuch as each block or pavilion is under the charge of a responsible head nurse. To each ward there is attached under her orders a day and assistant-nurse, and a night nurse. The nurses and domestic servants do not mess together, or even in the same room; the former have a dining-hall to themselves, under the kitchen; the latter take their meals in the kitchen of the establishment. Both here and at the Small-pox Hospital there are two laundries—one for the use of the officers and servants, and another (larger, of course) for the patients' clothing and linen; and it need scarcely be said that both are provided with all the modern appliances. The disinfection of the patients' clothing is effected by means of Nelson's patent apparatus—a box heated by gas. Dr. Barbour informs us that a heat of 250° can be obtained by its means, but that it is practically unsatisfactory in its operation, mainly on account of the rapid loss of heat which takes place on its being opened to remove the clothes, and the delay which this involves in reheating with another lot of articles. The store chamber for disinfected clothing is not open to the air on all sides, but is an apartment near the laundry and disinfecting chamber, ventilated in the ordinary manner. At the Small-pox Hospital a small brick oven is in use for disinfecting, and clothes are subsequently stored in an open shed, three sides of which are protected by lattice-work. We confess to a preference of the store chamber, constructed of louvre boards, in use at Hampstead and Homerton.

Up to the date of the last report of the Asylums Board, 570 persons had been received into the two Hospitals. When the Fever Hospital was opened, it was found that the accommodation provided was more than sufficient for the needs of the Southern districts, and therefore the managers wisely appropriated the overplus of beds to the relief of the Homerton and Hampstead Hospitals, and decided upon receiving patients from the Eastern and Central as well as from the Southern districts. Lately, since the old Islington Workhouse has been adopted as a convalescent Hospital, convalescents from these Hospitals, as well as from Hampstead, have been drafted off to Islington.

The numbers of patients received into the two Stockwell Hospitals up to March 17 from the several parishes were as follow:—

Camberwell	9	St. Saviour's	47
Clapham and Wandsworth	32	Woolwich	4
Greenwich	3	St. George's, Westminster	11
Kensington	10	Shoreditch	19
Lambeth	43	Holborn	13
Lewisham	5		
St. George's Union	7		215
St. Olave's	12		

Urged by the Poor-law Board to make still further provision for small-pox patients, the asylum managers have purchased six and a-half acres of land at West Brompton as a site for another temporary Hospital, upon the Hampstead plan. It does not appear that they contemplate any immediate erection, but they have secured a site which can either be utilised now, should the occasion arise, or remain as a provision for an epidemic of contagious disease at any future time.

THE TEACHING OF PSYCHOLOGY IN SCHOOLS OF MEDICINE.

A DISCUSSION has been going on in the columns of a contemporary on the above subject, which seems to us to be worthy of some little attention. Shorn of its excrescences, the question resolves itself into one of How best and where best may Medical psychology be taught? How best? Certainly not from the old metaphysical standpoint, but so as to bring all the light recent investigation and past experience can educe to bear upon the subject. On this point there does not seem to be room for much discussion, and it is practically conceded on all hands that the broader the basis on which the subject is taught, the more likely is that teaching to be successful. As to where these subjects had better be studied, this seems to us to involve the old discussion: Should practice or theory come first? If practice, then study in our great asylums should be more encouraged, and their superintendents should devote themselves more to the study of individual cases, and more to making the results of these studies known, than is now their wont. If theory, then a sound psychology should be taught in every school of Medicine. Of the two, perhaps the latter proposal is the more practical, to use a paradox, for—on the principle that if the mountain won't come to Mahomet, Mahomet must go to the mountain—if the ordinary student refuses to study insanity in asylums, it is better that he should be taught the principles of psychology in his school than to know nothing of this subject. Furthermore, as every student does not desire to become an alienist, the study of insanity in asylums is of the less importance; but it is highly desirable that all students and Practitioners should know something of the study of mind, from its somatic side especially, and of the plans of applying that knowledge to practice. We are also inclined to believe that a little more of the scientific method in the study of the insane would be good for alienists themselves; it would certainly encourage superintendents of asylums to become something more than they now in many instances are. As matters stand, the superintendent has to devote too much time to administration to attend carefully to his cases from a scientific point of view. Compare an asylum case-book, for instance, with the exact record that is kept by a skilful and careful Physician of the cases in his wards or in his private practice: the difference is more than striking. Were the superintendents enabled, by training and habit, to attend more to their cases and less to domestic details, it could not, we think, fail to redound to the benefit of the patients, of themselves, and to that of the Medical world generally.

This discussion has arisen with regard to a class of Medical psychology taught during the summer session in the Edinburgh University by Professor Laycock. Does it afford sufficient training in the study of mental disease or no? Is it a course to be encouraged or to be frowned upon? To answer the last query first, which we do without the slightest hesitation—It is a course to be fostered in every possible way, inasmuch as it does not deal with a special subject as a specialty, but as applying the principles of psychology to the practice of Medicine. An accomplished Physician thereby does his best to render facile the same scientific methods in the study of both mental and bodily disorders. We further conceive that the answer to the other is equally plain. Such a course as that of Professor Laycock is well fitted to enable the ordinary Practitioner to deal with such cases of mental disorder as may happen to come under his observation; but it is impossible that such a course—or that any course—should enable a man to leave the class-room and take charge of a large asylum. The daily routine has to be studied and mastered, the duties of each attendant mapped out; there is the habit of careful inspection to be acquired. These are matters of detail, but they are essential to an asylum superintendent, and, as they cannot be acquired in a class-room, must be studied in an asylum; but though essential to the alienist, they are by no means so to the general Practitioner, whose asylum studies, should he ever undertake any such, should be devoted to the cases rather than to the routine of management. To the importance of such studies most schools are now becoming alive, and in a considerable number teachers have been appointed to deal with the subject of insanity. These, as a rule, have been alienist Physicians, whose instructions have doubtless been of great value to the pupils in what relates especially to what might be called the practice of insanity. Their habitual frame of mind would perhaps, however, tend to the ignoring of that boundary-land which is of so much importance to the Physician. Thus the instructions given will tend in time to familiarise Practitioners with the laws relating to insanity, and we shall have fewer of those deplorable instances where respectable men, acting in ignorance of laws, have offended against them, and thus subjected themselves, all unwittingly, to much annoyance, and, it may be also, expense. Again, a clearer knowledge of the manner how to draw up a lunacy certificate must in itself be a gain. As matters now stand, facts elicited by inquiry from relatives or attendants are constantly placed under the heading reserved for those observed by the Medical man himself, and *vice versâ*. These are doubtless important, and such knowledge is of a clear and distinct value; but it is not everything. As we have again and again insisted, matter is not all in all in education; method goes for much. The application of scientific methods to psychological facts is in itself a positive good. Still more is it so when these facts, handled in a scientific fashion, are applied to Medical practice. And as the principles of Medicine cannot be well learned from clinical lectures on isolated cases alone, so applied psychology had better also be studied both generally and as bearing on and explaining particular cases. In this way it seems to us that Professor Laycock's class is likely to prove of great service to the Edinburgh students generally, as well as to those intending to devote themselves specially to lunacy practice.

PROPOSED ALTERATIONS IN PHARMACOPŒIAL NOMENCLATURE.

When the first edition of the British Pharmacopœia made its appearance, so little permanent change in our chemical nomenclature was anticipated, that the old system was retained without a word, notwithstanding all the difficulties it involved, especially that of dealing with certain substances as direct compounds of elements—chloride of sodium, for example—whilst others, say the sulphate of the same base, were supposed to be made up of the oxide of the metal sodium and sulphuric acid. By the time the second edition appeared, the new ideas had made such progress, that the system of notation they implied was placed, not exactly on an equal footing with the old, but at all events was fairly recognised. This, in itself, was a very great thing. Had the old plan been solely retained, it is quite certain that the new system would not have been so generally adopted by Medical teachers, for in their eyes chemistry must be regarded, not alone as an absolute science, but also in its application to medicine; chief among these, of course, being the chemistry of the Pharmacopœia. But whilst the new notation was employed, the old nomenclature was exclusively retained, and carbonate of soda and nitrate of silver were still spoken of as having ostensibly the same constitution, although soda was the oxide of sodium, and there was no pretence that the oxide constituted the base in the silver salt; this anomaly remains.

Professor Attfield has recently been drawing attention to this fact, and also to the expediency of having the pharmacopœial nomenclature as fixed as possible. Now, as sweeping revolutions are no more desirable in nomenclature than in politics, it becomes a matter of moment to search out how best to adapt the pharmacopœial names to the requirements of science, and so give them a more permanent character, whilst making the change as slight as possible.

For many reasons, it is desirable that scientific nomenclature should be an exact reflex of our scientific status, and, viewing the matter solely in this light, that names should change with our conceptions of things; but it is evident that such constant changes are most objectionable in pharmacy. There is the notorious example of the chloride of mercury, which one man would read as calomel, another as corrosive sublimate, according to his education, and on him it would depend whether the patient was poisoned, or the Physician's prescription rendered inoperative. On the other hand, in the olden days, when chemical composition was unknown and uncared for, a system of trivial names were in use, which were exceedingly useful, though altogether unscientific. Our forefathers talked of Mindererus' spirit, of sal volatile, of Glauber's salt, of pearl ash, of sal de Duobus, sweet spirit of nitre, and the like; these there was no possibility of mistaking, but, because they gave no clue to composition, they were gradually set aside as chemical remedies multiplied and it became desirable to use names which carried with them some idea of composition and properties. Between these two extremes we are, according to Professor Attfield, to seek the happy medium; and the changes he proposes to effect are substantially the substitution of the words "potassium, ammonium, sodium, lithium, calcium, and magnesium," for "potass, ammonia, soda, lithia, lime, and magnesia," respectively. Others there are, but these are the most important. The only instance in which he would exactly assimilate the proposed alterations to those terms now in general use is in the case of chloride of tin, which he proposes to call "stannous chloride." Why in this instance he should depart from his general principles we are at a loss to know. Another sensible proposal he makes is, that where one compound of a metal is to be distinguished from another, it should be by an initial syllable, and not by a terminal one; thus he would say "pernitrate of mercury" instead of "mercuric nitrate." This, considering the universal tendency to abbreviation in prescribing, we hold to be most wise, although a departure from the common custom of chemists. Dr. Attfield's *résumé* so well expresses his ideas, and so clearly exposes some of our present inconsistencies, that we venture to append it in full, and to commend it to our readers.

"The chief alterations in pharmacopœial nomenclature now proposed amount to this, that the compounds of the alkali-metals and alkaline-earth-metals, instead of being named as hitherto, on two distinct systems, should follow but one; that instead of salts of potassium and of potash we should have salts of potassium only; instead of sodium and soda compounds, sodium only; and so with preparations of ammonium, lithium, calcium, magnesium, and aluminium. This is a step in the direction of simplicity and permanency, and away from that of theory.

"*Synonyms.*—Modern scientific chemical names, and the old dualistic names, should, I think, be included as synonyms of the leading name in all Pharmacopœias.

"*Exceptional Alterations.*—Constitutional objections to the name *arsenium acidum* would be obviated by the old name *arsenicum album.* In view of the peculiar composition of *bichromate of potassium*, the first word of its name is most unsuitable, and would be advantageously replaced by *red chromate*—a name which would usefully distinguish the salt from *yellow chromate of potassium.* The names of the bismuth powders are not at present consistent with each other; if the one be termed *subnitrate*, the other should be *subcarbonate*, not '*carbonate.*' But these preparations and the similar compounds of copper and lead are normal rather than 'sub' salts, containing oxygen in the place of an exactly equivalent quantity of the acidulous radical of the neutral salts, and might well be termed respectively *oxycarbonate of bismuth*, *oxynitrate of bismuth*, oxyacetate *of copper*, *oxyacetate of lead;* at all events the latter names would do good service as synonyms. Similar remarks apply to the *peroxhydrates of iron.* The prefix 'sub' is most usefully, and, indeed, indispensably applied in the case of calomel, which is the 'lower' or under-chloride of mercury; it would be well if the meaning of the syllable could be always thus restricted to its etymological signification, and never again used in its old conventional sense. The names *tartarated antimony*, *tartarated iron*, *tartarated sodium*, I do not like at all. The sister terms, *sulphurated antimony* and *sulphurated potash*, are most happy, their utter vagueness fairly representing the nondescript character of the preparations. But *tartrate of antimony and potassium*, *tartrate of iron and potassium*, and *tartrate of sodium and potassium*, are at least as definite in composition as the citric trio which are properly honoured with the definite names, *citrate of bismuth and ammonium*, *citrate of iron and ammonium*, and *citrate of iron and quinia* (or, rather, with the old forms of those names)."

THE VOLUNTEER AND ARMY MEDICAL SERVICES.

Whatever may have been the amount of instruction in drill and tactics acquired by the volunteers during the preliminary training for the Easter Monday Review, and however much the great annual sham fight may in its military evolutions have resembled a real engagement—a point on which military critics have expressed very conflicting opinions—there can be no doubt that from a Medical point of view it has not presented any of the aspects of reality. It is, of course, a matter for congratulation that such should have been the case, and that the list of casualties among the very considerable number of troops engaged should have been relatively so small. It is very satisfactory to learn that during the review of Monday last there was no accident or mishap of any kind with the Snider rifle—the employment of which fortunately renders impossible the disagreeable accident of being shot with a comrade's ramrod—and that this was the first review at which there have been no men wounded with gunpowder.

The list of other casualties was also very small. These facts prove that such an extensive display of Medical organisation as was suggested by a contemporary would have been quite unnecessary. But we should not for this reason consider ourselves absolved from the consideration of the question as to the most suitable system of Medical organisation for our volunteer and reserve forces. The subject is one of paramount importance, and must meet with most serious attention in any scheme of army reform deserving of the name.

Until the necessity arises for bringing the volunteers into action with an invading enemy, the constitution of the force renders inapplicable as well as unnecessary any system of Medical aid beyond that already afforded on reviews and field days by the Volunteer Medical Staff. The circumstance of an invasion would, however, entirely alter the case; the volunteers would then be embodied with a very considerable proportion of the regular army, with which they would have in all respects to assimilate themselves for the time. They would then depend for their supplies of all sorts upon the resources of the Army Commissariat and Medical Departments, aided, it is to be expected or hoped, by contributions at least as liberal as those which flowed from the charitable of this country during the late war between France and Prussia. The great object to be desired is, then, that these two great departments of the public service shall attain such an elasticity of organisation during peace as shall enable them during war to embrace and utilise, to the best advantage of all concerned, the personal efforts of volunteers of all sorts.

The experience of these latter days has taught us that the aid of the sick and wounded in war not only affords full scope for all the volunteer energy which can be brought to bear on it, but that, unfortunately, the requirements of the sufferers have always vastly exceeded all that has ever been effected for their relief. We do not, therefore, anticipate that any opposition to well-directed volunteer aid would be raised by the military or Medical authorities, or, indeed, tolerated by the country. But to derive from such aid all that may reasonably be expected from it, we maintain that it should be afforded in a spirit of perfect accord and, in fact, subordination to those authorities on whom, *ex officio*, the duty and responsibility of making all necessary arrangements permanently devolve. The Medical officers of volunteers, under such circumstances, should therefore, for the time, in their respective ranks, be subject to the same discipline and control as prevail among the permanent officers of the Army Medical Service, of which, in fact, they should become acting members. This would be the only means by which uniformity of system on active service could be attained. It should also be remembered that the Professional results of a campaign are not limited by the actual termination of hostilities, but must be patiently collected and systematically arranged in order that they may be thoroughly utilised; and this can only be done by carrying out, during actual service, a regular system of record of Medical events, such as has with so much advantage been established in the Army Medical Department.

In the proposed establishment of a reserve force, into which the present militia shall gradually be absorbed and assimilated, through the localisation of regiments of the line, the means of establishing a reserve force of trained Medical officers, we trust, will not be lost sight of. The slowness of promotion in all ranks of the Army Medical Department is so well known that the glimmer of a prospect of amelioration is eagerly looked for. Early optional retirement, on a moderate half-pay, with a liability, up to a certain age, of being called upon to re-enter the active ranks, if combined with a system of selection of deserving officers for the Medical charge of the reserve forces, according to districts, would impart a wonderful impetus to the now retarded stream of promotion, and would at the same time place at the disposal of the authorities a trained staff of Medical officers, available for any emergency. Compulsory retirement, on increased half-pay, at the same age at which the obligation to active service terminates, would tend to maintain a sub-current in the Medical reserve, and present a moderate number of annual vacancies to be filled by temporarily retired Medical officers. In order not entirely to lose the services of men of established ability and zeal, and to maintain the efficiency of the general service, it would also be advisable that reserve Medical officers should be eligible for reintroduction and promotion into the inspectorial grades of the Army Medical Department. As we have already so frequently urged, it would be essential to the maintenance of the stream of promotion that these appointments should be held only for limited periods. No objection, however, could be made against officers retiring from them continuing eligible for the post of Director-General.

The approaching reforms in the whole system of army administration cannot be effected without an investigation and consideration of the Medical service, the importance of which to the well-being of an army can hardly be over-estimated; but when, as is likely to be the case with us, the army represents the strength and vigour of the country, its Medical administration involves questions of supreme national importance.

THE WEEK.

TOPICS OF THE DAY.

There is but little new this week. The great world of imperial politics and the small one of Medical politics are both taking a holiday. The Committees on the Conjoint Board are, we hope, enjoying theirs, and will meet with renewed appetite for work and undiminished determination to carry through their scheme after the recess. As Medical men, we cannot but wish that the opposition to Mr. Goschen's Local Taxation Bill and Mr. Bruce's Licensing Bill, on the part of the landed and brewing interests, may have sufficiently cooled when Parliament meets to permit some useful legislation on these subjects in the present Session. There is but little else now before Parliament of any Medical interest.

Professor Parkes, we are glad to hear, will most probably be elected a Senator of the University of London at the next meeting of Convocation, which will take place on May 9. By a mutual understanding between the Medical and Arts graduates, a Medical graduate will be selected on this occasion, and an Arts graduate on the next. Mr. Jacob Waley, Dr. Weymouth, LL.D., and Mr. Julian Goldsmid, M.A., M.P., are named as probable candidates. Mr. Julian Goldsmid's gift to the University of £1000, in ten yearly instalments, for the purpose of founding a classical library, gives him a claim on the gratitude of his fellow-graduates. We notice that it is proposed to purchase the late Professor De Morgan's mathematical collection, as a nucleus for a scientific and mathematical library.

In the list of candidates proposed for the Fellowship of the Royal Society are the names of the following Medical men:—Surgeon-Major Andrew Leith Adams, M.B., eminent as a geologist, zoologist, and traveller; Dr. William Budd, of Bristol; Mr. George William Callender, of St. Bartholomew's Hospital; Mr. Le Gros Clark, of St. Thomas's Hospital; Dr. John Cleland, Professor of Anatomy in Queen's College, Galway; Dr. Herbert Davies, of the London Hospital; Dr. Walter Dickson, Medical Inspector of H.M.'s Customs; Dr. Alexander Fleming, of Birmingham; Dr. Wilson Fox, of University College; Dr. Arthur Gamgee, of Edinburgh; Mr. Edmund Thomas Higgins, Surgeon and Naturalist; Mr. Edmund Charles Johnson, F.R.C.S., author of "On the Scientific Appliances for the Education of the Blind"; Dr. M. Kelburne King, of Hull; Dr. Richard Norris, of Birmingham; Dr. Edward Latham Ormerod, of Brighton; Mr. Oliver Pemberton, of Birmingham; Dr. Richard Quain, late President of the Pathological Society; Dr. George West Royston Pigott, the Microscopist; Dr. John Shortt, of the Madras Medical Service; Dr. A. T. Houghton Waters, of Liverpool; and Mr. John Wood, of King's College.

The proposal to remove the Government School of Mines from Jermyn-street to South Kensington is part of that plan for centralising the scientific treasures and scientific teaching of the metroplis in a suburb which, although in the midst of the fashionable world, is practically inaccessible to the masses of Londoners, against which we have so often protested. Prof. Huxley, who is one of the Royal Commissioners on Scientific Education who have recommended this change, defends it on the ground that the premises in Jermyn-street are inconvenient and insufficient, and that the building recently erected by the Government at South Kensington is convenient and spacious. We fail to see the force of the reasoning. The School of Mines is not supported by the nation on account of the building in which it is housed, nor for the Professors who direct it, but for the sake of the people whom it is to instruct. The first element of convenience in such a school, therefore, is that it is accessible to its scholars. This the school in Jermyn-street is; the building in South Kensington is not. If the building in Jermyn-street be too small and badly arranged, the nation can surely afford to remedy these defects. But it ought not to afford to keep up a national scientific institute for the sole benefit of a favoured aristocratic purlieu.

The Medical officers of volunteer corps present at the Brighton review have expressed their sense of the obligation under which the Medical Department of the Volunteer Force lies to Brigade-Surgeon J. Cordy Burrows, of the 1st Sussex Artillery Volunteers, by presenting that gentleman with a valuable gold snuff-box. The presentation was made by Dr. Carr, of the 1st Kent Rifle Volunteers, after a breakfast to which the Volunteer Medical Officers were invited by Mr. Burrows. In the name of the assembled guests, Dr. Carr expressed their sense of Mr. Burrows' hospitality and kindness to themselves personally, and his devotion to the interests of the Medical Volunteer Service.

SURGEON-MAJOR WYATT.

Surgeon-major Wyatt, of the Coldstream Guards, having, in consequence of indisposition, been unable to return from Paris at the same time as Dr. Gordon, C.B., Deputy Inspector-General of Army Hospitals, in concert with whom he had been sent by our Government to visit and report upon the Medical arrangements of the French army, has, we are happy to learn, returned to this country in a better state of health.

THE ANTI-CONTAGIOUS DISEASES ACT ASSOCIATION.

We learn from the *Daily News* that, during the present reign of misrule in Paris, the Commune, rather hard upon men, in many cases depriving them of their liberty and subjecting them to severest discipline, is extremely anxious for the liberty of women, and has begun by at once abolishing that department of the police-office which ventured to busy itself with their morals. The opponents of the Anti-Contagious Diseases Act in this country, we hardly think, can congratulate themselves on this acquisition to their ranks.

ORGANISATION OF MILITARY HOSPITALS.

Mr. D. Dalrymple, Member for Bath, has given notice that it is his intention on Monday night to move a resolution to the effect that no system of military reform will be complete or satisfactory which does not include the principle that, in the organisation and administration of general military Hospitals, power and responsibility should be combined in the persons of the Medical officers, instead of, as at present, being divided between them and military commandants. We need hardly say how cordially we wish him success. The reappearance of the charge for an assistant to the Military Governor at the Royal Victoria Hospital, Netley, in the estimates for 1871, should, on economic grounds, carry considerable weight in the House of Commons.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The meeting of the Medico-Chirurgical Society on Tuesday was sufficiently interesting to warrant the hope that the lethargic condition, almost amounting to coma, into which this venerable Society has been sinking of late has ceased, and that the Fellows are awakening once more with the season. The paper of the evening was by Dr. Silver, on a very interesting case of localised paralysis of lips, tongue, and pharynx. The teachings of anatomy, physiology, and pathology were most happily blended in Dr. Silver's account of and reasoning on this case, and the criticisms of Dr. Harley and Dr. Broadbent reminded us of the best days of Medical discussion. The disease came on suddenly, and presented at its onset all the symptoms ordinarily characteristic of the progressive form of the malady just before death. These were paralysis of the lips and jaws, of the tongue, soft palate, pharynx, and larynx, besides grave cardiac and respiratory symptoms, so that there was total loss of voice and power of swallowing, and tenacious saliva ran constantly from the mouth. From this dangerous condition the man gradually rallied, and by-and-bye was able to swallow, but he did not recover his voice. Intelligence being perfect, there being no loss of motion or sensation, and the senses being unimpaired, it became plain that the affection depended on lesion of the medulla oblongata below the level of the auditory, glosso-pharyngeal, and trigeminal (sensory) nuclei; that it affected the nuclei of the motor root of the trigeminus, of the vagus, the long root of the facial, the spinal accessory, and hypoglossal; the spinal cord was not affected. Several drawings from Dr. Lockhart Clarke's researches illustrated this portion of the subject. With such promise of good work among the men of the coming decade, we need not fear for the future of British Medicine.

Dr. Robert Lee followed with a short and pithy but incoherent paper, which led to some lively remarks from Mr. Birkett and Mr. Hulke, on the Results of Operations for Cancer. No more important subject could engage the thoughts of the Fellows, and we hope we understood Mr. Birkett correctly when he promised to introduce it again by a paper on the results of his personal experience. At the next meeting, Mr. Hutchinson will comment on some cases of Chancre following Vaccination. A paper by Mr. Paget is only deferred until the author is sufficiently recovered to attend; and Mr. Spencer Wells follows by his fourth series of One Hundred Cases of Ovariotomy, with especial reference to Difficulties in Diagnosis. So attractive a programme is certain to draw full meetings, and the Profession will look with interest to our reports of the discussions, which we trust will be worthy of the Society.

AID FOR THE SICK AND WOUNDED IN WAR.

Colonel R. J. Loyd-Lindsay, V.C., M.P., delivered a lecture on this subject in the Royal United Service Institution, on Friday, March 31. His Royal Highness the Duke of Cambridge was in the chair. There was a very large audience, among whom were several ladies, the Earl of Shaftesbury, Sir Wm. Codrington, Sir T. G. Logan, and many other military and Medical officers. The lecture was chiefly a *résumé* of the proceedings of the English National Aid Society during the war between France and Germany, and fell with a familiar sound on the ears of all who had read the correspondence from the seat of war in the daily papers. The maintenance during peace of an establishment of individuals and stores commensurate to the relief of the sufferers from war being a task which no Government can ever be expected to undertake, the organisation of a system by which, during war, each country itself may be prepared, by voluntary efforts, to supplement the regular establishment, is rendered necessary. In order that all the advantages of the association of volunteers with the permanent staff in such work may be attained, the essential point is that the volunteer organisation shall, from the outset till the end, sacrifice its individuality, and be completely under the control of the military authorities. Colonel Loyd-Lindsay did not appear to us sufficiently to estimate the importance of this point; but there can never be harmony of action unless it be clearly established. The intervention of neutral aid societies is a subject on which we have on former occasions expressed our opinion. We consider that the experience gained at such an enormous cost to this country during the late war should be sufficient to warn us against ever again making a similar attempt. The jealousy of foreign interference, the desire for stores or money evinced by both sides in preference to personal aid, and the fact that the supply of such requirements, although ostensibly for the sole use of sick and wounded, virtually left equivalent means available for warlike purposes, and to that extent relieved the countries engaged from charges legitimately devolving upon them, while, at the same time, it deprived, as is well known, many of our home charities of their usual means of support, confirm us in our opinion. Colonel Loyd-Lindsay concluded his lecture by reading some interesting extracts from the report by Surgeon Manley, V.C.R.A., of the ambulance under his charge at Orleans. He also alluded in terms of the highest commendation to the services performed by Drs. Frank, Sims, McCormac, and Yünger.

FROM ABROAD.—STRYCHNIA IN AMAUROSIS—M. DESGUIN ON GUNSHOT WOUNDS AFTER SEDAN—M. HEYFELDER ON CONSERVATIVE SURGERY IN GUNSHOT WOUNDS.

Professor Nagel, in illustration of a former communication (*Medical Times and Gazette*, January 21, p. 76) on the successful employment of strychnia in the treatment of amblyopia and amaurosis, has recently published in the *Berlin Wochenschrift* (No. 6) the details of a remarkable example which the present war brought under his notice. A Prussian soldier, 22 years of age, was, on August 14, struck on the left temporal region by the ball of a chassepôt, fired at about fifty paces distance, which, after shattering the outer wall of the orbit and the zygoma, passed out near the meatus auditorius. The patient did not come under Professor Nägel's care at Tübingen until January 2, when he was in full convalescence, the whole of the wound having healed, except that of the meatus, on passing a probe through which a portion of exposed bone could be felt. The left eye was completely blind, large bright objects not being visible. On placing the patient in front of a light window, he could discern only a slight glimmer of light, and was aware when this was darkened by the hand at a foot distance. In a dark room, also, the bright flame of a lamp was perceived at some inches distance. The visual power of the right eye, too, had undergone considerable diminution, and, if it were employed for a few minutes in reading even large letters, it became fatigued, while subjective flashes of light appeared in the left eye. The man could not possibly follow his occupation as a weaver. Externally, the eyes exhibited little abnormal, the left pupil, however, being somewhat dilated, and only moving slowly. The results of the ophthalmoscopic examination are given in considerable detail, when it appeared that the ball could not have come into contact with either eye, the effects observed having been produced by the compression of the air caused by its striking against the bones. Some very minute foreign bodies which were observed in the vitreous body were probably due to granules of powder. As the changes which had been induced by the subsequent inflammation were not considerable, the blindness being due rather to functional paralysis than visible anatomical alterations, a favourable prognosis was given. At all events, a moderate improvement in the left eye from the strychnia treatment was anticipated, and the result far exceeded the expectation. Between January 5 and January 15 nine injections of strychnia were performed in the supra-orbital region, or in one or other of the temporal regions. The patient's condition markedly improved after each injection, and as after the ninth he was able to read Jäger's type, No. 1 at 7 inches, and No. 17 at 12 feet distance, his cure was regarded as completed. Judging from all former experience, the improvement thus obtained will also prove to be durable. No ill effects whatever were observed during the treatment to result from the use of the strychnia. A coincident deafness of the left ear, produced by the shattering of the temporal region, was in nowise bettered by the treatment.

M. Desguin, a Surgeon in a Belgian artillery regiment, who was attached to an ambulance at Bouillon immediately after the battle of Sedan, has published an interesting account of some of the characteristics of the wounds observed in the present war, in which they differ from those described after the battles of recent times. The Dreyse, or needle-gun, employed by the Prussian infantry had already exhibited its remarkable power during the Bohemian campaign, so that its mechanism, the form of its ball, and the destructive effects which this produced were all well known. But this arm, which in 1866 had brought about a revolution in the art of war, was found to labour under various defects, which all the European governments were employed in studying in order to produce an improved weapon. The chassepôt, which was adopted by the French army, had, prior to the present war, only been tried at Mentana, and in the suppression of popular tumults. Besides these, there were the muskets of the Bavarian, Würtemberg, and Saxon troops, as also the "snuff-box gun" of the Francs-tireurs, which, although differing from each other in detail, all agreed in the employment of non-spherical balls projected through rifled barrels—conditions determining remarkable precision and rapidity in firing, combined with great projectile and penetrative force. In a Surgical point of view these are the arms which are of most interest; for, however much the various modifications made in the artillery and the mode of serving it may influence the precision and force of its fire, the wounds produced by it are much alike, and now, as formerly, a limb struck by a projectile during its course is almost necessarily condemned to amputation, in consequence of the excessive shattering it has undergone. The balls of the mitrailleuses were of the same form and about double the size of those of the chassepôts, but the wounds produced by either weapon could seldom be distinguished from each other. Sabre- and bayonet-wounds were very seldom met with.

Having at Bouillon full opportunity of observing the lesions caused by all the varieties of rifle, M. Desguin declares that he was unable to perceive the least difference among them. He had often heard that the Prussian and Bavarian balls made larger wounds than the French balls, but he never could verify the statement, and he found it impossible to conclude as to the dimensions of the ball from the size or form of the wound. A characteristic which has been often observed with respect to all these balls was that the orifices of entrance and exit exhibited no difference whatever; and so true was this, that the patient had to be questioned as to the position in which he was, and as to where the ball had penetrated. Under some circumstances, when the wound only involved soft parts, inducing a superficial seton wound, this was remarkably clean, and in nowise jagged, so that in a few days cicatrisation was nearly complete, very slight suppuration taking place. From numerous facts of this kind observed, it may be concluded that when the balls now in use only traverse soft parts, and that superficially, their track is remarkably clean and rectilinear, and the complications are very few; so that, in fine, they produce less considerable lesions than the old balls caused. But this is not the case when bones are struck, which may be done in the direction of the diameter or obliquely. In the latter and simpler cases, the ball, after having come in contact with the bone, deviates in its course, and produces ravages among the soft parts proportioned to its loss in rapidity of motion. It is thus very often detained in the limb, requiring a counter-opening for its removal. When the bone is struck in its diameter, the most serious comminutive fractures may result, the bone being sometimes literally pulverised, and the neighbouring soft parts triturated. Several such cases were received at Bouillon, amputation not having been performed on the field of battle. Their general condition now prohibited its employment, and most of them died, with abundant suppuration and all the symptoms of pyæmia. In the same category are to be placed penetrating wounds of the joints, with comminutive fractures of the ends of the bones, the discharge of splinters, excessive pain, and abundant suppuration. Conservative Surgery was put into force as far as possible in these cases, and sometimes with good results. "But I have acquired the conviction that, as a general rule, too few amputations were performed on the field of battle, and that the operation would often have been the means of saving the life of those unfortunate beings who long afterwards succumbed to purulent infection, after having been the victims of intolerable suffering."

Almost all the balls that were extracted had undergone great change in shape, some being only flattened, others presenting irregularities or superficial ruptures in their long axis; and others, again, being cleaved right through in the direction of this axis. M. Desguin believes that balls found in this state have given rise to the erroneous accusation of the employment of explosive bullets. Owing to the great part which the formidable German artillery played at the battle of Sedan, the wounds from shells were exceedingly numerous. The portion of lead which surrounds the projectile becomes detached after it has been fired, flying into fragments, which, on striking the limbs with great force, may produce as severely contused wounds as those which result from the explosion of the shell itself. Marshal MacMahon was, indeed, wounded by one of the fragments of this leaden envelope. Sometimes, when the fragments of shells only strike at a great distance, or after having rebounded more than once, they only produce very slight wounds or mere contusions. In other cases, the shattering is so great that immediate amputation is the only resource. In numerous cases, wounds which at an early period seem very slight afterwards become so complicated as to endanger the patient's limb, or even his life; so that, when contused wounds are in the vicinity of articulations, we should never be put off our guard by their apparent benignity, and a vigorous antiphlogistic treatment should be resorted to even before any signs of active inflammation manifest themselves. The complications most frequently observed were both Medical and Surgical. Among the first were typhus and dysentery. These were chiefly observed among the German wounded, and were attributable to the great privations of all sorts which they had been subjected to, bivouacing in all weathers without tents, and lying down on the damp ground or even in the mud. The symptoms of typhus and dysentery were constantly found mingled together, so that each case presented symptoms of both affections. They proved a most fatal complication in the wounded who became their subjects. Pyæmia and septicæmia also were very fatal among the wounded, especially those who were the subjects of comminutive fracture with suppuration. Such cases, on their arrival in Belgium, were in a condition that rendered amputation out of the question. In four of the author's cases tetanus appeared, and were treated by chloral in increasing doses, until four grammes per diem were given. In all, the symptoms were at first arrested, but all four eventually died. Secondary hæmorrhage was not very frequently observed, and was always caused by ulceration, consequent upon inflammation of the tissues in the vicinity of the wound.

In treating gunshot wounds, M. Desguin states that in the great majority of cases the amovo-inamovible apparatus should be employed. It prevents movements of the parts in comminutive fractures, and, therefore, greatly diminishes the sufferings of the wounded, which chiefly arise from irritation of the soft parts by the pointed extremities of the splintered fragments. Moreover, the frequent dressings which the abundant suppuration in these cases render necessary are easily performed. The dressing by occlusion, though well-suited for superficial wounds with little suppuration, is not applicable to complicated suppurating wounds. Weak solutions of carbolic acid were much employed at Bouillon for washing the wounds, moistening the fenestrated dressings, and injecting sinuous tracks leading to the fractured region; and in intra-articular wounds, the injection of a weak solution of nitrate of silver proved of great service. Most of the patients were anæmic, having become attenuated by forced marches and every kind of privation. Quinine and wine and a good diet were therefore prescribed. The violent pains and obstinate sleeplessness which many suffered from had to be assuaged by opium and morphia.

Mr. Oscar Heyfelder, of St. Petersburg, who, during the late war, had charge of an ambulance at Neuwied, seems to entertain a much higher opinion of the advantages derivable from treating Surgical patients in tents and sheds than is held by Professor Billroth and other German Surgeons. In an address delivered at the Belgian Academy of Medicine, March 24, he stated that he was a strong advocate of conservative Surgery, freely resorting to excision whenever possible, and that almost all such operations in his hands were successful—another point at which he is completely at issue with the German and French Surgeons, who are pretty well of accord that many more lives could have been saved in this war if conservative Surgery had been less practised. He strongly advocates the plaster amovo-inamovible apparatus, and sometimes has recourse to carbolic acid dressings; but his great reliance is on free exposure to the air, and the employment of a restorative diet.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XII.

By J. F. CLARKE, M.R.C.S.,

For nearly forty years on the Editorial Staff of the "Lancet."

Editors, Authors, Actors, and Doctors: Dowton, O'Smith, C. Mathews, John Reeve, R. Keeley, Fanny Kemble, Charles Kemble, Edmund Kean, Dr. Maginn, Jack Lawless, Honoratus Leigh Thomas, Merriman—Professional Incomes—Elliotson—Long-winded Writing—Dr. Pinckard—Dr. Spurgin—Mr. Anthony White—Benjamin Golding—John P. Vincent—Dr. Darling.

During the five years of my pupilage I was in the very centre—at that time (1828-33)—of the literary and dramatic world. It was then the fashion for editors and actors to live either at or near their places of business. Barnes, who was for a long period the editor of the *Times*, lived in Soho-square; John Wight, the editor of the *Morning Herald* and author of "Mornings at Bow-street," in the Strand; and Stewart, the proprietor of the *Courier*, at the printing- and publishing-office of the paper, on the north side of the Strand, opposite Wellington-street. The house was taken down when the north part of Wellington-street was formed, in consequence of the burning down of the old Lyceum Theatre. Murdo Young, the editor of the *Sun*, who died last year upwards of 80 years of age, lived at 112 in the Strand, then, and for fifty years before, the *Sun* Office; Gaspey, the proprietor and editor of the *Sunday Times*, lived in Tavistock-street, Covent-garden; Dowling, the editor of the *Bell's Life*, in Norfolk-street, Strand. Actors of prominence also resided in the immediate neighbourhood. Dowton lived exactly opposite our house, with his sister, who was married to a hosier of the name of Smith. I used constantly to see Dowton, and on one occasion prescribed for him. He was a tall, portly man, and off the stage (though he was as free from "cant" as anyone I knew) looked the very character for the impersonation of which he was so celebrated—Dr. Cantwell in "The Hypocrite." O'Smith, the delineator of "The Vampire," "The Bottle Imp," and similar characters, resided next door, and was a patient of my master. He was a singular-looking man, with a tall, gaunt frame, and a face well suited for the characters he delineated with such marvellous effect. He was one of the gentlest and kindest of human beings, and was never wearied of doing good works. In the same house lived John Huckell, the stage-doorkeeper of the Adelphi Theatre—not an actor, but a well-known personage, and the friend of Charles Mathews, who at this time, with Yates, was lessee of the Adelphi. Huckell, like Mrs. Malaprop, had a peculiar propensity for remarkable "epitaphs." He would frequently come into the surgery to speak about his wife, who was a confirmed invalid, and to show me letters he had received from his "friend" Mathews. The fact was, Mathews would draw Huckell into a correspondence with a view of making use of his sayings in his "At Home's." On one occasion, in writing to Mathews, Huckell stated that his wife had "a most vocarious appetite," but he had no doubt that this arose from her being "impregnated with asthma." John Reeve, the "elephant of fun" at the Adelphi, lived on the first-floor at Stammers, the silversmith, two doors east of Beaufort-buildings in the Strand. I occasionally visited him. Like Liston, he was subject to fits of the most desponding melancholy, during which he presented a most wretched spectacle. He could never play, like Edmund Kean, unless under the influence of powerful stimulants, the reaction from which was really dreadful. I once recollect going behind the scenes at the Adelphi to see him. He was at the time playing his great and humorous character of Marmaduke Magog in "The Wreck Ashore," Jemmy Starlight, the next prominent character, being sustained by the present Mr. Buckstone, the author of that famous drama. John had just come off the stage from a scene in which he had convulsed the audience with laughter. I found him walking up and down a short corridor which existed in the old Adelphi building. He was extremely irritable and nervous, and declared he could not finish his part. A full dose of aromatic spirits of ammonia in camphor mixture somewhat revived him, and, at the summons of the call-boy, he was again on the stage to convulse the audience. Like Kean, he was remarkably sensitive to the expression of the slightest disapprobation on the part of the audience, but was revivified, as it were, by applause. When Keeley was playing in "The Bottle Imp," he was on one occasion a great sufferer from the footlights, and came into our surgery for me to cup him. Everything was got ready for the operation. I was just on the point of placing a glass on his back, when he suddenly turned round, and, with a most comically serious face, exclaimed "Don't, don't hurt me!" "Mr. Keeley," I replied, "you really must be quiet, or I cannot go on." I took about twelve ounces of blood, with the effect of entirely relieving him; and I believe he never suffered from the same symptoms afterwards. It is a curious fact that he never forgot this little episode in his life, even when memory on other events long past was most imperfect. I met him, shortly before his death, in a Brompton omnibus. He referred to the operation, but I found he did not recollect many circumstances in his career at the same time; and, when I spoke of some of them, he merely said "God knows." Mrs. Glover lived in Soho-square; Yates in the rooms fronting the Adelphi Theatre in the Strand; Arnold, the lessee and manager of the Lyceum, in Golden-square; Mrs. Waylett, the most charming of ballad singers, in the Quadrant. For some time before her retirement from the stage, she suffered from severe illness, and had often to appear when she was more fitted to be in bed.

At this time (1830) a newspaper called the *Age* was published in Catherine-street in the Strand, at a house taken down some little time since for the Gaiety Theatre. This paper was most scurrilous and unprincipled. The owner and editor was a person of the name of Westmacott. He libelled people, as it were, with impunity—at all events, I do not recollect an action for libel being brought against it. Westmacott, however, on one occasion got severely punished. When Fanny Kemble first appeared at Covent-garden Theatre, in the character of Juliet, the part of Romeo was sustained by her father, Charles Kemble. In some comments upon her first appearance, Westmacott styled her a "doxy." A few nights afterwards, Kemble, whilst on the the stage, saw the impudent libeller in one of the dress boxes. The moment the piece was over, Kemble, still in costume, went round to Westmacott, took him by the collar, dragged him into the lobby, and gave him a sound thrashing. We were always early-to-bed people in Brydges-street. I was just getting into bed when the night-bell rang, and on coming into the surgery I found Westmacott in a sad plight. He told me he had fallen down. I gave him a lotion for a black eye, and some medicine. The fellow had the impudence to fling a shilling on the table. "What is this for?" I said. "Why, for yourself. I could not call you up without giving you a fee." "Oh," I said, "take up the shilling; I'll place you on the pauper list." He laughed heartily, took up the shilling, and departed. He dared not proceed against Kemble for the assault, and contented himself with abusing him in the *Age* as a "coward" and a "ruffian." Kemble was contented with the revenge he had taken. The *Age*, however, was destined to be outdone in ribaldry and blackguardism by another paper. The *Satirist*, edited by B. Gregory, was established some few years later. It was a disgrace to the periodical literature of the day; but it displayed considerable ability, and had a good circulation. Gregory was an actor of no mean powers, and appeared several times on the stage, usually as Richard the Third. Those, however, who had been attacked by him mustered in strength and drove him from the stage. Westmacott died last year, in Paris, at a very advanced age; Gregory succumbed in the prime of life; Edmund Kean played occasionally at Drury-lane, but he was fast sinking from physical infirmities. He was almost nightly attended at the theatre by his Surgeon, Mr. Douchez, a dapper, shrewd, and convivial little man. Kean was very much attached to him, and in his later years was constantly in his company. Douchez then lived in Golden-square, but in the evening was to be almost invariably found at "The Harp," a house used by Kean, in Little Russell-street, Covent-garden. I was present the last time Kean appeared as Othello at Drury-lane. Charles Young—the brother of George Young, the eminent Surgeon, who practised for many years in the house now occupied by William Coulson—was Iago; Cooper, Cassio; and Miss Phillips, Desdemona. In the fourth act Kean broke down, but managed somehow to struggle through the scene. He immediately threw himself upon a sofa just behind the scenes. He was very weak and tottery. Douchez told me that he was fearful Kean could not finish the part, but he gave him his usual dose of brandy-and-water. When the call came, Kean jumped up and stalked on the stage, exclaiming, with a proud air, "Now hear them! hear them!" in allusion to the applause which he knew he should elicit. This was his last appearance at Drury-lane.

Amongst acquaintances and patients at the time now referred to was Dr. Maginn, then one of the editors of the *Standard*, but newly established. Maginn, the most versatile of writers, was scarcely anything "off the stage." He had what someone called a kind of "gin-and-water face," so far as colour went, but his features were regular and his eye expressive, his forehead broad and expanded. He would sit in company drinking his "gin twist," no matter how many glasses. He seldom spoke, but had a habit of biting short pieces of straw by the hour together. He professed to be a Conservative, but I believe he had no settled principles, and was of opinion, with Chatterton, that a man "ought to be able to write as well on one side the question as the other." At all events, he carried out this doctrine, for he would write a leader in the *Standard* one evening, answer it in the *True Sun* the following day, and abuse both in the *John Bull* on the ensuing Sunday. He was the Ensign O'Doherty of Blackwood's "Noctes," and at one time editor of *Fraser's Magazine*. "Honest Jack Lawless" was an occasional patient during the time of the famous debates in Parliament, just before the carrying of the Bill for Emancipating the Roman Catholics. Jack was a fine, dashing Irishman, above the middle height, firmly made, and active as a deer. His features were finely chiselled; nothing of the Celtic about them. He dressed in a green coat, and a hat with somewhat turned-up brim. He was then publishing his "History of Ireland" in weekly numbers, with a bright green cover. Regularly every Saturday morning he brought me the current number. Poor Jack, who was so prominent an *aide-de-camp* of O'Connell before the Emancipation Act, sank into obscurity soon after it was carried. It would be departing too far from the object of these papers to dwell further on actors and authors, though I could fill pages with my recollections of them. It is time, however, to say something of the men of our own Profession. The men whom we chiefly called in consultation occupied at the time prominent positions, but some of them contributed little or nothing to the literature of the Profession. Honoratus Leigh Thomas, councillor, examiner, and twice President of the Royal College of Surgeons, was often called in by us. He was a very poor Surgeon, very undecided, and avoided operation, but he was a shrewd Practitioner in Medical cases, to which his practice was mainly limited. He was familiarly known as "Dr. Thomas," and had a very extensive practice amongst the middle classes. He had in early life been a pupil of the celebrated Cruikshank, whom he afterwards assisted in his anatomical demonstrations, and lived with at his house in Leicester-place, Leicester-square. He subsequently married a daughter of Cruikshank, and succeeded his father-in-law as tenant of the house in Leicester-place, in which he practised for nearly half a century. Mr. Thomas, as far as I know, made no contribution to his Profession. He was courteous and able as an examiner, dignified as president; but he had no genius; there was nothing suggestive, nothing of *élan* about him. He was perfect in the sick-room; cool, attentive, kind, and in Medical cases an excellent Practitioner. Personally he was the *beau-ideal* of a Physician. A tall and slender form, slightly bowed; a face sedate but kind; a forehead, though somewhat low, denoting great perceptive power; and a calm, somewhat subdued voice. He dressed truly "Professionally"—black dress-coat, waistcoat, and trousers, black silk stockings, and pumps; a spotless white cravat encircled his long neck; and a massive chain, with seals and keys, dangled from his watch-pocket. As I have said, he assisted Cruikshank in his anatomical lectures; but I am not aware that he was ever connected with any Hospital or Dispensary. He seemed to have a dread of operative procedure, though by no means in his palmy days a bad operator; but he would delay and delay Surgical interference until his patient, tired out, would consult some more decided Surgeon. He had a very extensive practice amongst licensed victuallers, and probably attended more members of that craft than any other Surgeon of the present century. In midwifery cases we were in the habit of calling in Merriman and Golding. Merriman, like Thomas, chiefly attended the middle classes; and amongst them he was popular, as he deserved to be. He was originally in general practice, and at a mature age became a Licentiate of the College of Physicians. He was a man of some literary ability, and a consummate obstetric Practitioner. He was in every way fitted for that department of the Profession. He was gentle, decided, and an excellent operator. In person he was of the middle height, with a fine benevolent expression of countenance, a high and expanded forehead. He wore gold spectacles. He dressed, not according to the time, as a Medical Practitioner. He wore a blue coat with brass buttons, and generally light-coloured waistcoat and trousers. He was in appearance and manners a finished gentleman. He never took a fee from a governess or a curate. I wrote his life for the second edition of the "Lives of British Physicians," published by Wm. Tegg.

It may not be out of place here to refer for a moment to the incomes of celebrated Medical Practitioners. These, we believe, are usually much overrated. In almost the last conversation I had with Dr. Merriman at his house in Brook-street, this subject was touched upon. "I do not believe," said Merriman, "in these enormous incomes. I have had as large, perhaps a larger, practice than any obstetric Physician of the time, and in my most prosperous year I never made more than £4000." Brodie in his zenith never exceeded £13,000 per annum, and though Sir A. Cooper is recorded to have made in one year the great sum of £24,000, it was acknowledged by him to be quite an exceptional amount. His average income was probably about half that sum. But it must be recollected that he was quite an exceptional Surgeon—no man was so generally consulted; no man ever received such large fees for operations. Abernethy, I believe, never in one year reached £10,000, and Liston's income never amounted to £7000. These appear small compared with the incomes of great lawyers; but it must be remembered that we are only paid for what we do, not for what we are retained to do; and, moreover, we only receive our fees when the work is done. Elliotson was occasionally consulted. He had just made himself famous by his clinical reports in the *Lancet*, by which his income rose in one year from £500 to £5000. But he was the first to publish such lectures. I know that his imitators since have met with no such success. I shall have to speak fully of Elliotson in a subsequent article, and need not enlarge upon his career at this time. In these days, when almost every man is a lecturer or "author," and publishes his narratives in the journals or in monographs, it may be worth while to refer my readers to the models of contributions to the practice of Medicine published by Elliotson. It is refreshing in these days to go back forty years to look at them. There they are all simple matter of fact, with common-sense deductions; not as now, pages filled with

> "Fancies to show the stretch of human brain,
> Mere curious pleasure or ingenious pain."

The great evil of the present day, *quoad* the writers and authors of the Profession, is the voluminous (a) nature of their contributions. This is an evil which seems on the increase. Can it be abated? We fear not. "Voluminous" writers should remember that their lucubrations are read in an inverse ratio to their length. Facts can be stated briefly; the briefer, so long as they are clear, the better. Sir Samuel Romilly contended that no speech of an advocate in the Court of Chancery need exceed twenty minutes in length. Take a volume of the *Transactions of the Medico-Chirurgical Society* fifty years since, and compare it with one of modern date. The difference is striking, but not pleasant to us. Yet who shall say the late volumes are to be compared in interest and value to the earlier ones? When Astley Cooper, Haighton, and Babington were at Guy's; Green, Tyrrell, and Travers at St. Thomas's; Abernethy and Stanley at St. Bartholomew's; Brodie, Keate, and Chambers, at St. George's; Sir C. Bell at the Middlesex; White, Lynn, and Guthrie at the Westminster; Blizard and Heaviside at the London, most of whom contributed to the *Transactions*, we had none of the windy reports that characterise those of the present day. The evil had begun to exhibit itself in the time of Sir Astley, who once naïvely remarked to me—"Sir, the writers are becoming like seamen who neglect the prominent landmarks for taking useless soundings, and making absurd calculations of no use to anyone, and liable to run the unlucky ship on a rock."

It is related that Blake, the most imaginative of painters—Fuseli himself not excepted—once saw the ghost of a flea, and sketched it. Had he belonged to the "pre-Raphaelite School" of the present day, it is probable that he would have made the "ghost" merely a feature in an elaborate production of his easel. Perhaps he would have placed it on a rich blanket, on a superb bed, in a gaudily-furnished room; every thread of the blanket, every line of the bed tick, every object—even the most minute—elaborately "worked-up," the "poor ghost," like that of Hamlet's father, being invisible, or only seen by the gifted eye. What would have been the result? The great sketch of the flea, so wonderfully portrayed by the painter, would have been "nowhere." Writers on Medicine and Surgery of the present day get hold of the "ghost of a fact," and they theorise upon it to such an extent, and with such elaborate minuteness, that we are mystified, and looking for the meaning, as we do for that in Gratiano's talk, find to our cost that it is "an infinite deal about nothing."

Many Practitioners of the present day are not contented with pursuing the "even tenour of their way" to eminence and success. Each and everyone is anxious to be original and a discoverer. Thus, one identifies his name with some therapeutic "discoveries"; one finds the dung of a toad, judiciously administered, an infallible remedy for consumption; whilst another declares, from a "large experience," that the "thin white curd of asses' milk" is an universal panacea. Young Surgeons who have yet to "gain their spurs" "invent" all kinds of imaginable instruments. One, who has never seen a gunshot wound, may modestly give to the Profession an improved bullet extractor, to be procured only of Weiss or Coxeter. Another, who probably has never performed ovariotomy, introduces a new "clamp," or something else, to "arrest hæmorrhage"; whilst another, less ambitious or more "modest," contents himself with parading a new kind of tweezers for extracting superfluous hairs.

Richard Pinckard was a Physician in extensive practice in Bloomsbury-square. He was one of the "old school." He had no theories—

> "A cowslip on the river's brim
> A yellow cowslip was to him,
> And it was nothing more."

But he was a shrewd, common-sense Practitioner, and successful too. He had great faith in medicines, and always prescribed with a definite object—"the remedy for the disease." He was a tall, big man, with a common-sense expression of face, which at once inspired the patient with confidence in him.

(a) When Sheridan was making his great speech against Warren Hastings, Gibbon was in the gallery, and was much pleased by a reference made to him by the orator as the "luminous historian." Being twitted afterwards in company as to the expression, the wit said, "No, I did not say luminous; I said *vo*luminous." The force of the joke will be understood by the fact that the "Decline and Fall of the Roman Empire" originally appeared in eight large volumes. The work was dedicated to the Duke of Cumberland—"the butcher." On Gibbon presenting his seventh volume, the illiterate old rogue exclaimed, "What, another big book, Mr. Gibbon!"

At the time referred to, the late Dr. Spurgin, who unfortunately fell a victim to the garotte, had a large practice. He resided in Guildford-street. He was a Practitioner of good common sense. Unfortunately, in the very zenith of his practice he took to farming; his practice declined, and he spent the later years of his life in something like indolence. He was a large-hearted man, and an honour to the Profession.

Anthony White, the senior Surgeon of the Westminster Hospital, was, as I have stated elsewhere, one of the ablest, but certainly the laziest, Surgeon of his day. He was a man of consummate ability, and of large resources in difficult or dangerous cases. But his besetting sin was idleness, and this he carried to an extent that seems almost incredible. I believe that he never was known to keep an appointment in his life. To be an hour or a couple of hours beyond time was nothing to him, but he has actually been known to forget the day, and go the next; and on one occasion it is positively stated that he was a full week in arrear, having mistaken his appointment by seven days. It may readily be supposed that White never had a large practice, though he might undoubtedly have been fully occupied had he been a man of business. But to go round the wards of the Westminster Hospital when he did go round was really a treat. He spoke little, but it was always to the purpose, and what he said stamped him as a man of high philosophical, yet practical, views of Surgery. White was about the middle height, stout, firmly and rather clumsily built. He was the subject of gout, and usually walked slowly and with difficulty. He had a large head, a high and capacious forehead, with an eye of surpassing intelligence. His mouth was large and masculine, but his chin wanted that full development which indicates firmness and resolution. He spoke slowly and deliberately. He dressed in black, somewhat slovenly, but always clean.

Golding, of whom I spoke just now, was the very opposite of Merriman. He lived in St. Martin's-lane, in a house taken down when Cranborne-street was formed. It was one of the old-fashioned houses, with several steps leading up to the front door. Golding never had an extensive practice, but he was undoubtedly a man of ability. He was quick, decided, and self-opinionated. He went to his work like a workman, and was deficient in that gentleness which characterised Merriman. He was a man of great industry and perseverance. He founded Charing-cross Hospital, which was originally a dispensary in Villiers-street. Even after an attack of apoplexy, ending in partial paralysis, with which he was afflicted shortly after middle life, Golding maintained his vigour and determination. He was a spare man, somewhat above the middle height. He had a sharp, shrewd expression of countenance, a sagacious blue eye, and head formed less for reflection than action, more for combativeness than for emotion. He was an upright man, but somewhat crotchety, and rather too self-willed to be called amiable. John Painter Vincent was occasionally called in for his opinion. He resided for many years on the north side of Lincoln's-inn-fields. Vincent was a peculiarly shy man, but was not without ability. People who did not understand him thought him slow and dull, but he was a minute and careful observer, but he wanted manner. He failed to impress his patient, at first, certainly, with an idea of his real power. Those who knew him better had great confidence in him. In person, he was just above the middle height, walked quickly and somewhat clumsily. He had somewhat of the appearance and manner of a lawyer's clerk hastening to court. He dressed rather shabbily in black. His face denoted no great power. His features were regular, and he had a good forehead, but he never seemed to be on good terms with himself, and consequently was often not on good terms with others. Dr. Darling, who had been in India, had a tolerable practice amongst old Indians. He lived on the east side of Russell-square. He was a man of very limited ability, and his resources in the treatment of disease were scanty. He was of the old school of blue pill and black draught, and treated most cases as "bilious." He was a man about the middle height, and would ordinarily be taken for a Methodist parson. He dressed in black, with a white cravat. His countenance had a little touch of Mawworm, but he bore a character for kindness and liberality. He did nothing for the literature of Physic.

These were some amongst the large number of consulting men then in full practice, but some of whom died and "made no sign." I have purposely omitted to notice several, who will be referred to in subsequent articles.

PROFESSOR FAYRER, M.D., C.S.I., ON FIBRINOUS COAGULA IN THE RIGHT SIDE OF THE HEART IN CONNEXION WITH MALARIA.

The books that have been written on the non-existence of phenomena form a curious part of literature, general and Professional. Poor Dr. M'Laughlin wrote on the non-existence of syphilis; there have been books on the non-existence of hydrophobia, and on the non-existence of malaria as a specific poison; but, whatever the nature of malaria, there is no doubt as to the effects. Amongst these effects, Professor Fayrer, whose opportunities of studying disease in its most gigantic forms at Calcutta seem to dwarf the clinical experience of most European Surgeons, enumerates that coagulation of blood in the right cavities of the heart with which we were made familiar some years ago in this country by Dr. Richardson.

"There is one result of blood poisoning on which I have frequently remarked, in former communications to the *Indian Annals* and other periodicals—the rapid formation of firm fibrinous coagula in the right side of the heart, and the consequent apnœa, which in many cases proves rapidly fatal. I do not now offer any opinion on the cause or nature of the condition of the blood, which occasionally in Surgical patients, as well as those suffering from exhaustive diseases, determines the formation of these coagula, which either destroy life, or, having endangered it, produce subsequent evidence of thrombosis and embolism. I am quite aware that it has been advanced that these coagula form either during dissolution, or in that advanced stage of disease (such as croup, diphtheria, cholera), which is the precursor of death; or it may be as one of the latest vital changes in pyæmia itself, but such is not, I am satisfied, always the case. Over and over again I have seen patients who were not in this condition, and for whom there was every reason to prognosticate recovery, with a healthy, or at all events not unhealthy-looking, granulating surface, after a Surgical operation or wound, overwhelmed suddenly, as it were, and carried off in a comparatively short space of time. A remarkable example of it occurred only the other day, in which a young man who had sustained an injury causing gangrene of a portion of integument was suddenly attacked with all the symptoms of cardiac and pulmonary obstruction, and sank in a complete state of cardiac apnœa within a few hours. The post-mortem revealed what had been diagnosed during life—plugging of the right cavities of the heart and of the pulmonary artery, with firm adherent fibrinous coagula."

The case referred to in the foregoing extract was as follows:

"A Bengalli student, named P. D., aged about 20, was admitted into the Medical College Hospital on April 15, 1870, suffering from the results of a contusion on the right leg. He says that he tripped and fell, eight days before admission, over some bricks, and thus bruised himself, but was not seriously hurt. The part became painful, the leg swelled, and being unable to walk, he came to the Hospital. He had been suffering from frequent attacks of malarious fever and enlargement of the spleen for the last five months; his appearance confirmed this statement.

"The surface of the contused and abraded integument had been weeping a bloody sanies for three days, and for four days he had been unable to rise from his bed. The leg and knee were œdematous. The bruised portion, which was just below the knee-joint, looked as though it were becoming gangrenous; the temperature was low, and sensation diminished, the limb generally painful. He was depressed; pulse small and feeble. No diarrhœa. He was ordered stimulants and quinine. Carbolic oil dressing was applied to the injury.

"He remained in this state for two days, during which time the injured part became gangrenous to the extent of about two inches. The respiration began to be hurried on the 18th; slight return of fever in the evening, but temperature in axilla not above 99·4°, generally much lower. Ammoniacal stimulants were given both by enema and in the usual way, but there was no improvement; the respiration became more gasping and hurried; no murmurs were heard over the pulmonary artery; the heart's sounds became more feeble, the respiratory sounds gradually diminished, and in a state of extreme cardiac apnœa, he died at midnight of the 20th.

"The post-mortem examination was made on the 21st. The liver was of normal size, but discoloured from commencing decomposition. The spleen was much enlarged. The kidneys healthy. The lungs were somewhat congested hypostatically; a portion of the lower lobe of the right lung was consolidated. On opening the heart a firm fibrinous coagulum was found extending from the right auricle, where it was reddish, into the ventricle, where it was straw-coloured, thence firm and fibrinous into the pulmonary artery and its minute subdivisions; a similar one was found in the left cavities, extending into the aorta. The integument was gangrenous for several inches down the leg. The knee-joint was not compromised, and on being laid open its structures were normal.

"There was certainly not sufficient in this case, in the mere gangrene of the integument of the leg, to account for death in an ordinary individual; but in a person suffering from malarious blood poisoning and enlargement of the spleen, it was more than sufficient. Probably in no condition of disease is the formation of fibrinous coagula more likely to occur, on the least disturbance, than in splenic or malarious cachexia. In a marked case, such as this, where the spleen was four or five times its natural size, it may be said that there is nothing remarkable in the termination of the case; for do we not see it almost daily in the cases of cancrum-oris, sloughing ulceration, and necrosis that are unhappily so common in Bengal, and probably in other localities wherever that condition called 'malaria' is rife? The imperfect condition of the blood-making organs, and the improverished blood they elaborate, are amply proved and demonstrated in the anæmia and in the great tendency to disintegration and death of the soft tissues and bones; whilst the evil results of hyperinosis are seen in the limbs or other parts of the body, gangrenous from embolism when it occurs in the systemic or arterial circulation, and in the œdematous or gangrenous limbs also, when it occurs in the venous system; or, still worse, in the multiple deaths of portions of the viscera which are so frequently seen in the so-called pyæmic conditions generally met with after wounds and injuries, though by no means unfrequently, idiopathically.

"But it is the formation of the fibrinous coagula at the very fountain-head, in the cardiac cavities themselves, that I would especially notice, and particularly that very fatal form of it which, occurring in the pulmonary side of the circulation, is so frequently fatal to life. I have frequently called attention to the subject, as one of great importance in a Surgical point of view; for it is not only in cases where an enlarged spleen renders almost any operation impossible, and causes almost any wound to be fatal, but in many others, whether of wound or injury, where there is no obvious disease of the spleen, and where all seems to be, and to promise well, that it may and often does supervene and rapidly carry off the sufferer. The condition is one most common in exhaustive diseases, and it is, no doubt, often one of the latest pathological phenomena manifested by the moribund. But it is more than this—for, as I have frequently said, it may set in where there is no appearance of exhaustion, when repair and nutrition are going on satisfactorily, and within twenty-four or forty-eight hours carry off the patient, whose body after death presents no solution of the cause of death beyond a firm white adherent clot in the right auricle, or ventricle, or it may be just at the ostium of the pulmonary artery, which is indeed the *janua vitæ*.

"This condition of fibrinous coagulation taking place in the right side of the heart or in the pulmonary artery is one of the dangers that the subject of a Surgical operation, wound, or injury has to encounter, and not merely as the last act of a series of pathological processes—the result of exhaustive or prolonged disease—but an original and dangerous consequence of some blood change that has taken place as a result of the operation. What the nature of this change may be I am uncertain; it is an imperfect, or rather a post-perfect, condition that may perhaps arise out of the presence of matters retained in the blood that should have ministered to the nutrition of the part removed, in cases of amputation or ablation of parts of the body; a condition somewhat analogous, perhaps, to the retention in the body of a secretion that should have been eliminated, or, in cases were no removal of parts has occurred, to some disturbed condition of innervation, in which the blood itself is imperfectly elaborated, and rendered prone to this fibrinous coagulation. I have a strong suspicion that climatic influences are not without force in originating this dangerous state. In Bengal, all are more or less under the influence of malaria. It is true, happily, that in a large majority of persons its effects are not generally perceptible, and malarious or splenic cachexia, though common, is not universal; still, no doubt, all are more or less affected, and, as I have on another occasion remarked, an attack of ague and fever is perhaps one of the least common ways in which it expresses itself.

"I do not wish it to be understood that I regard this as altogether due to a malarious condition of the blood. I know that, although it may not have been noticed as a result of Surgical operations, Dr. Richardson long ago pointed out its tendency to occur in exhaustive diseases, under circumstances which, however low and depressing, were not, at all events, suggestive of what we understand of malaria in this country; nor can I help thinking that a pathological state of the blood capable of producing so many important changes as malaria does may have something to say to this also."

The next is a remarkable "Case of recto-vesical fistula, vesical calculus, malarious fever, death from pyæmia, and the formation of fibrinous coagula in the right side of the heart."

"Conductor H., aged 44 years, was admitted into Dr. Fayrer's wards of the Medical College Hospital, on December 16, 1868, suffering from the effects of a severe accident which happened to him eight months previously at Darjeeling. He was, notwithstanding all the suffering he had undergone, a stout, healthy-loooking man, apparently of steady and temperate habits. The history of his case, up to a short time before leaving Darjeeling, is so well described in the following statement that I give it in detail, as it came to me:—

"Conductor H., aged 43, and twenty-six years resident in India, of temperate habits, generally enjoyed good health. On the night of May 15, 1868, about 10 o'clock, was returning to his home, at Jellapahar, Darjeeling, but owing to the darkness missed his way and slipped down the hill-side a few feet, alighting on a stake, which pierced the right gluteal region and penetrated the bladder; through fear that if he moved he might fall down a precipice, he remained where he fell for several hours until he could see his way home, and although faint from loss of blood, he managed to crawl home, and arrived at three o'clock the following morning. Assistant-Surgeon M—— reports that he visited him at nine o'clock the same morning, and found him in great suffering. There was a large irregular wound in the fold of the nates at right side, about one and a half inch from the anus. Patient stated that he had been to stool, and passed some fæces and bloody urine through the wound, causing much pain. Pulse 100° and small, and he seemed greatly prostrated and despondent. He was at once placed in a warm bath, and the parts affected well fomented and cleansed. He was again visited at 1 p.m., and complained of tension and pain in the gluteal and pubic regions. A No. 10 silver catheter was passed, and about 5 ozs. of bloody urine drawn off. He was again placed in a warm bath, and after half-an-hour an opiate was given; he was put to bed, rest enjoined, and tea diet ordered. At 6 p.m. he expressed himself very much easier; he had passed a quantity of urine through the wound; no pain complained of, with the exception of a little tenderness in the hypogastric region. Pulse 88° and soft; skin moist. A hip-bath was ordered, in which he sat for half-an-hour, after which a spongio-piline epithem was applied between the folds of the nates, and a draught, containing tr. hyoscyamus, ordered at bed-time."

We omit the details of the treatment, under which he recovered to a considerable degree. On December 16 he was admitted into Dr. Fayrer's wards in the General Hospital, Calcutta, with symptoms of stone in the bladder.

"On admission," says Dr. Fayrer, "into the College Hospital, he was apparently in fair general health, but he complained of an incessant desire to pass water, with much pain at the neck of the bladder. The long and tedious journey had fatigued him and irritated the parts. He was ordered sedatives, demulcents, and a mild aperient as his bowels were confined. After rest and quiet for a short time, I passed a full-sized catheter into the bladder, and detected the presence of a calculus.

"The recto-vesical fistula was still unhealed; there was a prominent thickening at the orifice of the fistula where it opened into the gut; the ischio-rectal wound had quite healed; the cicatrix showed how serious it had been. The urine was slightly acid; sp. gr. 1018. A deposit of mucus, occasionally slightly mingled with blood; no other abnormal condition of urine. On January 7 the lateral operation was performed, and a friable calculus removed, which broke down completely under the forceps; the débris weighed about 140 grains. There was very little hæmorrhage and no difficulty in the operation, which was performed in the usual way. From this date until February 15, when his friends removed him for change, he was not well; he had frequent feverish attacks and diarrhœa; on January 11 especially, he had a sharp attack of ague. This was followed on the 12th by pain in the right testicle and cord. On January 30 the right inguinal region was swelled and painful. On February 2 an incision was made into the right inguinal canal, and a deep-seated collection of pus evacuated. The lithotomy wound was perfectly healthy, and he was free from pain in the perineum and about the bladder. After the incision he was relieved, and appeared to be doing better; the lithotomy wound was rapidly healing; the urine still flowing by the fistula, as well as by the urethra and lithotomy wound. Feverish symptoms returned, and another deep-seated collection of pus about the cord was evacuated as before. On the 9th he was again better, and apparently slowly convalescing, when he went home for a change of air.

"The treatment had been adapted to the symptoms:—Quinine, as he had been much exposed to malaria on his journey; astringents to check diarrhœa; opiates, when necessary, to give rest; and a nourishing diet, with a moderate quantity of wine. Alkaline and diuretic remedies, when the urine was more acid and irritating than usual.

"He returned to Hospital on February 17, having become much worse. He had had severe rigors and fever, and when readmitted was very much prostrated. His voice was low and depressed, pulse feeble and rapid, respiration gasping and hurried. Stimulants and sinapisms were ordered; quinine with hot brandy-and-water was given frequently.

"February 18.—The Hospital record says:—'Axillary temperature, 105°; pulse extremely feeble; hiccough; extremities cold. He has vomited some dark-coloured fluid; passed some turbid urine; motions loose and dark-coloured.' The breathing became more hurried and gasping; intense cardiac apnœa preceded death, which occurred on February 18, at $2\frac{1}{4}$ a.m.

"The body was examined the following day. Thorax: Lungs much congested posteriorly; no pyæmic patches; no effusion into pleura; and no lymph on the surface of pleura. Heart laid open: Firm decolorised clots in right cavities, extending far into the ramifications of the pulmonary artery. No other abnormal condition in the thorax. Abdomen: Liver considerably enlarged; contained very numerous pyæmic patches of the size of peas; these so-called abscesses were patches of dead liver-tissue, around which no suppuration had as yet occurred. They were simply dead tissue, with puriform decomposed fluid in their interstices. Spleen congested and softened. Kidneys somewhat congested. Bladder: Mucous membrane congested and thickened. Lithotomy wound healed. Recto-vesical opening still unhealed; tissues about it thickened, and considerable thickening and adhesion about the parts generally.

"This was an exceedingly interesting as well as instructive case from the beginning. His recovery from so grave an accident, in the first place, was very remarkable; a stake driven through the gluteal region and rectum into the bladder might well have proved rapidly fatal; the result wonderfully illustrates the reparative power inherent in the constitution of a man in the vigour of health. He had so far recovered in about seven months as to be able partly to resume his duty. The formation of the calculus may be accounted for, no doubt, in the condition of the bladder injured by the wound; a nucleus having formed, determined by the roughened and irregular surface of that part of the bladder where the fistula opened, perhaps by the entry of some hard substance from the rectum, the concretion rapidly gathered round it, and formed the calculus detected on his admission into the Medical College Hospital. No part of the stake with which he was injured could be found in the bladder, though carefully looked for.

"His subsequent condition was not less remarkable. There can be little doubt, I think, that the train of unfavourable events which preceded his death were mainly due to the influence of malarious poisoning to which he was exposed on his way to Calcutta from Darjeeling in December, a month when some parts of the Terai are most dangerous. The fever that supervened after the operation was most probably of malarious origin, and the blood already thus poisoned was more readily affected by the toxic conditions excited by the operation. The fibrinous coagula in the heart, which were the immediate cause of death, were no doubt due to the same causes, and, as I have elsewhere pointed out, are probably more prone to occur in cases where, to the ordinary form of blood poisoning resulting under certain circumstances after wounds, is added that of malaria. That the absorption of septic matter in this case took place mainly through the portal circulation is indicated by the state of the liver, which was studded with local deaths of tissue; and the enlarged spleen tends to support the theory that malarious poisoning was much concerned in inducing a state of the blood generally which predisposed the patient to yield to pyæmic influences, and finally accelerated the fatal result by determining the formation of fibrinous coagula in the right cavities of the heart."

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.	April 1.	April 8.	April 8. Sent to Hospital.
West—							
Chelsea	10	6	6	5	6	?	—
St. George, Hanover-square	16	7	19	10	11	12	1
St. Margaret and St. John, Westminster	30	27	?	?	?	?	—
St. James, Westminster	3	3	8	4	4	8	4
North—							
St. Pancras	62	69	63	65	44	?	—
Islington	62	23	34	49	26	45	15
Hackney	36	41	31	24*	29	31	29
Central—							
City of London	22	17	13	13	13	7	1
St. Giles-in-the-Fields	5	10	?	5	8	?	—
Holborn	2	3	3	2	3	?	—
St. Luke's	20	27	18	12	?	?	—
East—							
Whitechapel	34	32	15	33	15	?	—
Poplar	9	?	?	?	11	?	—
South—							
St. Mary, Newington	16	19	?	28	23	27	22
St. Olave, Southwark	2	9	1	11	5	3	?
St. George-the-Martyr, Southwark	?	17	5	?	9	19	13
Bermondsey	15	?	?	?	?	?	—
Lambeth	12	28	33	33	17	32	39
Clapham	28	17	29	22	13	40	24
Battersea	?	13	?	?	?	?	—
Wandsworth	4	?	3	5	10	13	1
Putney	—	1	?	?	?	?	—
Streatham	1	?	2	3	3	4	1
Camberwell	26	14	13	4	4	?	—
Greenwich	2	?	?	—	—	—	—
Lewisham	1	16	2	?	2	4	1
Plumstead	1	1	4	6	4	19	1

* Return imperfect.

SCOTCH MORALITY.

(*From an Anglo-Scottish Correspondent.*)

Some of our contemporaries have been greatly exercised of late on a certain report incidentally dealing with Scotch morality—or rather, perhaps, we should say immorality; but it is a thing worth notice that in one respect, and in one respect only, can such a term be applied to the population generally—a population unusually quiet, well-behaved, and well-educated. In the counties where illegitimacy is most prevalent there may be said to be no crime, at least by the indigenous population. Certainly a criminal class does not exist. But this is not the only peculiarity. The marriage vows are faithfully observed; infidelity to them is rare; divorce is almost unheard of, or heard of only to be scouted and reprobated—nay, more, women who have been the mothers of illegitimate children, being left widows, remain respectable and well-conducted.

It is quite clear that the peculiarity attaches only to young unmarried women and unmarried men of the same age, and that it is not limited to any one part of the country, although more prevalent in some parts than in others. It is useless, therefore, to attribute illegitimacy to what is not universal. Thus, in some of the replies given to the Commissioners we find ample illustration of the ridiculous effect of assigning to local causes universal influence. Imagination, also, would seem to have something to do with these replies, one gentleman gravely asserting as the cause of this all-prevalent illegitimacy the oatmeal of the country, which, said he, contains an unusual quantity of phosphorus. A similar and equally unfounded explanation has been given of the fecundity of fish-eating tribes. Another favourite theory is, that it is the bothy system. If so, illegitimacy should be most common where bothies most abound; but it is not. Again, they say the feeing markets are at the root of the evil. If so, as feeing markets occur only once in six months, the bulk of the illegitimacy should come in certain months, and the others should be comparatively free; but it does not. In short, the cause is such as not exactly to lie on the surface, and to be better appreciated at a distance than at hand.

The life of an unmarried Scottish farm-labourer is not a very pleasant one: his work is hard, his fare unvarying. He is allowed so much oatmeal (always more than he can consume by himself), and so much milk fresh from the cow. His common food is *brose*. At meal-times a large iron pot filled with water is put on the hearth and made to boil with brushwood. Whilst this is going on, a quantity of oatmeal has been placed in a wooden bowl, and sprinkled with salt. When the water boils, a sufficiency is thrown on the meal to scald it, and reduce it to a paste by stirring. A quantity of the strong rich milk is poured on the whole, and an exceedingly nutritious mess is the result; but used day after day it is apt to pall. Morning and noon, and very often, also, at night, this is repeated, with an occasional change, when oatmeal has been sold to buy wheaten bread. His lodging is of the poorest, always of the roughest; and yet there will sometimes be found in it works both on philosophy and history, though it must be confessed that chap ballads are the ordinary reading. With all this, the tendency is not to marry young—perhaps because the accommodation for married men is limited, frequently from the natural caution which induces the men not to take such a step until they have saved up money to buy furniture, and make a fair start in life.

On the other hand, female servants are divided into two groups: a certain number, working at out-door farm labour, become hard and strong like men, and in many respects act like them; a certain number are employed in domestic service, and over these a somewhat stricter control is maintained. Both sets ordinarily take their meals in the farm-kitchen, and, if there is no female bothy, sleep in the farmhouse. Like most other women, both sets look forward to marriage as a settlement in life; the question is, How is this to be brought about?

In dealing with this subject, two things essentially distinct have been hopelessly intermingled—these are immorality and illegitimacy; for it is perfectly possible that immorality may abound, and yet that the rate of illegitimacy may be small. Speaking broadly, it may be said that in a given country one or other of three things will prevail—early marriages, illegitimacy, or prostitution in one or other of its forms. In Scotland, early marriages are not the rule; except in the large towns, prostitution is not common, and in these it does not prevail to the extent it does in England, still less as on the Continent; illegitimacy takes their place, but it is not on that account to be supposed for one moment that immorality is more prevalent in Scotland than in many parts of England; indeed, it is far less so.

It is, we think, in the laws and customs of the country that the prevalence of illegitimacy is to be sought. In the laws, because marriage at any time legitimises all children born before wedlock, and an old offender against the laws of morality may hold her head as erect as any, and so may her offspring, the moment the marriage ceremony is gone through. It is the chance of this whitewashing process which lies at the root of much of the evil, although it must be confessed, in accordance with the old rule that familiarity breeds contempt, the offence itself is not looked upon in any other light than venial; in short, it is considered a misfortune to which anyone is liable.

But it is also plain that a portion of the evil is due to the social habits of the people, and especially to that inveterate tendency which Calvinism induces to keep a fair face before one's neighbours. The secrecy with which everything is habitually done, and the stoical training to keep hidden everything like feeling or emotion tell strongly in sexual as in other relations. A man is ashamed to let it be known that he admires a certain person, consequently he visits her by night. The long dark evenings, which can only be spent in the unsavoury bothies, encourage the same tendency. A man, after dozing for an hour or two, wakes up inclined for an excursion, and forthwith, accompanied by one or more of his companions, he starts off on a visit to the "lasses" of some farm in the neighbourhood. As a rule these are nothing loth—for has it not been the rule with their fathers and mothers before them?—and gladly receive their visitors; but where? They have no other place save their bedroom, and the only access to that is frequently by the window. An alarm is raised, escape is impossible, hiding beneath the bedclothes or beneath the bed is the only resource; and so, the ice once broken, the rest follows.

Furthermore, to these women an illegitimate birth seems the only sure road to matrimony; it is true they may be deceived in that, nevertheless they will risk it on the chance of marriage condoning all, and they thus acquiring that settlement they desire. As we have said, the tendency on the part of farm-labourers is not to early marriage, but with the prospect before them of being saddled with an illegitimate child, and the scanty comforts they enjoy being thus seriously contracted, they resolve to make the companion of their deed an honest woman, and so everything is soldered up. But this, again, tempts others, and the whole thing is so common as to be generally winked at. Till all these things are changed, illegitimacy will prevail in Scotland.

REVIEWS.

Pauperism and the Poor-laws: The Lectures Delivered in Edinburgh under the auspices of the Chalmers Association, 1870. Edinburgh: Seton and Mackenzie; London: Whittaker and Co. Pp. 191.

The Scottish Poor-laws: Examination of their Policy, History, and Practical Action. By Scotus. Edinburgh: Edmonston and Douglas. 1870. Pp. 227.

These two volumes treat of subjects possessing unusual interest at the present moment. Such a field as Scotland presents to the Poor-law reformer is, from its moderate dimensions, clearly and readily mapped out, and offers great facilities for a tentative advance towards theoretical perfection; while results can be, and have been, measured and weighed in a manner characteristic of the keen insight of our northern neighbours.

Just now we seem to be approaching what may prove the greatest sanitary reform of our time, in the proposed consolidation of powers at present divided between the Poor-law Board and the Home Office under one "Minister of Health and the Poor." And in all impending discussion of these recommendations of the "Royal Sanitary Commission," we venture to say that no one who would master the subject can afford to neglect the two books above mentioned. Of these, the former may be described as a collection of essays with a general tendency towards severe condemnatory criticism of the existing Scottish Poor-laws; the latter as a guarded and temperate essay in their defence. In the former, which is a collection of lectures delivered for the "Chalmers" Association, the plan so ably developed by that eminent man, of systematic, unpaid investigation of each case of poverty, is warmly advocated by Dr. Alexander Wood, and pitted against the "Bumble" system of wholesale relief with its attendant evils. Dr. A. Wood's classification of the poor, according to the causes—moral and physical—of their distress, and the varying treatment required for each, reads not unlike a page of the "Republic" of Plato. As we should expect, it soon becomes clear that Medical experts alone can distinguish between the great classes of "unable to work" and "unwilling to work," and, accordingly, the "necessity is recognised of having the Medical element largely infused into any system of efficient inspection." Now this is, it will be observed, in principle the very combination of Health Officer with Poor Officer from which the Sanitary Commission starts as the foundation of the proposed reforms.

It is not our province to review these works at length, but it is to be noted that along with a development of the opposite view in the distinctively legal arguments of "Scotus," the necessity for very numerous practical reforms is freely admitted, and that "the Medical officers should be placed on an equally independent footing with the inspectors" strongly asserted. The subject of both works is a provision for the poor—rather than for the sick—of the community; but day by day it is becoming clearer that our Executive must deal with these classes as inextricably combined, and must do so to a great extent by means of Medical men. These essays, therefore, carefully written, and with the best intentions, will be read with all the more advantage and pleasurable interest by our Professional brethren.

GENERAL CORRESPONDENCE.

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POOR-LAW MEDICAL REFORM.

Letter from Dr. Joseph Rogers.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you permit me, through your columns, to inform the Profession that Mr. W. H. Smith's notice of motion, to refer the consideration of poor relief in the metropolis to a Royal commission, adjourned by the transfer of Mr. Goschen to the Admiralty, will come on for discussion on Friday, May 5; and as it is most desirable, in the interests of the Poor-law Medical Service, that this motion should be acceded to, I do hope that Poor-law Medical officers will not fail to press on such M.P.'s as they may know the desirability of supporting this gentleman's proposition. I would further point out to provincial Medical men, that whilst the terms of Mr. Smith's motion limit the inquiry to the metropolis, Mr. Fawcett has given notice of his intention to move an amendment to the effect that the contemplated inquiry should be extended to the whole of the county.

That this motion, etc., will be opposed, and that, too, determinedly, by all those who can be influenced by the sophistries of the officials at Gwydyr House, may safely be calculated on; it therefore behoves all those members of the Profession who are interested in a humane and economic treatment of the sick and other poor to use that wide-spread political influence which they undoubtedly possess in support of both these propositions. I am, &c.,

Dean-street, April 12. Joseph Rogers.

OUT-PATIENT HOSPITAL ADMINISTRATION.

Letter from Drs. J. H. Stallard and Heywood Smith.

[To the Editor of the Medical Times and Gazette.]

Sir,—We beg leave through you to remind the Profession that a meeting is to be held in the rooms of the Royal Medical and Chirurgical Society, Berners-street, on Thursday next, 20th inst., Sir William Fergusson, Bart., F.R.S., in the chair, to receive the report of the committee which was appointed last year to inquire into the out-patient Hospital administration of the metropolis, with the view to its reform. The result of their work, extending over more than a year, is embodied in a report which can be obtained by enclosing twelve postage stamps to the treasurer, Dr. Alfred Meadows, 27, George-street, Hanover-square, or to your obedient servants,

J. H. Stallard, }
Heywood Smith, } Hon. Secs.
April 13.

DR. BEAUPERTHUY'S TREATMENT OF LEPROSY.

Letter from Dr. R. H. Bakewell.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have received an official letter from the Colonial Office, informing me that my reports on Dr. Beauperthuy's treatment of leprosy, and the observations of the College of Physicians thereon, "will be laid before Parliament without delay." As the whole of the documents may be easily printed in a week, I should think they may be expected some time before the end of the session. The Profession will then be in a better position to judge of the value of the treatment than they could have done from the scanty materials hitherto furnished by me. As surprise has often been expressed that I did not publish my reports myself, I may be allowed to say that I did not consider myself in any way bound to incur such an expense about a method of treatment which was not my own, and in the success or failure of which I have no personal interest.

I have one patient under the treatment in London. He has been seen twice, at my request, by Professor Erasmus Wilson, F.R.S., and I have asked Mr. Jonathan Hutchinson also to see him. I regret that I cannot extend the invitation to other members of the Profession, on account of the patient's position in society, and the reluctance of his friends to have the case known. I presume, however, that the two gentlemen whose names I have mentioned will be amply sufficient to guarantee the correctness of the diagnosis and the results of the treatment. The case is so far advanced that I was obliged to inform his friends that I could not promise a complete cure, but I confidently anticipate an arrest of the disease, and a very marked amendment in all the symptoms.

Should any member of the Profession have a case in an early stage, I should be most happy to show him the method, and to superintend the treatment for a few weeks previous to my return to the other side of the Atlantic.

I may state that Messrs. Savory and Moore have manufactured from my recipe an oil of cashew exactly like that used by Dr. Beauperthuy, and which acts in a precisely similar manner. I would suggest that it should be tried in other obstinate diseases of the skin. Its action, though very powerful, is slow, the crust from one application not falling off until after eight to ten days. Only a thin layer of the oil should be once smeared over the part, and allowed to dry. Of course, it must not be washed. On the principle of making an experiment *in corpore vili*, I touched some pimples on my own face the other day. The result is not yet visible, as the crusts have not fallen off. I just mention this fact in order to caution Medical men not to apply it to the face unless their patients can remain in-doors for a few days, as the appearance of the spots where the oil has been applied is at a little distance most unpleasantly like secondary syphilis.

I am, &c., R. H. Bakewell, M.D.,
Medical Officer of Health, etc., for the
Colony of Trinidad.

Waverley Villas, Hendon, April 8.

ON THE USE OF LATIN TO THE PHYSICIAN, AND ON THE STATUS OF THE PHYSICIAN IN BRAZIL.

Letter from Dr. R. Gumbleton Daunt.

[To the Editor of the Medical Times and Gazette.]

Sir,—Having ordered from England the regular *envoi* of the journal you edit, I am already in possession of the number of January 7 of the current year. Seeing there an excellent editorial article on the necessity of the study of Latin, and on the absurd pronunciation of this language by the English lettered class, I, as an enthusiastic student of this language, and believing that the study of the Latin syntax or grammar is the most powerful agent in human hands for educating duly the intellect, and so civilising society, congratulate you most warmly for the expression of so useful a doctrine, which is opportune in the extreme in presence of the Yankee materialism now preached up as the *summum bonum* of human legitimate aspirations.

There can be no room for doubting that the Physician of the nineteenth century is a less lettered man in general, and socially inferior, to our old Physicians, and that the decadence of Latin and literary studies in presence of the importance given to the practical applications of physical and chemical science is the root of the evil. Brazil gives a lesson on this point which shames English and Scotch institutions and the Queen's University of Ireland. No one in Brazil can matriculate as a student of Medicine until he has passed an examination in letters equal to that for a B.A. degree of a British university; and after overcoming this difficult entrance, he must study for six years with only ten weeks, or at the most eleven, of rest during each twelvemonth. For the reality of the tests to which candidates are subjected, the frequent attendance of the Emperor in person at the examinations and defence of theses in the Rio Faculty is a most satisfactory guarantee.

The social status of the Physician and Surgeon is here, therefore, proportionately elevated, and they can aspire to any political or social position without fear of being unable to sustain it with dignity. In justice to Ireland and Scotland, I will observe that in these countries the Latin pronunciation is that of the Continent of Europe, and the only true and natural. Among the languages which are daughters of the Latin, your able article does not include the Portuguese, the least modified of all modern languages; indeed, so much so, that a good scholar will write a page of which it will be impossible to say if it be Latin or Portuguese. I had the advantage of a tolerable knowledge of Latin when resolving to make an *Annus Medicus* in the University of Vienna. I there found the lectures delivered in Latin, and heard this language only in the clinic of Von Hildenbrand, and so could familiarise myself in an exceptional way with it. To this day I retain all the admiration I then felt for the brilliant improvisos of Professor Toltenyi, the distinguished Magyar Professor of General Pathology and Therapeutics, delivered in Latin as fluent and correct as the French discourse of any good French orator.

There was an old elementary book for young Latiners which, I think, was relinquished to their prejudice. I refer to Cordery or Corderius. For advanced students, as a most useful help to conversational Latin and composition on modernised subjects, I suggest the study of the Colloquies of Erasmus, and strongly recommend the bringing out a new edition under the auspices of some learned corporation, as the book must be very scarce. The study of the Latin of the Gallo-Roman poets under the empire and under the early Merovingians is also most useful; so, also, useful and spiritualising is the study of the magnificent mediæval hymns of the missal and breviary. What splendid and chaste poetry, conceived in the conditions of modern thought, do we not owe to the early Franciscans of the thirteenth century. (See Ozanam, "Les Poètes franciscains du 13me Siècle.") In my opinion no one can pretend to a well-developed and cultivated intelligence who has not passed through a course of Latin study conducted on the old principles, and not in any modern, superficial, parrot-like, or rough-and-ready style, or merely with a view to the translation of easy books. I believe there is now a college for the education of the sons of Medical men; if so, no greater boon can be conferred on their families than by giving a rigorously classical character to the education. After this the study of modern languages and of modern science is much more rapidly and perfectly performed than in the case of those who have not had their intellect so trained. I should much wish to see the B.A. degree a necessary qualification for admittance to the Cursus Medicus of the Scotch Universities. At least, if the course of Medical study were prolonged, as it should be, one or two years, there might be attached chairs of Latin literature to the greater institutions, which the first and second years' students should attend. The regents of such chairs should frequent for two years the Faculties of Letters of Montpelier and Toulouse to qualify themselves, leaving all insular presumption at the port of embarkation. I am &c.,

Richard Gumbleton Daunt, M.D. Edin.

Campinas, San Paulo, Brazil, March 4.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 28.

Mr. John Birkett, F.R.C.S., Treasurer, in the Chair.

A paper, by Deputy Inspector-General T. Longmore, Professor of Military Surgery in the Army Medical School, Netley, was read "On the Classification and Tabulation of Injuries and Surgical Operations in Time of War." After adverting to the practical value which attaches to statistical information derived from Surgical experience in time of war, the author proceeded to consider the subject of his paper under five separate heads. Under the first head, he remarked upon what had been done in this country in respect to the nomenclature and allocation of gunshot injuries in general nosological classification; more particularly commenting on the changes of names and arrangement which have been introduced by the Committee appointed by the Royal College of Physicians of London to draw up a Nomenclature of Diseases which appeared in the year 1868. In the second division of the paper, the author gave an account of the special classification and tabulation of the statistics of particular gunshot injuries and their treatment in time of war adopted in the British military service; and afterwards of the official systems employed in the United States and France. He also remarked upon the absence of any corresponding official system of classification in the army Medical returns of Germany. In the third section of the paper, the question was considered how far the tabular statistics contained in the official records of campaigns published in this country, in the United States, and France, can be justly compared with each other; and the author arrived at the conclusion that no such fair comparisons can be instituted under present circumstances. The fourth division of the paper was devoted to a study of the relative merits of the British, French, and United States systems of classification and tabulation; more especially as regards accuracy and completeness of information, and economy of labour and cost in compilation. Finally, in the fifth part of the paper, the author urged the necessity for an international consideration of the subject, with a view to the statistical and Surgical histories of campaigns being constructed on a general system common to the Medical departments of all regular armies.

Dr. Althaus said that Mr. Longmore had made an error in stating that no record of the wounded was kept in the German army. Both in the dressing-places to which wounded men were first taken, and in the movable Hospitals, the nature of each case and its treatment were noted; and the same was done in the field Hospitals. In this way very complete statistics of the Danish war had been made; and it was highly probable that a very complete account of the injuries received in the late war would appear.

Staff-Surgeon Fitzgerald said that in the German army a note of each case was indeed made; but there were no numerical returns made out at the dressing-places or in the movable Hospitals. The question of records of individual cases was quite different from that of numerical returns. What was wanted was, that each Surgeon should furnish a return of this kind. He had been employed in compiling the records of the Crimean war, and had had occasion to notice the defects in the returns of primary amputation—there not being sufficient information as to the injuries for which the operations were performed.

Mr. Spencer Wells pointed out a source of fallacy which he had noticed while on duty in war: that the same man may receive more than one wound, and thus be entered more than once on the returns.

THE PATHOLOGICAL SOCIETY.

Tuesday, March 21, 1871.

Mr. Hilton, F.R.C.S., President, in the Chair.

Drs. Powell and Dickinson read a report on the Brain Tumour exhibited for Dr. Hawkes at a previous meeting. They considered it the remains of an ancient aneurism.

Dr. Cayley and Mr. Arnott, in their report on Mr. De Morgan's specimen of Lymphadenoma, only confirmed that gentleman's statements.

Mr. W. Spencer Watson exhibited a Growth of the size of sixpence, removed from the Cheek of a woman, 60 years of age, which presented, besides the characters of epithelioma, fluid-containing cavities, with intra-cystic bodies of the size of rice-grains. There had been no return of the disease several months after the operation.

Mr. Hulke did not know when the cysts were found, before or after removal.

Mr. Watson said after removal.

Dr. Payne exhibited several organs from a patient affected with very general cancer. Besides large cancerous masses in the liver and adjacent lymphatic glands, two small new growths were found on the inner surface of the heart-walls. One was in the extreme angle of the appendage of the right auricle, among the trabeculæ; the other in the apex of the left ventricle. In the left iliac and a small part of the common iliac veins was found a pinkish mass, with a somewhat reticulated surface, very closely adherent to the walls of the vein, which seemed at once to be something different from an ordinary thrombus. The vein at this part was very closely adherent to the subjacent cellular tissue, and by that to the body of the last-but-one lumbar vertebra. Part of the body of this vertebra was found to be thickly infiltrated with a whitish, creamy juice, the cells of which, in their character and in their great variety, differed entirely from the normal structures of the part, and so far appeared to be heterologous. On closer examination of the mass within the vein, it was found to be partly composed of blood corpuscles, but to be traversed by bands of some organised structure, forming a reticulation. This structure was composed of rather small cells or nuclei, and was vividly tinted by carmine. The wall of the vein was at one point infiltrated with similar cells. The whole structure there appeared to be a new growth extending into a thrombus, though it had not reached the complete development of cancerous structure. The cancerous masses in the liver showed a perfect alveolar structure, but the cells were extremely small, usually not larger than a blood corpuscle. The coincidence of growth within a vein and growth within the heart at first suggested the idea that one might have been the consequence of the other; but this could hardly have explained the growth in the left ventricle, unless the infecting material (liquid or solid) could pass through the lung capillaries without producing disease there, since there was no affection of the lungs.

In reply to Dr. Barnes, he stated his belief that the patient died of cachexia.

Mr. Arnott thought it hardly necessary to assume that the heart disease had arisen in that way. He had frequently seen cancer of the heart where there was no direct communication with the external disease. He had seen masses projecting into the cavity of the heart with the endocardium covering them.

Mr. Hulke thought there was one difficulty in Dr. Payne's notion. Assuming that the cancer was shed into the veins as a fluid, it should be more generally distributed.

Dr. Payne also exhibited the supra-renal capsules from a case of Addison's disease, and microscopic preparations of the pia mater of the spinal cord. The points of interest in this case were—the limitation of visceral disease to the supra-renal capsules, all the other organs being practically healthy; the distribution of the discoloration, which was only noticed on the genitals, with some faint traces on the chest; and the occurrence of similar pigmentation on the pia mater of the spinal cord. The pigment in this situation gave the membrane a strong resemblance to the choroid coat of the eye, it being contained in a system of connective tissue-cells with anastomosing prolongations.

Dr. Cholmeley asked if the mouth was examined. Spots were sometimes found there and nowhere else. It had not been so.

Dr. Fagge said Dr. Moxon's attention had recently been drawn to pigmentation of the pia mater. A man died last week, apparently of Addison's disease, and in him the pigmentation had been faint. In another, last year, there had been hardly anything in the way of coloration. The natural pigmentations might be merely excessive in Addison's disease if we considered it as disease of the ganglionic system.

Dr. Greenhow said there was ordinarily no discoloration of the pia mater in Addison's disease. He also thought it was a neurosis. It was sometimes intermittent in its form, and pigmentation varied. He remembered diagnosing a case by an epigastric blister-mark which had disappeared before death.

Dr. Cayley said dark patches in the mouth might occur in other affections, as in a case with ordinary dyspeptic symptoms, where the patient got quite well.

The President remarked that normally the penis and scrotum became darker with advancing age.

Dr. Clapton exhibited a specimen of Atrophy of the Cerebellum. He said: M. A. F., aged 33, married, was admitted into St. Thomas's Hospital, under my care, on December 20, 1870. She was suffering from pleurisy, with extreme prostration. The abdomen was hard and distended, but there was no indication of pain on pressure. Her manner was peculiar. She would answer questions promptly, but not rationally. She could not recognise her friends. Her hands were very tremulous when moved, and she was unable to feed herself. Pulse very frequent and feeble. Breathing short and rapid. She had been married a year, and was confined a month previous to admission; was said to have been very delirious for a day or two after her confinement. She died nine days after admission. An hour before death she startled the nurses by suddenly rising and manifesting a considerable degree of muscular strength. There were no convulsive movements. Her husband informed me that he was only acquainted with her a short time before their marriage. She could take long walks, but was obliged to walk slowly, and during her pregnancy her gait was very unsteady. She was somewhat dull of comprehension, but could read and write, and carry on all her domestic duties very fairly. Her brother informed him that as a child she was very backward in intellect and delicate in health, and that she was unable to walk at all until 6 years of age, and up to 14 could not guide her hands to her mouth, so that she was obliged to be fed. My clinical clerk, Mr. Newby, took some trouble to find out her mother, and her account was to the effect that up to the age of 4 her daughter was a very healthy child; that at that period she was attacked with measles, after which she was unable to walk or talk for six months; that from that time up to the age of 15 she walked unsteadily, and was not able to use her hands with ease and certainty, and that she was of dull intellect. With regard to the theory which assigns the cerebellum as the organ of sexual instinct, I may mention that, according to the husband's account, everything was perfectly normal in respect of her generative functions. Post-mortem Examination: The membranes of the brain appeared healthy. The cerebellum was remarkably small, and the posterior fossæ of the skull small in proportion. The spinal cord was removed, and throughout the pia mater, on the posterior aspect of the cord, were scattered small, thin, bony plates, about the sixteenth of an inch in diameter. The brain and cord were set aside for further examination. The pleuræ and each pleural cavity contained a few ounces of turbid serum, and both layers were covered with an exudation of soft, recent lymph. The lower lobe of each lung was congested, and sparingly crepitant. Beneath the pelvic fascia on the right side of the pelvis, between it and the innominate bone, was about an ounce of pus; a smaller collection was situated immediately in front of the first piece of the sacrum. The iliac and femoral veins were unobstructed. The liver was pale and fatty. The other organs were all examined, and were found free from disease. A careful examination of the cerebellum was made by Mr. C. Stewart, the Curator of the Museum, who has supplied me with a drawing of the microscopical appearances. The weight of the entire brain was 38 oz., and of the cerebellum 710 grains; the average weight of the brain in the female being 44 oz., and of the cerebellum 2200 grains. The weight of the atrophied cerebellum is consequently less than a third the normal. Its transverse diameter was three inches, the average being about four inches. This would correspond with a reduction of cubic contents from five to three. The base of the skull was, without any increase of its thickness, accurately adapted to the under surface of the brain. The cerebrum appeared of normal consistence, but the cerebellum was extremely hard, with the exception of a narrow area in front of each lateral lobe, which, both to the naked eye and under the microscope, appeared normal. The bloodvessels were healthy. (Drawing by Mr. C. Stewart, illustrative of microscopical appearances, with description, on card.) The section extends from the surface to a point a little below the ganglionic layer. It shows an almost complete absence of proper nerve substance, with great increase of the neuroglia; also spherical, transparent, and apparently homogeneous bodies, which are stained deeply with carmine.

Dr. Dickinson said there was a curious case of a symmetry of the brain in their *Reports*. It occurred in a deformed idiot, who never walked. In a French case of atrophy of the cerebellum occurring very early in life, it, as well as the pons, was entirely a-wanting. This patient was paraplegic. He had found experimentally that removal of the cerebellum paralysed the lower limbs.

Mr. Hart said it was forgotten that here both hands and feet were affected.

Dr. Fagge said that in a case where the outside of the cerebellum was very hard, the size being small, but the centre normal, no nervous symptoms were noted.

Dr. Clapton said, if they had not taken pains about the history, no symptoms would have been noted here. In reply to Dr. Broadbent, he said she learned to read and write after 14. The peduncles were not examined. In reply to Mr. Hulke, that it was a case of atrophy, not of arrested development; the child was quite healthy till 4 years old; also, that the convolutions were normal, perhaps more symmetrical than usual.

Mr. Beck exhibited a Tumour from the Head of the Tibia of a sailor, aged 31. He fell about eighteen months ago, and three months after detected a lump below his knee, which by-and-bye rendered him incapable of work and gave him a good deal of pain. The tumour was large and lobulated, soft, and elastic; it was not tender. There was unusual mobility of the leg. The head of the bone was found to be entirely destroyed, the periosteum alone remaining expanded over the tumour. There were many cysts containing bloody fluid, and its central parts were pulpy. The myeloid cells were common, spindle and fusiform cells less so in the tumour. The cysts seemed to have distinct walls, and the cartilage of the knee-joint was healthy.

In reply to the President, he said it would probably not recur.

Mr. Hulke considered myeloid bodies to be often accidental, depending on the place of origin of the spindle-celled sarcomas. In proportion to the predominance of the spindle cells, so was the tendency to recur.

Mr. Arnott had seen recurrence where the myeloid element was abundant. From this abundance he had been able to predict the recurrence of a nasal polypus as showing its origin from bone.

An Odd Definition.—The proprietor of a little alehouse in Scotland having on his sign-board, after his name, the letters "M.D.F.R.S.," a Physician, who was a Fellow of the Royal Society, asked him how he presumed to affix these letters to his name. "Why, sir," said the innkeeper, "I have as good a right to use them as you have." "What do you mean, you impudent fellow?" replied the Physician. "I mean, sir, that I was Drum-Major of the Royal Scots Fusiliers."

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 6th inst., and, when eligible, will be admitted to the Pass Examination:—

Addis, Philip, of University College.
Benson, Percy, of St. Bartholomew's Hospital.
Bosson, George, of University College.
Charlesworth, Henry, of the Middlesex Hospital.
Davies, G. Augustus, of University College.
Dixon, John F., of St. Bartholomew's Hospital.
Douglas, Claud, of St. George's Hospital.
Evans, John, of the London Hospital.
Haigh, Percy de H., of St. Bartholomew's Hospital.
Hopkins, Rees, of the London Hospital.
Jameson, Hampden G., of University College.
Lawson, Thomas C., of University College.
Lawton, Herbert A., of St. Thomas's Hospital.
Masterman, George F., of Guy's Hospital.
McKay, Henry K., of Guy's Hospital.
Moxon, John, of King's College.
Mutch, Robert S., of Montreal and Guy's Hospitals.
Nicholls, H. A. Alford, of St. Bartholomew's Hospital.
Pitts, Robert Z., of the Middlesex Hospital.
Rigby, James A., of Guy's Hospital.
Saer, D. Protheroe, of St. Mary's Hospital.
Saunders, Everard H., of Guy's Hospital.
Schlesinger, Barthald M., of St. Mary's Hospital.
Strugnell, Frederick W., of St. Bartholomew's Hospital.
Thomas, G. Tucker, of St. Bartholomew's Hospital.
Webb, William E., of King's College.
Whitsed, J. Longland, of St. Bartholomew's Hospital.
Wilcox, Henry, of St. Bartholomew's Hospital.

The following candidates passed on the 11th inst., viz.:—

Atkins, Francis T., of Guy's Hospital.
Bevan, John P., of Guy's Hospital.
Bradbury, D. Addison, of the Leeds School.
Chicken, Rupert C., of Guy's Hospital.
Clyma, H. Hosking, of Guy's Hospital.
Coom, Richard, of Guy's Hospital.
Drew, Henry W., of Edinburgh.
English, Thomas J., of St. George's Hospital.
Fenton, George F., of King's College.
Field, Ernest, of Guy's Hospital.
Fletcher, George, of St. Thomas's Hospital.
Hayward, William T., of the Liverpool School.
Hewetson, Henry B., of the Leeds School.
Huntley, George H., of the Newcastle School.
Murray, John R., of the Newcastle School.
Nicholson, Arthur, of King's College.
Palmer, M. H. Campbell, of St. Thomas's Hospital.
Parker, George W., of St. Thomas's Hospital.
Parry, David L., of the Liverpool School.
Powell, Evan, of University College.
Reckless, Alfred, of the Sheffield School.
Riding, Edwin, of the Liverpool School.
Spark, Sidney Walter, of Guy's Hospital.
Strickland, Arthur W., of the Birmingham School.
Thompson, Thomas W., of University College.
Triggs, J. B. Bowden, University College.
Vines, Sydney H., of Guy's Hospital.
Ward, Joseph, of the Birmingham School.
Wilson, W. Teasdale, of the Newcastle School.

The following candidates passed on the 12th inst., viz.:—

Barrard, Frederick, of King's College.
Blunson, John, of the London Hospital.
Carolan, James F., of St. Mary's Hospital.
Colgate, Henry, of University College.
Crespin, E. R. L., of Guy's Hospital.
Dobbie, R. J. A., of the London Hospital.
Drew, Charles W., of the London Hospital.
Evans, Thomas, of Guy's Hospital.
Harvey, William, of St. Bartholomew's Hospital.
Haslam, William D., of University College.
Hayden, Thomas H., of the London Hospital.
Hex, Henry, of the Charing-cross Hospital.
Manser, Robert, of Guy's Hospital.
Mayburg, Aurelius V., of St. Thomas's Hospital.
Palmer, F. J. M., of Guy's Hospital.
Paul, Frank T., of Guy's Hospital.
Siccombe, George S., of St. George's Hospital.
Smith, Frank J., of Guy's Hospital.
Smith, James, of the Newcastle School.
Smith, W. Hammond, of the Middlesex Hospital.
Snell, George, of Guy's Hospital.
Stephens, A. E. R., of the Charing-cross Hospital.
Sweetland, F. Y., of Guy's Hospital.
Tayler, Herbert P., of Guy's Hospital.
Tayler, Seymour, of St. Thomas's Hospital.
Venning, Edmund, of University College.
Ward, Joseph, of the Birmingham School.
Whitaker, James S., of Guy's Hospital.
Willcocks, Alexander, ofGuy's Hospital.

The following candidates passed on the 13th inst., viz.:—

Amyat, T. H. E., of King's College.
Bevers, Edmund A., of Guy's Hospital.
Bishop, George H., of St. Mary's Hospital.
Boulger, Isaac, of St. Thomas's Hospital.
Clark, F. Cheesman, of St. Bartholomew's Hospital.
Cleghorn, George, of St. Thomas's Hospital.
Clifton, Cyrus A., of University College.
Coates, W. Harrison, of St. Thomas's Hospital.
Ellis, Herbert M., of St. George's Hospital.
Emms, Wilson, of Guy's Hospital.
Gibbings, Ashley, of King's College.
Godding, C. Cane, of Guy's Hospital.
Greaves, Frank, of the Middlesex Hospital.
Greensill, Edward S., of St. Bartholomew's Hospital.
Hutchings, Arthur C., of King's College.
Johnson, William, of the Newcastle School.
Kershaw, Robert, of the London Hospital.
Knatt, Charles, of Guy's Hospital.
Lea, Julian A., of the Charing-cross Hospital.
Mahon, Edward E., of St. Mary's Hospital.
Page, Herbert, of the Birmingham School.
Peacey, William, of St. Bartholomew's Hospital.
Pocock, Frederick E., of the London Hospital.
Prothero, George, of the Middlesex Hospital.
Welch, Samuel, of the London Hospital.
White, Ernest W., of King's College.

Twenty-four candidates out of the 108 examined having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Anatomical and Physiological studies for three months.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen passed their first Professional Examinations during the April sittings of the Examiners:—

Berry, William, Wigan.
Cagney, Daniel, Cromer.
Coleman, James J., Galway.
Griffin, Thomas, Galway.
Hussey, Edward, Bath.
Mackay, John, Sutherlandshire.
Montgomery, Tristrim Lowther, Dumfriesshire.
Spears, William, Birmingham.

And the following gentlemen passed their final examinations, and were admitted L.R.C.P. Edin., and L.R.C.S. Edin.:—

Anderson, Robt. McGlashan, Perthshire.
Elder, William, Banffshire.
Falvey, Francis Joseph, co. Kerry.
Garde, Thomas William, co. Cork.
Galt, James, Fifeshire.
Mark, Joseph, Rathfriland.
Hale, Edmund Thos., Glamorganshire.
Mulholland, Owen, Newtonhamilton.
Thompson, Wesley Hayes, Worcestershire.

Royal College of Surgeons, Edinburgh.—The following gentleman passed his First Professional Examination during the recent sittings of the Examiners:—

Parry, Davenport, Argyll.

The following gentlemen passed their final examinations, and were admitted Licentiates of the College:—

Aikman, John, Edinburgh.
Allan, James, Glasgow.
Anderson, Isaac Henry, Belfast.
Charles, John James, Cookstown.
Chittenden, Charles Pierce Downy, London.
Douglas, John Campbell, Lanarkshire.
Glendinning, James, Dumfries.
Govan, Charles, Fifeshire.
Hall, William, Lancaster.
Kennedy, David Given, co. Antrim.
Levinge, Henry Mark, Westmeath.
M'Lelland, Alexander, Kirmabreck.
M'Naul, Hugh Hamilton, county Antrim.
Macpherson, Charles, Greenock.
Sneddon, William, Cleland.
Wilson, John, Belfast.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 6, 1871:—

Batchelor, Ferdinand Campion, Brixton-hill.
Bland, William Charles, Notting-hill.
Gray, George James, Stonehouse, Devon.
Jackson, James, Wootton Bassett.
Spencer, Francis Henry, Chippenham, Wilts.
Wharry, Charles John, Woolwich.
White, Edmund, Park-terrace, Regent's-park.

The following gentlemen also on the same day passed their First Professional Examination:—

Batchelor, Edward E. A., St. Bartholomew's Hospital.
Beardsley, Arthur A., Guy's Hospital.
Butler, Francis William, Westminster Hospital.
Cockerton, Henry H., London Hospital.
Cogman, Charles, London Hospital.
Thompson, Henry, St. Bartholomew's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

De la Motte, Peter W.—House-Surgeon, *vice* Mr. M. E. Cant, who has been appointed to the St. Pancras Schools at Leavesden.

Foot, Arthur Wynne, M.D. Univ. Dub., Fellow King and Queen's College of Physicians, Ireland.—Physician to the Meath Hospital, Dublin, *vice* Dr. Hudson, resigned.

Moore, Mr. Arthur J.—House-Surgeon to the London Hospital.

BIRTHS.

Bryant.—On April 10, at 2, Finsbury-square, the wife of Thomas Bryant, F.R.C.S., of a daughter.

Gribbin.—On April 8, at Great Edward-street, Belfast, the wife of E. D. Gribbin, L.R.C.P. Edin., L.F.P.S., and L.S.A., of a son.

Pern.—On April 3, at Botley, the wife of Alfred Pern, F.R.C.S., of a son.

Pocock.—On April 7, at Manor-terrace, Brixton-road, S.W., the wife of Edward William Pocock, M.R.C.S.E., of a son.

Propert.—On April 12, at 100, Gloucester-place, Portman-square, the wife of John Lumsden Propert, M.B., M.R.C.S., of a son.

Summerhayes.—On April 3, at 18, Sandringham-gardens, Ealing, the wife of Wm. Summerhayes, Surgeon, of a son.

Sutcliff.—On April 6, at High-street, Wandsworth, the wife of Edward Sutcliff, M.D., of a daughter.

Tayler.—On April 10, at New-cross, the wife of Francis T. Tayler, M.B., B.A., of a son.

MARRIAGES.

Forman—Gardiner.—On April 12, at St. Stephen's, Dulwich, George Ellery Forman, Surgeon R.N., to Freda, eldest daughter of the late Robert Barlow Gardiner, Esq., C.E.

Gill—Grainger.—On April 4, S. Lawrence Gill, Surgeon, Bow-road, to Lucy Grainger, of North Bow.

DEATHS.

Appleby, Tom, formerly of the 3rd Hussars, son of the late Mr. Appleby, Surgeon, Ripon, Yorkshire, at Middlesborough, on April 4.

Carr, Emily Frances Louisa, the beloved wife of Dr. Copley Carr, of Iver, Bucks, on March 27.

Cory, Arthur Belmore, the youngest son of Dr. Cory, at Buckhurst-hill, after a few hours' illness, on April 1, aged four months.

Ibbetson, Frances, widow of the late James Ibbetson, Surgeon, Bognor, on April 6, aged 70.

McDougall, Elizabeth Ann, the beloved wife of Patrick McDougall, of Myddelton-street, Clerkenwell, daughter of James Adair McDougall, Surgeon to her late Majesty Queen Caroline, on March 31, aged 46.

Powell, Lewis, M.D., son of the late Lewis Powell, Esq., J.P., of Ongar, Glyntawe, Breconshire, at Bon Air, Mauritius, on March 8, in the 54th year of his age.

Russell, Edith Stratford, only child of the late Robert James Russell, Surgeon, of H.M.I.S., Bombay, and granddaughter of the late Lieut.-Colonel Stratford Powell, at Queen's-gardens, on April 6.

Shepherd, James Carter, M.R.C.S.E. and L.S.A., at Ambleside, on April 7, aged 62.

Starling, George Augustus, third son of G. A. Starling, M.D., Bishop's Stortford, at the residence of his brother, Hornton House, Kensington, on April 10, aged 34.

Symonds, Samuel, son of the late J. Symonds, Surgeon, Kidderminster, and grandson of the late Rev. S. Addington, D.D., at 30, Claverton-street, Pimlico, on April 2.

Thompson, Charlotte, widow of the late Dr. Thompson, at Hothampton-place, Bognor, on March 31, in the 68th year of her age.

Trustram, Harriet Julia, wife of Charles Trustram, Surgeon, Tunbridge-wells, on April 6, after a short illness.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Assistant Dispensers in Her Majesty's Naval Establishments.—An open competition will take place on April 25. *For particulars see advertisement.*

Aysgarth Union.—Medical Officer and Public Vaccinator for the Askrigg District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Geo. Winn, Esq., jun., Clerk to the Guardians, on or before April 17.

Bristol Lunatic Asylum, Stapleton, near Bristol.—Medical Superintendent; must have both Medical and Surgical qualifications. A gentleman who has had practical experience in the management of a Lunatic Asylum will be preferred. Applications and testimonials to the Chairman of the Committee of Visitors, on or before May 1.

East Ward Union.—Medical Officer for the Borough District. Candidates must be duly qualified, and be registered under the Medical Act, 1858. Applications and testimonials to Mr. John Whitehead, Clerk to the Guardians, Appleby, on or before April 22. Election on the 24th.

Halifax Infirmary and Dispensary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians. Applications and testimonials to Mr. John Crossley, on or before April 22. Election on the 28th.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.—Assistant-Physician; must be M.D., or M.B., or M.R.C.P. Applications and testimonials to the Secretary, on or before April 19.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, on or before May 9. Election on the 12th.

Manchester Royal Infirmary.—Junior House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Chairman of the Weekly Board on or before April 22.

Middlesex County Lunatic Asylum, Colney Hatch.—Assistant Medical Officer for the Female Department. Candidates must be duly qualified and registered. Applications to be made on printed forms, which can be obtained of the Medical Superintendent, on or before April 15, after which date no applications will be received. The election will take place on the 18th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Newry Hospital.—Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary of the Fever Hospital, Newry, on or before April 26.

Norwich Dispensary.—Resident Medical Officer. Candidates must be duly qualified. Applications and testimonials to the Treasurer on or before April 20.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

South Staffordshire General Hospital, Wolverhampton.—Dispenser; must be a Member of the Pharmaceutical Society. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29.

South Staffordshire General Hospital, Wolverhampton.—House-Surgeon; must be a Fellow or Member of the Royal College of Surgeons of London, Edinburgh, or Dublin, and a Licentiate of the College of Physicians, London, or be L.S.A. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29. Election on May 9.

South Staffordshire General Hospital, Wolverhampton.—Physician; must be M.D. or M.B. of the University of Oxford, Cambridge, London, Edinburgh, or Dublin, or F. or M.R.C.P. London, Edinburgh, or Dublin, not practising midwifery or pharmacy. Applications and testimonials to the Secretary, on or before May 6.

Westminster General Dispensary.—Honorary Physician; must be M.D. or M.B., and be registered. Applications and testimonials to Mr. J. Potter, Secretary, on or before April 24. Election on the 27th, at 11 a.m.

Westminster Hospital (opposite Westminster Abbey).—Resident House-Surgeon; must be qualified to practise under the Medical Registration Act of 1858. Applications and testimonials to the Secretary, on or before April 15. Election on the 25th.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Cricklade and Wootton Bassett Union.—Mr. Theodore T. Taylor has resigned the Third District; area 13,823; population 3628; salary £55 per annum.

Halifax Union.—Mr. James Hilly has resigned the Elland District; area 3388; population 8713; salary £20 per annum.

Holbeach Union.—Mr. W. J. Hodgson has resigned the Tydd District; area 7408; population 1461; salary £25 per annum.

Ormskirk Union.—Mr. John D. Porter has resigned the Fourth District; area 12,660; population 7699; salary £31 per annum.

Wisbeach Union.—Dr. Hodgson has resigned the Tenth B District; area 4516; population 919; salary £20 per annum.

APPOINTMENTS.

Bicester Union.—George Gent, L.S.A., to the Piddington District.

Crediton Union.—Wm. F. Thurston, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., to the Colebrooke and Bow Districts.

Dulverton Union.—Rawdon B. Robinson, L.R.C.S. Edin., L.R.C.P. Edin., L.S.A., to the Workhouse.

Edmonton Union.—Francis H. Forshall, M.R.C.P. Edin., L.R.C.P. Lond., M.R.C.S. Eng., to the Highgate District. Frederic Orton, L.R.C.S. Ire., M.D. Dub., L.S.A., to the Hornsey District. C. H. Carver, M.R.C.S. Eng., L.S.A., to the Enfield Highway District.

Evesham Union.—Ferdinand Beadles, M.R.C.S. Eng., L.S.A., to the Fourth District.

King's Norton Union.—Francis Hollinshead, M.R.C.S. Eng., L.S.A., to the King's Norton District and the Workhouse.

Knaresborough Union.—Henry R. Wright, M.B. and M.C. Edin., to the Knaresborough District.

St. Ive's Union.—James Deane, M.D., M.R.C.S., L.S.A., to the Somersham District.

St. Pancras Parish.—William E. Cant, M.R.C.S.E., L.R.C.P., to the Leavesden Schools.

West Ward Union.—Andrew C. Johnston, M.R.C.S. Eng., L.K.& Q.C.P. Ire., to the Shap District.

The office of Curator and Librarian at the Royal London Ophthalmic Hospital, Moorfields, is vacant.

Westminster Hospital.—Dr. Lee and Mr. Davey intend to give a short course of practical demonstrations on pathology, with instructions in post-mortem examinations, etc. It is also intended to form classes of students under separate Physicians and Surgeons, for special clinical instruction for pupils in their first summer session. Dr. Sturges has been appointed Lecturer on Materia Medica, and Dr. Lee has replaced him in Forensic Medicine.

Devonshire Hospital, Buxton.—The annual general meeting of the above Hospital was held last week. The report stated that the number of patients had been doubled from the first year, 1859, to the last year 1870, and that 1015 patients had been treated beneficially during the past year. Patients had been received during the year from 166 towns and districts. During the three winter months just passed, 133 patients had been admitted, of which only one had been sent away as no better.

We regret to hear that the Bishop of Salisbury's son has died of scarlatina, at Winchester School, after a very short illness.

Dr. Matthews Duncan has been elected one of the Consulting Physicians of the Royal Edinburgh Hospital for Sick Children.

Hydrophobia is said to be very prevalent in Mid-Cheshire.

The Northwich Local Board resolved last week to summon two publicans for permitting customers to assemble whilst they had small-pox cases in their houses.

Sixteen institutions are to participate in the distribution of £3,250, the amount of collections and subscriptions of the Manchester and Salford Hospital Sunday Fund.

A coroner's jury at Manchester, last week, returned a verdict of "Wilful murder" against Frances Rogers, the so-called "baby-farmer," in whose house the body of an unknown child was recently discovered.

The ratepayers of Tettenhall, Staffordshire, have, upon a poll, decided against establishing a board of health, by a majority of 343 out of 474.

Mr. T. B. Thorne, of 107, London-wall, has been appointed District Certifying Surgeon, under the Factory Act.

A superannuation allowance of £45 per annum has been sanctioned by the Poor-law Board to Dr. Jarvis, late Medical officer for the West Hackney district.

St. Petersburg is still suffering severely from cholera, which has also made its appearance at Moscow. The sanitary state of both cities is extremely bad.

A man named Rigg, employed at the Thornley Colliery, has died from hydrophobia, arising from the bite of a cat nine weeks ago. Two other persons were bitten by the same animal.

The Shoreditch Vestry, last week, passed a vote of censure on Messrs. Dennis and Probason, the sanitary inspectors, for receiving Christmas-boxes from the dust contractor of the parish.

The annual return of the number of insane paupers in England and Wales shows that, on January 1, 1870, there were, among 1,084,821 persons receiving relief from the poor-rates, 46,548 who were insane—that is, 4·3 per cent. of the pauperism was ascribable to insanity. The ratio is a fraction less than on January 1, 1869.

The experiment of a large farm for the utilisation of the sewage of Croydon is about to be tried at Beddington, where an extensive tract of land, north of Beddington Church, on the other side of the River Wandle, and extending from Beddington in the direction of Hackbridge railway-station, has been acquired, and is being rapidly prepared for its purpose.

The Rev. H. D. Nihill, Vicar of St. Michael's, Shoreditch, and the Rev. R. C. Kirkpatrick, Vicar of St. Augustine's, Kilburn, are both suffering from small-pox, caught in the discharge of their clerical duties.

The stipendiary magistrate at Birkenhead last week inflicted a penalty of 100*l.* on a butcher named Goddard, for exposing for sale at the slaughter-houses in that township a number of sheep which were infected with the disease known as scab. The defendant had purchased the sheep for the sum of 1s. 4d. each.

Dr. Hime, of Sheffield, was last week presented with a silver biscuit-box, which had been subscribed for by the patients at the Women's Hospital, as a slight token of their esteem and appreciation of his services as one of the Medical officers of the institution, and expressing the hope that his connexion with this charity will be long continued.

On the 11th inst. Dr. Gairdner reports 502 known cases of fever in the city of Glasgow, being a decrease of thirty-three upon the number previously reported. Of these, 114 were typhus, and 358 cases of relapsing fever. The number of known cases of small-pox was 109, being a decrease of fourteen cases. Of this number, forty-three were vaccinated, and sixty unvaccinated. In the week ending April 8, there were eight deaths from fever and five from small-pox. The deaths from all causes were 343.

The domestic legislation upon the sewage difficulty in Birmingham is passing into a further stage. Ten members of the Town Council of that borough have memorialised the mayor to convene a special meeting of the Council to consider and resolve upon certain propositions. They suggest that a committee should be formed to report as to whether application should be made to Parliament for a special Act to enable the Corporation effectually to dispose of the sewage by irrigation or otherwise.

The Government of India has recorded its thanks to Dr. Fayrer for his papers on snake-poison, which are to be republished.

The National Library of Salvador, in Central America, is being organised. Everything necessary has been imported for the use of the classes of Medicine, natural philosophy, and chemistry of the University.

Fever and cholera appear rife at Peshawur. We hear that the fever was so bad in November, in the 5th Fusiliers, that nineteen children, besides adults, died during twenty-one days. Even then, in the healthy season, the Hospitals were full.

Yellow fever is increasing at Buenos Ayres, and the death-rate is nearly 200 per day. There is no yellow fever at Monte Video. At Cape Town the general health of the community has been and continues exceptionally good—at least, there are no epidemics.

Last week, a convict named Brown mutilated himself in the most resolute manner, at the Chatham Dockyard Extension Works. Brown had refused to work; he was being taken back to St. Mary's Convict Prison for punishment, when he deliberately placed his arm under a waggon laden with bricks which was passing along a tramway, and the limb was completely crushed. Instead of being conveyed to a cell for punishment, he had to be taken to Hospital to have the arm amputated.

Mortality of Soldiers in India.—It appears from statistics that, for the first six years of service, the ratio of deaths is 43·31 per 1000, while for the first twelve years it is only 31·93.

Scotland—Fraserburgh.—A public meeting has been held at Fraserburgh, having for its object the providing a public Hospital for the district, and a committee was appointed to carry out the scheme.

Baths and Washhouses in Liverpool.—The local Baths and Washhouses Committee has resolved to recommend the Council to apply to the Lords of the Treasury for permission to borrow £40,000 for building baths and washhouses in Toxteth-park, West Derby, and Kirkdale districts.

The Small-pox.—Government has advised the suspension of removals from unions in England and Scotland, where the small-pox had prevailed, to Ireland for the present.

The small-pox is on the increase in Hackney, and the Homerton Hospital is now full.

Wales and Small-pox.—"Newport, in Wales, claims the merit," says the *Cardiff and Merthyr Guardian*, "of having practised inoculation of the small-pox from time immemorial, before it was even known to the other counties of Britain; for while the London Physicians, on the recommendation of a Turkish practice, by Lady Mary Wortley Montagu, were cautiously venturing to experiment on some condemned criminals, the more hardy native of Pembrokeshire dared to inoculate himself, without the assistance of either Physician or preparation. This was as early as the year 1722. The method had been constantly attended with great success, and though it had not acquired the name of inoculation, yet it was carried on much in the same manner. They called it '*buying the small-pox*,' as it was the custom to purchase the matter contained in the pustules of each other. We should be glad if any of our readers could throw more light on a circumstance so honourable to Wales."

Vaccination Opposition.—Mr. Henry Clark, a tobacconist, of Derby, had been committed to gaol for fourteen days, for having refused to pay a fine for non-compliance with the Vaccination Act. A branch of the Anti-Vaccination League decided upon getting up a procession on his release. About ten o'clock the procession started, Mr. Clark being attired in prison dress, with salt-bag and number complete, and carried shoulder-high by a band of men, preceded by several thousand people, a large red flag being carried in front. A public meeting was held shortly afterwards, and lasted for several hours. Mr. Clark was welcomed on his release from prison, and some strong language was used in the speeches which followed. The town presented very much the appearance of a general election.

Death of Ex-Professor Baumès.—One of the former Medical celebrities of Lyons has just died in his 80th year. Originally a Professor of Mathematics at Perpignan, he resolved upon adopting the Medical career, for which he had always felt a great inclination, and recommenced his studies at Montpellier, and in 1818 gained by the *concours* the post of *interne* of the Lyons Hospitals, at which city he continued to reside. Entirely devoid of resources, he laboured with the utmost diligence, and trying his strength at *concours* after *concours*, at last was nominated Surgeon-in-Chief to the Antiquaille Venereal Hospital. His reputation now rapidly increased, and an immense field was opened to his observation. As an opponent to Ricord, he published his once famous *Traité des Maladies Vénériennes* in 1840; but the work by which he became widely and advantageously known was his *Traité des Maladies de la Peau*, published in 1843. As a clinical teacher and practitioner he enjoyed a vast celebrity.

City of London Truss Society, 35, Finsbury-square.—The number of patients relieved during the month of March was 777, to whom 785 instruments were supplied.

Hydrophobia.—An inquest was held last week at Bootle, near Liverpool, upon the body of Robert Wylde, an officer of Customs, who died from hydrophobia produced in an unusual way. On February 20, as Mr. Wylde was leaving his house, a South American bloodhound, which had broken loose from a neighbouring timber-yard, owned by Mr. M. Gregson, attacked him, and, in the struggle with the dog, which was a "wicked one," but not mad, Mr. Wylde was bitten on the cheek, forehead, legs, and arms. The wounds were immediately dressed, and the sufferer had so far, apparently, completely recovered that he visited his friends in Wrexford. He returned a few days since, exhibiting no effects of the attack except the slight traces of the scars. On Tuesday week, however, he showed signs of hydrophobia, which developed so rapidly that he died on Wednesday, in great agony and terror. The jury returned a verdict in accordance with the facts. The bloodhound—since shot—had bitten some other persons also, who, up to the present time, however, have not exhibited any symptoms of the malady.

Composition and Quality of the Metropolitan Waters in March, 1871.—The following are Dr. Letheby's returns to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	20·93	0·105	0·125	0·005	15·4	4·1
West Middlesex .	19·53	0·082	0·125	0·002	15·0	3·8
Southwark & Vauxhall . . .	21·11	0·085	0·110	0·008	15·8	4·1
Chelsea . . .	21·25	0·084	0·091	0·004	16·0	4·3
Lambeth . . .	20·91	0·109	0·110	0·006	15·8	4·0
Other Companies.						
Kent. . . .	27·73	0·004	0·128	0·001	21·0	5·8
New River . .	20·17	0·040	0·125	0·003	15·8	3·9
East London . .	24·39	0·080	0·137	0·003	16·4	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was more or less turbid—viz., in that of the Chelsea and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 100,782,216 gallons; and the number of houses supplied was 483,566. This is at the rate of 30·9 gals. per head of the population daily.

Hy. Letheby, M.B.

Doctors and their Fees in the "Good Old Times" in Ireland.—The following curious mode of providing for the payment of the Medical Profession prevailed in Ireland under the Brehon laws prior to the thirteenth century:—In an interesting address delivered to the Law Students' Debating Society of Ireland, December 6, 1869, by Mr. John B. Falconer, A.B., it is stated that—"A law in relation to Doctors enacted that their fees should be proportioned to the rank of the patient and the nature of the complaint. It was also held that no fee should be paid unless a cure were effected. On the other hand, the fees seem to have been sufficiently large; and as the method of treatment must necessarily have been less scientific than at present, and the habits of life more simple, perhaps deaths did not occur so frequently (*sic*) from disease as at present. Fourteen *cumhals*, or forty-two cows, for example, were the fee for curing a bishop or local chief, while the health and bodily welfare of a member of the lowest rank of the tribe were valued at six cows." This standard of value—viz., per *cumhal*, or three cows—was the origin of the expression, "So much land as follows three cows," and is explained by the then patriarchal state of society, which was chiefly pastoral, and, as the lecturer observes, "strongly resembled that of the Israelites of old in their institutions. The land belonging to each sept was divided into common pasture lands, common tillage lands, private demesne lands, and the demesne lands of the tribe. Each member of the sept had the right of pasture for his cattle upon the common pasture lands. The share he received of the common tillage lands depended upon the number of cattle he possessed. The demesne lands of the tribe were assigned for the support of the chief, the chief-elect or Tanist, the Brehons or judges, and the bards and Doctors. In the demesne lands of the tribe, the chief, the Tanist, the Brehons, the bard, and the Doctor, had life interests, of which the reversion lay in their successors, who were ordinarily members of their own family." So it seems the Doctors were not wholly dependent on the *kill or cure* system.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Charles O'Reilly, Hamilton, Canada West.—Your letter, with enclosure, received with thanks. Your request shall receive attention.

An Inquirer.—We will find out at head-quarters, and an answer shall be given next week.

Obstetricus.—We have received the disgusting handbill. The thing is not only filthy and abominable, but it is a lie. The people who employ themselves in disseminating such filth are only fit to keep a brothel in a town of Communists.

We can confirm what Dr. Andrew Clark said at a recent meeting of the Medical Society of London as to the great relative frequency of enteritis amongst public school-boys. Blows on the abdomen, violent exercise, and exposure to cold when the skin is hot and perspiring, and the tuck-shop, seem to be the causes of these attacks.

Justice.—The extract from the *Globe* is scarcely worthy of the serious notice which our correspondent takes of it. It is evidently a bit of *badinage*, and does not mean to reflect upon us. It is rather making fun of the plaintiff for supposing that he had a ground of action against his Doctor for making a slight mistake in diagnosis.

Pro Bono Publico.—The name of "Dr. Clarkson" is certainly in the Medical Directory; but, surely, he cannot be answerable for the outrageous puff under the above title, which it appears is circulated by Wesleyan ministers throughout the various circuits! Until we hear to the contrary we shall not indentify Thomas Clarkson, M.R.C.S., of Ripley, Yorkshire, with "Clarkson's specific for bad legs."

J. D., Hull, calls our attention to the following extract from a law recently enacted at the Hull and Sculcoates Dispensary:—

"The services of the Physicians shall be gratuitous. The Surgeons shall receive an annual payment of thirty guineas for their services, and have three months' notice from the Committee in case it is necessary to dispense with them. The Surgeons shall give a like notice to the Committee if they wish to terminate their engagements."

We venture to say that in no other charitable institution throughout the length and breadth of the land is such an impudent law in existence. It reduces the position of the Surgeon to that of "a maid-of-all-work." Can it be possible that any Surgeon in Hull should so far forget his self-respect and the honour of his Profession as to take office under such a degradation?

Venal Diplomas.

Will the editor of the *Medical Times and Gazette* give his opinion on the enclosed advertisements taken from the *Daily Telegraph* of this day, the construction of which seems to be equally scandalous and criminal to the party inserting them, and to the paper that receives them. Surely such infamous proceedings should not be allowed to pass unnoticed by the Medical Profession.

M.D. de Paris.

Curzon-street, Mayfair, April 5.

MEDICAL DIPLOMA WANTED. Foreign would suit.—Send particulars and price, which must be moderate, to Medicus, 52a, Barnard-street, Tavistock-square, W.C.

PROMOTION IN ABSENTIA.—Qualified Surgeons, Dentists, Oculists, Clergymen, and Professors of Music, aspiring to degrees from foreign universities, may communicate with Medicus, 12, Harder's-road, Peckham, London, who will send gratuitously instructions how to proceed.

⁂ Fools and their money are easily parted. Diplomas, such as are obtainable in this way, are utterly useless in the Medical Profession; but to corncutters, quack lecturers, and others of that stamp, they may add a tinge of respectability.

"Parisiana."—A Correction.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Cher et très-honoré Confrère,—In thanking you for your delightful and *spirituelle* critique on my little book "Parisiana," allow me to point out a little slip of the pen. It is not I, but the nice old French countess, who is a firm believer in the Manichean or dual doctrine, and who asserts in the pages of "Parisiana" that God is not *omni*potent, being incapable of causing evil and unmerited suffering. As I do not wish to be excommunicated, you will understand my anxiety for you to publish this note.

I am, &c., C. Macdowall, M.R.C.S.L., etc.

The Graduated Chloroform Bottle.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Mr. J. Alexander Ross has evidently been misinformed respecting the introduction of Mr. J. Astley Bloxam's chloroform bottle, so, therefore, we think it our duty to state that we made for Mr. J. Astley Bloxam the graduated chloroform bottle, according to his suggestion, about two years ago, and we find upon reference to our ledger that we supplied St. Bartholomew's Hospital with one on June 2, 1869, thereby showing Mr. J. Astley Bloxam's idea to be original, and not based in any way upon Mr. J. Alexander Ross's invention, which was (according to his own letter) introduced about twelve months later than Mr. J. Astley Bloxam's.

We are, &c., Arnold and Son.

35 and 36, West Smithfield.

COMMUNICATIONS have been received from—

Mr. John Dix; M.D. de Paris; Mr. A. J. Moore; Dr. J. N. Vinen; Dr. Martyn; Dr. Day; Mr. J. Hutchinson; Mr. J. Chatto; Dr. Bakewell; Mr. A. S. G. Jayakar; Dr. E. D. Gribbin; Dr. Murray, Hong-Kong; Mr. F. Durham; Mr. C. Macdowall; Mr. J. Robertson; Mr. H. C. Lawrence; Dr. Mercer; Mr. P. W. De la Motte; Dr. Dale; Messrs. Arnold and Sons; Dr. E. Long Fox; Mr. T. Mason; Dr. Phillips; Dr. Rogers.

BOOKS RECEIVED—

Report of the Glamorgan County Lunatic Asylum—Tyndall's Fragments of Science for Unscientific People—Notes and Recollections of an Ambulance Surgeon, by William MacCormac, F.R.C.S., etc.—Rheumatism and Rheumatic Gout treated on Antiseptic Principles, by James Dewar, M.D.—Temperature Variations in the Diseases of Children, by William Squire, L.R.C.P. Lond.—Common Salt a Remedy against Small-Pox—Working Men's Dwellings in Liverpool, by William S. Trench, M.D.—Report of the Cumberland and Westmoreland Lunatic Asylum—Programme of the Land Tenure Reform Association—Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques; Tome Treizième—Nicholson's Introduction to Zoology—The Beginning: Its When and its How, by Mungo Ponton, F.R.S.E.—Report of the Stafford County Lunatic Asylum—Report of the Cambridgeshire, Isle of Ely, and Borough of Cambridge Lunatic Asylum—Report of the Committee and Sub-Committees appointed to inquire into the Subject of Out-patient Hospital Administration in the Metropolis.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Scotsman—Pharmaceutical Journal—Woodhull and Claflin's Weekly—Dark Blue, April—The Middlesborough and Stockton Gazette—Philadelphia Medical Times—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

April 15. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

17. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London, 8 p.m. Thos. Bond, M.B., "A Case of Lithotomy." Dr. Thorowgood, "Some Cases of Pleurisy, with Effusion." Mr. W. C. Lake (of Teignmouth), "On an Epidemic of Fever at Shaldon, Devon."

18. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Dr. Murchison, "Gall-stones followed by Pyæmia and Atrophy of the Liver." Drs. Murchison and Cayley, "Post-mortem Appearances in a Case of Paralysis Agitans." Dr. Dickinson, "On the Nature of the Renal Calculi in the Museums of London." Mr. H. Arnott, "Soft Cancer of the Breast." Dr. Crisp, "Aneurism of the Coronary Artery." Mr. Thomas Smith, "Calcareous Degeneration of a Scirrhous Cancer of the Breast." Mr. Lawson, "A Hand skinned by an Accident with Machinery."

Royal Institution, 3 p.m. William Pengelly, F.R.S., F.G.S., "On the Geology of Devonshire, especially of the New Red Sandstone."

19. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Hunterian Society. 7½ p.m.: Council Meeting. 8 p.m.: Open Meeting.

Society of Arts, 8 p.m. Meeting.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society, 8 p.m. Mr. Fairlie Clarke, "On the Arrest of Hæmorrhage, Primary and Secondary."

Royal Institution, 3 p.m. Prof. Tyndall, "Sound."

21. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal Institution, 9 p.m. Prof. Blackie, F.R.S.E., "On the pre-Socratic Philosophy."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 8, 1870.

BIRTHS.

Births of Boys, 1095; Girls, 1005; Total, 2100.
Average of 10 corresponding weeks, 1860-69, 2186.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	760	733	1493
Average of the ten years 1860-69 . . .	762·8	710·1	1472·9
Average corrected to increased population .	...	...	1620
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	7	1	7	2	10	1	1	3	2
North ...	618210	90	1	15	3	16	3	3	2	4
Central ...	383321	9	...	...	...	5	2	...	1	...
East	571158	37	3	4	...	11	...	4	1	...
South	773175	71	10	10	1	11	2	3	3	1
Total	2803989	214	15	36	6	53	8	11	10	7

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·861 in.
Mean temperature	43·1°
Highest point of thermometer	56·7°
Lowest point of thermometer	29·1°
Mean dew-point temperature	36·1°
General direction of wind	Variable.
Whole amount of rain in the week	0·01 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 8, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending April 8.	Deaths Registered during the week ending April 8.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2100	1493	56·7	29·1	43·1	6·17	0·01	0·03
Portsmouth ...	125464	13·2	73	45	60·0	30·0	45·4	7·44	0·01	0·03
Norwich	81787	10·9	52	38	53·0	26·0	39·6	4·22	0·05	0·13
Bristol	173364	37·0	115	74	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	45	23	54·8	30·2	42·6	5·89	0·22	0·56
Birmingham ...	378574	48·3	255	158	57·0	27·6	43·9	6·61	0·13	0·33
Leicester	101367	31·7	59	50	57·0	25·0	42·1	5·62	0·07	0·18
Nottingham ...	90480	45·3	54	35	54·9	26·8	41·2	5·11	0·03	0·08
Liverpool	526225	103·0	290	380	53·9	31·9	42·7	5·95	0·04	0·10
Manchester ...	379140	84·5	254	208	60·0	29·8	43·4	6·33	0·08	0·20
Salford	123851	23·9	89	55	58·8	29·8	42·4	5·78	0·10	0·25
Bradford	148030	22·5	64	60	53·0	29·8	41·5	5·28	0·02	0·05
Leeds	266108	12·3	110	102	53·0	29·0	41·3	5·17	0·27	0·69
Sheffield	255247	11·2	174	107	54·0	25·8	40·6	4·77	0·07	0·18
Hull	135195	38·0	72	54	...	...	...	...	...	...
Sunderland ...	103037	31·2	43	42	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	74	73	49·0	32·0	39·8	4·33	0·18	0·46
Edinburgh	179944	40·6	137	75	53·7	40·0	44·8	7·11	0·30	0·76
Glasgow	477627	94·3	343	304	55·4	30·4	42·9	6·06	0·11	0·28
Dublin (City, etc.†)	322321	33·1	108	165	59·0	27·5	44·0	6·67	0·05	0·13
Total of 20 Towns in United Kingd'm	7336961	34·4	4511	3541	60·0	25·0	42·4	5·78	0·10	0·25

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·86 in. The highest was 30·05 in. on Thursday evening, and the lowest was 29·58 in. on Monday morning.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on the 3rd inst., will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

ORIGINAL LECTURES.

ON ORCHITIS FROM IRRITATION IN THE PROSTATIC URETHRA.

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON,
Surgeon to the Hospital, and Lecturer on Surgery.

(*Concluded from page* 420.)

I WILL relate yet another case in illustration of our subject, and then proceed with comments upon them.

I had attended Mr. C., a gentleman of about 30, on account of a very obstinate gleet. Before coming under my care he had twice suffered from gonorrhœa and gonorrhœal orchitis, and instruments had frequently been passed on account of a slight stricture. Under my advice he abstained entirely from stimulants, occupied himself in country pursuits, and took alternately bromide of potassium and tincture of iron for several months. We abstained entirely from the use of instruments and injections on account of his known liability to orchitis. I had ascertained that he had no material stricture. We got him quite well of his gleet, and he had remained well for six months, when quite suddenly a discharge, resembling a fresh gonorrhœa, occurred. For this he used a weak injection for a few days; the discharge then ceased, and he seemed well, but a week later the discharge returned. On this occasion he did not use injections, and on the same day that the discharge recurred his right cord and testis began to inflame. He had an attack of most acute orchitis. The pain was such that in spite of the freest use of ice, opiates, etc., for a week he scarcely slept, and about the tenth day I opened an abscess in the substance of the testis itself. I incised the tunica albuginea freely, let out some thick dirty pus, and with the result of immediate relief to his pain. Some portions of the gland afterwards sloughed away, but, in the end, the part healed, and the testis, although still adherent to the scar, is now of fair size, and free from induration. The urethral discharge ceased on the day that it had recurred, simultaneously with the commencement of the inflammation of the testis, and it never returned. Respecting the nature of this discharge there was throughout much mystery. I do not think it was gonorrhœal, but am inclined to believe that it was in connexion with prostatic inflammation.

These instances of inflammation of the testis in association with some source of irritation existing in the urethra are of great clinical interest. From the cases which we have cited, you will have gathered the facts that not only may the source of urethral irritation differ much in different cases, but that the course and events may also present considerable variety. Thus we may have—

1. Inflammation of the vas deferens only, as evidenced by deep-seated pain in the iliac fossa and swelling in the inguinal canal. This may subside, and the patient may get well without any further symptoms.
2. In connexion with inflammation of the vas deferens, an abscess may form over its course, and may require to be opened through the abdominal wall, or may present at the external ring.
3. The inflammation may involve the whole vas deferens, and extend to that portion of the testis which is directly continuous with it—viz., the epididymis, leaving the gland itself unaffected.

In a fourth and last group of cases, the epididymis, body of the testis itself, the tunica vaginalis, and the cellular tissue of the scrotum are all involved. In these cases, the effusion is usually serum only, and a speedy and complete cure by absorption may be expected; but, in exceptional instances, suppuration may occur in the cavity of the tunica vaginalis, and in others, still more exceptional, in the body of the testis itself.

By far the most common cause of orchitis of this kind is gonorrhœa; and we are all of us familiar with the symptoms of this affection. I have taken many opportunities of pointing out in the wards that gonorrhœal orchitis presents certain features which are very characteristic: the cellular tissue of the scrotum is almost always more or less inflamed, and there is evidence of some effusion into the tunica vaginalis; the swelling is almost always flat-sided, a condition due in part to the greatly disproportionate swelling of the epididymis, pushing the gland in front of it, and, in part, to moulding of the œdematous scrotum against the thigh; the two glands are never inflamed at the same time; and lastly, if you examine carefully you will almost invariably find that the vas deferens is much thickened. Gonorrhœal orchitis almost always subsides spontaneously, and without any permanent damage to the gland; all that is necessary is to keep your patient in bed, to purge him freely, and apply ice to the part. Now and then, however, the severity of the inflammation may be such as to threaten abscess, or even to cause gangrene.

Before we proceed to the question as to the treatment of these cases, let us see if we can gain any light as to their true nature. What is the connexion between prostatic irritation and orchitis? The direct communication by the tube of the vas deferens may be supposed to afford a ready explanation, and my impression is strong that the facts which I have to-day quoted strongly support the opinion that it really is so; but I must tell you that there are two creeds extant on this point, and a large majority of Surgeons hold, I believe, that orchitis from urethral irritation is an example of what is called sympathy, and has nothing whatever to do with structural connexion between the parts. The able author of the article on Diseases of the Testis in Holmes's "System of Surgery" writes, "There is no evidence in the greater number of cases that the inflammation travels along the vas deferens from the urethra to the testicle. I do not know that we can offer any other explanation of its occurrence than is conveyed by the term sympathetic." He adds, "The course and symptoms of the inflammation are much the same whether it accompany gonorrhœa or other inflammation of the urethra, or be excited by some other cause. The epididymis is the part first and chiefly affected. Attention is attracted to the malady by pain, which, after a time, is felt not only in the scrotum, but in the groin, the iliac region, and in the loins." Now, his expression "after a time" is, according to my experience, an error in observation. I believe that whenever there is pain in the cord that pain begins before the epididymis is affected; and I believe, further, that if the vas deferens be carefully examined, you will almost always find clear proof that it is thickened and inflamed. We have used this symptom in the wards constantly as a means of diagnosis between orchitis preceded by urethral irritation and orchitis from other causes, and I do not at present recollect a single instance exceptional to the view which I have stated. Gonorrhœal orchitis often spreads very rapidly, and twenty-four hours may be quite sufficient for it to involve the whole of the vas deferens, the epididymis, and the testis itself; when once this has occurred, the attention both of the patient and Surgeon are concentrated on the testis, and the state of the vas is rarely inquired into minutely. In favour of the opinion that the inflammation does travel through the vas, and that sympathy or metastasis have nothing whatever to do with the orchitis, I venture to insist upon the following facts:—1. That, as already stated, in a vast number of cases there is conclusive proof that the vas is involved. 2. That in a few cases the opportunity occurs for observing that the vas is inflamed before the testis is involved. 3. That now and then the inflammation begins and ends in an inflammation of the vas, and never gets to the testicle at all. 4. That, according to the admission of all Surgeons, the orchitis begins in the epididymis—*i.e.*, in the part directly continuous with the vas deferens—a fact which the theory of sympathy cannot in the least explain.

The only fact which, to my mind, is difficult of explanation on the theory of direct extension, is that the orchitis is scarcely ever symmetrical; although it is not at all uncommon to have one testis inflamed first and the other subsequently; and now and then it seems to alternate from one to the other—a condition to which M. Ricord has given the name "see-saw orchitis." Now, one would certainly have expected, if the inflammation of the testis be due to direct extension from the vas deferens, that though many cases might be one-sided, yet that every now and then it would happen that the tube on both sides would be attacked at the same time. Of those who have gonorrhœa, or who suffer from other sources of prostatic irritation—the use of catheters, etc.—an extremely small proportion ever get orchitis, and of this small number it is to be expected that only a very few would chance to show this rare complication on both sides at once. Still, unless there be some reason why it should not be symmetrical, we should certainly look for the coincidence of a double orchitis now and then. I have seen gonorrhœal orchitis double, but I grant that it is a most rare event. Another reason for believing in sympathy which has been adduced by some authors is the well-known fact that when the testicle inflames the urethral discharge diminishes. But of this another explanation is easily found, and I quite agree with the author of the excellent article from which I have quoted, and from one of whose opinions I have ventured to differ, that in this matter cause and effect have been confused. Is it not probable that the acute inflammation of the testis, acting as a most efficient form of counter-irritation, is the cause and not the consequence of the reduction of the urethral discharge? I am glad, also, to agree most fully with another remark of the same author, to the effect that the risk of orchitis in gonorrhœa is no reason whatever for not resorting to the abortive plan of treatment. Dr. Humphrey writes: "So long as the discharge lingers, so long is the patient liable to swelled testicle, and those measures are most preventive of the latter affection which most quickly put an end to the former." Fully believing in this doctrine, I invariably adopt abortive measures in all stages of gonorrhœa, and believe that by doing so I much diminish the risk of orchitis.

The discussion as to the immediate cause of these forms of orchitis, although of great physiological and pathological interest, does not very much concern treatment; in any case, whether we believe in sympathy or in continuous extension of inflammation through the vas, one indication is to allay urethral irritation.

We will now pass to a few remarks concerning the treatment of the orchitis. I have already specified the measures required in the gonorrhœal form, and have only to add a few remarks regarding the exceptional cases of extreme severity. When the pain is intense, and when it persists in spite of the use of ice, I believe that the practice of incisions is not only safe, but very valuable. Some Surgeons are in the habit, even in ordinary cases of gonorrhœal orchitis, of seeking to relieve tension by making one or more punctures into the tunica vaginalis, or even into the testis itself. I believe that we may accept the results of their experience as proof that such punctures seldom do any harm; to most of us, however, they scarcely appear to be necessary. In recommending incisions, I am speaking rather of the exceptional cases in which abscess is threatened; and in looking back on my own experience, I am certainly inclined to regret, respecting several cases which I remember, that I did not make incisions earlier. A free incision into the tunica vaginalis leads to no ill consequence whatever, excepting the inconvenience of suppuration of the sac; and if you chance to let out pus the relief is immense. A free incision through the tunica albuginea into the testis itself does not lead to gangrene of the testis, nor always even to fungous protrusion. When the testis is swollen, it appears to relieve pain, much with the same certainty that iridectomy does in acute glaucoma, and my impression is that it is likely in critical cases to diminish the danger of gangrene on the one hand, and of consecutive atrophy on the other.

ORIGINAL COMMUNICATIONS.

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ON THE OCCURRENCE OF

EPILEPTIC ATTACKS AND OF MANIA IN CONJUNCTION WITH CHOREA:

AND ON

IRREGULAR EPILEPTIC ATTACKS.

WITH ILLUSTRATIVE CASES.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

(*Concluded from page 392.*)

I HAVE next to detail the three remaining cases (to which I have added a fourth), in illustration of the irregular epileptic attacks I referred to at the commencement of this paper. The first two are instances of "unilateral epilepsy," in which the spasms, or the altered state of innervation connected with them, are not only unilateral, but do not occur simultaneously in all the parts of the limb to be affected by them, as in the ordinary epileptic fit, but run up the limb, affecting successive portions with greater or less rapidity, sometimes with considerable deliberation. In one instance the fit was followed by temporary paralysis and anæsthesia in the affected limb; in the other, by temporary numbness. I would call attention to the support afforded to Dr. Hughlings-Jackson's observation by these two as well as by the next following case, to the effect that when the access of the spasm is sufficiently deliberate for its course up the limb to be traced, in the case of the upper extremity the forefinger and thumb will be found to be the parts first affected, being those most largely represented in the brain. It is in this manner that the (so-called) aura is produced—a phenomenon seldom met with in its characteristic form in the idiopathic epileptic fits, where the different regions of the body are attacked simultaneously.

Judged by the analogy of similar cases in which post-mortem examinations have been made, these two cases should be examples of epileptiform attacks depending upon "organic disease" within the cranium; but in the details of the cases themselves no reliable evidence is afforded of such disease being present. The question as to the dependence of the attacks upon organic disease is, of course, not a merely speculative one, since it involves, also, the inquiry, whether, in treating the patient, we shall content ourselves with remedies such as bromide of potassium, which allay the condition of the nervous centres immediately producing the fit; or, whether we shall give medicines supposed to exert a specific influence upon certain forms of cerebral disease—antisyphilitic medicines being, of course, those which would first occur to our minds.

The other two cases are merely examples of peculiar attacks, which may or may not be called epileptic, according to the sense in which we use that term. They are epileptic in so far as it is not unlikely that they depend for their immediate production upon the same condition of nerve-tissue with that producing the attacks of essential epilepsy, though the part of the nervous centres affected in the attack is different; but the entirely exceptional character of their symptoms would prevent their being placed in the idiopathic class in any examination of the natural history of that disease. I might add another case, in further illustration of these remarks, in which I possess a history of the last twenty years of the patient's life, fifteen of which were marked by a yearly recurring single but protracted paroxysm of symptoms, connected apparently with the medulla oblongata alone. The patient was perfectly healthy between the attacks, and now has enjoyed uninterrupted health for five years.

Case 3.—Unilateral Progressive Convulsion.

W. A., aged 35. He has had numerous attacks during the last nine months, affecting the left side of his body only. They consist of a peculiar "screwing" sensation, which begins in the end of the thumb and forefinger, gradually creeping up the arm to the shoulder, thence to the left side of the neck and face and to the left eye; immediately on reaching the eye, vertigo comes on; he loses sight in the eye, and is obliged to lie down. Twitching then takes place, and so, in about ten minutes, the fit passes off, without consciousness having been at all affected, though he is quite unable to speak.

This is the account given by the patient; but Mr. Ernest Elkington, the Resident Medical Assistant, watched one of these fits, and gave me the following excellent description of what took place, accurately describing the order in which the muscles were successively affected:—First, in the left forefinger rapid abduction and adduction took place, and then rotation in a circle; in a few seconds, the left angle of the mouth began to twitch, these movements going on together for about two minutes, when movement of the thumb was added to that of the face and forefinger, and in another half-minute all the fingers of the left hand were twitched. Next occurred alternate flexion and extension of the wrist; the depressor muscles of the chin were also engaged, and those of the hyoid bone, causing a guttural noise; the left sterno-mastoid and some fibres of the platysma also quivered; the left side of the face at last worked violently. The globes of the eye were unaffected, but the left orbicularis and corrugator were weakened. The tongue was protruded direct. In about five minutes the left elbow moved gently in flexion and extension, and the left pectoral quivered a little.

The patient was perfectly conscious throughout. The pupils were equal and rather dilated. At the end of about five minutes, the convulsive movement began to relax, and subsided in an order inverse to that in which they came on, the forefinger continuing to move after all other action had ceased. The patient asserts that a peculiar sensation also occurs in the left lower extremity. Paralysis of the left side of the face (the angle of the mouth and orbicularis of the eye), of the hand and wrist, and, to a less degree, of the elbow followed the fit, and lasted for half an hour; and, as I afterwards observed, a peculiar abnormal sensation remained for some days in the thumb and forefinger. The paralysis, however, is an entirely new symptom; it has not followed any fit previous to those which occurred on the day before his admission. On that occasion he had several fits, and, as he came to the surgery, Mr. Elkington had an opportunity of observing that paralysis remained after each. On the next day, I discovered marked anæsthesia to contact in the hand and forearm, and, to a less extent, in the upper arm.

The patient's family is free from nervous disease. He presented no other evidence of cerebral disease. I could get no proof of the presence of syphilis. His urine was free from albumen; his heart's sounds were pure.

Mr. Hodges, House-Surgeon of the Eye Hospital, found vision good in both eyes, but slight weakness of the left internal rectus; there was some fulness of the retinal veins; the discs were healthy. The patient took iodide of potassium in half-scruple doses for seventeen days without a fit recurring; he then left the Hospital.

Case 4.—Unilateral Progressive Twitching and Abnormal Sensations.

W. B., aged 47, a man of irregular and intemperate habits, who had had syphilis with loss of hair three years ago, had his first fit fourteen months ago. As he was dropping off to sleep, something ran up his left arm, and he became unconscious, continuing so for ten minutes. He was left with weakness of the left side, but not sufficient to confine him. His speech was slightly affected for a few days, and he had twitching in the left side of his face. For a fortnight before the fit, he had a dead feeling in the left forefinger; and the day before, some twitches of the left hand and arm, "working it like a pump-handle."

Ever since this fit he has been liable to what he calls fits of "twitching" in the left hand; they begin in the left forefinger "as if the blood can't work in it;" lately the second finger, and now the thumb, have been similarly affected. He speaks of it as "a fearful sensation," thus indicating some accompanying cerebral change. Then follows twitching "inside" the arm; on one or two occasions "it has worked his arm badly." "It works up the nerves of the arm, up to the left eye and cheek." He never loses consciousness. In two or three minutes the attacks go off suddenly, "as if the blood was set free," but the hand remains numbed for some days. Since these attacks he has suffered from pain all round his head, with vertigo.

At his admission the muscles of the left side of the face did not act quite perfectly, but the left hand grasped strongly. The tongue was protruded direct. Marked anæsthesia existed in the first finger, to a less degree in the second finger and thumb. The movements of the eyeballs, sensation in the face, taste, and smell were normal. Vision was good (No. 1 Brilliant) though accommodation was not perfect; pupils were small but active. My friend, Mr. A. Bracey, of the Eye Hospital, found the discs healthy. There were no albumen, no present signs (local or general) of syphilis, no tenderness, etc., of the scalp, nor fixed pain in the head.

Case 5.—Paroxysms of Disorder in the Organic Functions, alternating with Progressive Convulsion of both Upper Extremities.

Mrs. S., aged 42, whom I saw with Mr. Bradley, has been subject for five or six years to attacks of diarrhœa, lasting from three to six or more days; in these attacks she voids large quantities of fetid "black water," even to the amount of a chamber-pot full during the night. Mr. Bradley entirely confirms this statement; he saw, at least, three pints of brownish fluid intolerably fetid, containing flakes of solid mucus, which was but a part of one night's evacuation; sometimes she has as many as twenty-five stools in twenty-four hours. The attacks are attended with cramps in the abdomen, legs, and feet, *but not in the upper extremities*, and with vomiting. The intervals are usually of about a month's duration; but during the last two years, as the paroxysms of purging subside, contraction of both hands comes on, accompanied by pain up the arms, lasting two or three days; the abdomen and lower extremities, the seat of cramps during the diarrhœa, remaining quite free. The contraction of the hands begins with pain in the first finger, next in the thumb, afterwards in all the fingers. At the time of my visit the right hand was contracted in the manner I have described, the muscles of the forearm and the intrinsic muscles of the thumb being very firm. The back of the hand was remarkably puffed, and the veins were distended exactly as in a gouty attack. The left hand was just recovering, but much puffiness remained at the back, and the knuckles were red. Her face also was visibly puffy, and she complained much of this symptom. Lately she has had fits of sudden vertigo, and has even fallen; but she does not become unconscious.

I failed in discovering any explanation of the attacks in the state of the abdomen, nor had she any permanent symptoms of cerebral disease. When the attacks subside she goes about her business as usual. Her heart-sounds are healthy; her urine is free from albumen. There is no known case of nervous disease in her family, but she has lost fifteen brothers and sisters, though I cannot obtain a clear history of the cause of their death.

Case 6.—Repeated Attacks of Sudden and Temporary Loss of Sight.

E., aged 19, in August, 1868, had been subject for a year to attacks of dimness of vision. They were perfectly sudden; she became red in the face, put her hand to her eyes, and exclaimed "I can't see; I don't know where I am," and groped about as if blind. She recovered in a minute or two, but subsequently the attacks lasted longer—she said for five minutes, though probably this was an exaggeration. Objects were indistinct, but not perfectly obliterated. There were no other visual aberrations, and between the attacks she was free from all symptoms of disease. The attacks at last occurred four or five times a day. Under a prolonged course of aloes and steel, with bromide of potassium, she entirely recovered by the end of the year 1868.

The attacks returned in April, 1870, accompanied by brief fits of double vision, affecting objects placed in a direct line with her nose. She was still free from any other symptom. On this occasion, unlike the last, the bromide produced such extreme torpor that once she was found asleep on the doorstep which she was engaged in cleaning. At the same time she manifested much dulness and peculiarity of manner. I omitted the bromide, substituting tincture of digitalis. I did not see her frequently, but on August 18 I found that the attacks had again ceased for some time, and that she was in her ordinary health.

I was indebted to Mr. A. Bracey for repeated examinations of her eyes; but they failed in determining whether the loss of vision was due to changes in the vessels of the retina or in the apparatus of accommodation. The optic disc was quite healthy, except, perhaps, a little under-blooded.

During the first attack vision in the intervals was perfect, and the pupils were active; but in the second illness Mr. Bracey discovered that the patient could only read No. 8 Jäger with the right eye, and that with difficulty; with the left, No. 1. The pupils were still normal. In the first illness the muscular apparatus was healthy; but in the second, whilst she was subject to double vision, defective action of both internal recti, particularly on the right side, was discovered. This latter symptom subsequently disappeared; but vision in the right eye is not perfect.

The patient's family is free from nervous disease. She was anæmic, and suffered from constipation; her menstruation was irregular; her heart was healthy; her urine free from albumen; her nose was healthy, and smell was natural; her front teeth were well formed; she had no decayed teeth in her mouth, and never had suffered from discharge from her ears.

As a companion to the last case, and as showing that more than one influence may operate in producing such attacks, I may add a brief note of a female, aged 30, whose sister is a confirmed epileptic, whose cousin is epileptic and imbecile, and who herself has long suffered from mental depression. She has experienced, during the last twelve months, attacks of incomplete loss of vision, lasting three or five minutes, and occurring two or three times in the day. She has also vertigo with the attacks. She had a loud aortic bruit.

Mr. Owen, formerly House-Surgeon to the Eye Hospital, reports that she has had choroido-retinitis, having patches of choroidal atrophy and pigment irregularly deposited in the choroid. She is slightly myopic. There is no recent mischief. She works at gold-chain making, using the gas flame in her operations.

THE Sanitary Inspector of the Strand Union was summoned upon the jury, on Monday, in the Court of Common Pleas, and as he considered the duties he had to perform—viz., visiting places where patients were, or had been in, removing infected clothes, and other sanitary work—he appealed to Mr. Justice Willes whether his Lordship did not think it inconsistent his sitting in the jury-box. His Lordship agreed with the juryman, and excused him from further attendance.

DR. FRANKLAND has published the result of an inquiry into the position which England occupies in chemical research. It is instructive. In 1866, 1273 papers on new discoveries were published by 805 chemists, 1·58 paper being thus the average produce of each investigator. Of these, Germany contributed 777 papers, by 445 authors; France, 245 papers, by 170 authors; and England 127 papers, by 97 authors, or 1·31 paper to each. Dr. Frankland refers this to—first, the want of suitable buildings and apparatus for the prosecution of investigations; secondly, the non-recognition of experimental research by any of our Universities.

CHLORAL HYDRATE: ITS USE IN LUNACY PRACTICE ILLUSTRATED.

By N. G. MERCER, M.D. Edin.,
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The addition of an hypnotic agent of high value to the resources of our Materia Medica is obviously of the first importance in the Medical practice of asylums. Apart from the mere curative power exerted by drugs which are administered with the view and effect of producing sleep, it soon becomes apparent, in an intercourse from year to year with the society of a large asylum, that the comforts of the inhabitants are promoted in a wonderful degree by making their noisy neighbours of peaceful habits, especially during the night. It will scarcely be considered a slight upon some highly respectable soporific medicines, which have been erewhile recommended and employed from time to time, if we summarise the results of experience by saying that, when contrasted with opium and its preparations, their utility dwindles into comparative insignificance. It would be out of place here to dilate at length on the precious service rendered by opiates in the many varieties of mental infirmity. Let me, however, make one observation, which must be familiar to all asylum Practitioners—viz., how great is the change for the better produced in the general comfort of a ward where a patient of particularly or continuously noisy habits lives, by the administration to that patient of morphia at intervals. Under its influence clamorous excitement subsides; a disposition to quarrel is for a time completely subdued; obscenity, execrations, and abuse no longer constantly offend the ears of convalescent and of sensitive neighbours; and it is well understood that a temporary tranquillity of mind in a person with such troublesome tendencies is attended (for the quieter inmates of the ward) with a transition into a state of comparative Elysium. These remarks especially apply to the female wards, and it is improbable that any remedy will be found to supersede opium in achieving such results. Unfortunately, however, the sedative effects of the drug become less and less marked by repetition of the dose, and it requires to be increased before they are developed; ultimately the medicine is for a time abandoned, so that its action may possess increased impulse when resumed. The inconvenience felt from first having to enlarge to a great extent the dose of opium, and again from having to intermit its administration on account of the negative results, has been especially experienced when a full hypnotic action has been sought, and the medicine is given in the form of a draught at bed-time. This leads me to observe that, used with this object, the chloral hydrate appears to possess certain advantages. Thus, suppose thirty grains of the latter medicine be given in a draught to a restless and sleepless patient, and a good night's sleep follow its exhibition, we shall find that the drug does not lose its potency by repetition; as, after the lapse of a few weeks, during which time it has been regularly taken, the same quantity of dose will produce effects as marked and as happy as when first administered. Although prone to view with suspicion any medicine claiming to rival opium, I have been compelled, by experience of the virtues of chloral hydrate in practice, to attribute to it this advantage and superiority over any opiate as regards the effects of an uniform dose. I will now proceed to give notes regarding some cases in which its use was fairly tested, and some are included in which the medicine, like previously-tried large doses of opiates, failed to produce any sensible benefit. The cases given are those of the most excited women-patients that have been in the Asylum of late years.

1. A young woman, 25 years of age. A case of recurrent mania, having been under treatment here seven years ago. At first was extremely restless, noisy, and sleepless during night. A draught containing twenty-five grains of chloral hydrate was administered, and its action as an hypnotic was most prompt and unmistakable. Two or three times it was accidentally omitted, and the noisy habits became as bad as ever. By day the patient was hysterical, and very prone to violence, but was treated only by exercise, liberal diet, and occasional aperients. The draught, in an uniform dose, was continued for about six weeks, when, from the stage of improvement then attained, it was left off. Recovery went on rapidly, and the patient has since been discharged.

2. A case of recurrent insanity in a young woman, a few years older than the last, presenting many symptoms in common, with the additional one of dirty habits. The noisy habits by night were perhaps even more marked, but were equally successfully combated by a chloral draught of the same strength. She was soon enabled to dispense with the draught, but the further progress of the case has been far different from that in the other, as habits of determined violence—the offspring in part of delusions, and in part of a naturally revengeful disposition—still, after the lapse of a year, continue, and necessitate constant watching.

3. A puerperal patient, 31 years of age. Her first attack. Presented peculiar delusions of fixed kind, such as that she was John the Baptist, etc., which are not common in this form of insanity. Slight improvement in her general conduct was soon manifest, and she went to work at the laundry, where it was necessary she should pass the night in a large dormitory, with many fellow-workers, also patients. Her noisy habits by night soon made her obnoxious to her neighbours, and ultimately her shouting and screaming became so dreadful that the step of removing her back to a gallery was in contemplation. This necessity, however, was completely obviated by a chloral draught. The dose given was thirty grains, and, during a course of many weeks, no increase was required. An occasional accidental omission proved its extreme usefulness. Many months have now elapsed, but permanent amendment in mental aberration has not, I regret to say, taken place.

4. A girl, 20 years of age. Said to be deranged in mind as sequela of rheumatic fever. By day suffered from symptoms of mixed melancholy and dementia. Her expression was one of great anxiety and suffering. Was dull in apprehension, with wild look about the eyes, and tremors of the limbs, and required feeding. A suicidal tendency being strongly marked, she was placed to sleep amongst others in a large dormitory, where, however, she soon began to raise a loud, screaming, and affrighted noise, to the great annoyance of some highly fastidious neighbours. Thirty grains of chloral hydrate were given in this instance, with the most advantageous result. During a course of over five weeks, no increase of dose was required, and the medicine did not fail of its purpose. An evanescent rash of the character of urticaria appeared on several occasions in the morning when the draught had been taken on the night before, and there was also some flushing and burning of the head and face. Though these phenomena were thought to be due to the medicine, it was not deemed desirable to forego its good effects by reason of such a modified and transitory unpleasantness. The patient's progress towards recovery was tardy, but, in the end, very sure and satisfactory, and she is now no longer an inmate.

5. A girl 16 years of age; likewise a recurrent case. In the day-time she was at first so excited and noisy that morphia was given with a view to moderating the disturbance she made in the ward. Its success was temporary. Her nights, also, were noisy until a chloral draught containing twenty-five grains was given, which served its purpose perfectly. On the morning succeeding the first administration of the draught, the appearance and symptoms of the patient had undergone a wonderful change for the better. Her natural interest in tidiness of dress and person, her habits of industry, and her coherency of conversation were so remarkably restored to her, as the apparent consequence of a good night's rest, that I flattered myself with the hope that decided convalescence had suddenly begun. On the omission of the draught, however, all her worst symptoms were at once re-established, and as strongly marked as ever. Although its use was resumed, and with the same gratifying results as regards its sleep-producing power, it was long before symptoms of amendment again appeared. Sound sleep, without the administration of medicine, was by-and-bye procured, but it was not before she had been four months an inmate that she was deemed sufficiently restored to sanity to warrant her discharge. This, also, was a case in which a rather more obstinate nettle-rash was observed on the day following the administration of the chloral draught. There was also some flushing of the head and face, though not so marked as in the case last described. If I may be allowed to draw an inference from these two cases of urticaria resulting apparently from the patients taking chloral hydrate as a draught, I would be disposed to say that the cutaneous rash is more likely to occur in highly sanguine temperaments, of which these two girls were striking examples.

6. A case of chronic mania, in a woman, 37 years of age, whose symptoms have presented a variety of phases. Some months ago, she became very noisy by night, as well as offensive in her conduct. She slept in a dormitory, her removal to a single room being deemed inexpedient, on account of a well-known suicidal tendency. She complained of spirits constantly flying about her head, and these, with other delusions, made

her life extremely unhappy, and, in the night-time, compelled her to seek relief in lamentable cries. Twenty-five grains of chloral hydrate acted upon her like a charm. So long as she presented the kind of symptom described, this draught was continued, with the same good effect. A complete change in the phenomena of the mental malady, of which one feature consists in her now preserving unbroken silence both by day and night, has made further administration of the medicine uncalled-for.

7. A woman-patient, 44 years of age, with symptoms of chronic mania, and who has been many years in the asylum, is subject to exacerbations of mental disturbance, during which her nights have usually been passed amidst constant vociferating. Had such an attack a short time ago, and took regularly for six weeks a draught containing thirty grains of the hydrate at bed-time. The consequence was, there was no further complaint about her on the part of a large number of inmates who slept in the same dormitory.

8. The case of a female, 52 years of age, who for the last thirty years has come and gone between her home and the Lancaster Asylum, although this time she has been under treatment for over ten years. She is now detained in consequence of increased seriousness in her relapses, their longer continuance, and their greater frequency. During her lucid intervals she is a person of most amiable disposition, but in her excitement becomes obscene, prone to violence, and extremely noisy in the night-time. The last symptom has usually been met by opiates, but the effects of these soon became uncertain and partial. On the occasion of the last recurrence of excitement, a chloral draught, containing twenty grains, was at first tried to control the sleeplessness, and for a week it served the purpose of a perfect hypnotic. It was one night omitted, however, and she again became boisterous. On its resumption, completely tranquil nights were not obtained until the more considerable dose of forty grains was reached. The draught was repeated every night during many weeks, and no enlargement of dose was demanded. The personal testimony of this patient as to the efficacy of the medicine was very pleasing, as her accounts of her sensations are quite reliable; and she mentions how greatly her nightly distress was ameliorated by the administration of the draughts.

9. There is a woman-patient, 53 years of age, who, during the day, works industriously at the washhouse, but in the night-time requires the use of a single-bedded room in consequence of the frightful noise she makes. The gallery where she spends the night was made vocal with her shouting, and opiates were given up as perfectly impotent to control the insomnia. The chloral hydrate was tried, and when a dose of sixty grains was reached, the woman's reputation for noise became practically lost. Since this discovery of its efficacy in the present case, I cannot say that a draught has been given with perfect regularity, but when the woman's noisy conduct is at its worst, the above dose is always sent, and its success is predicated with certainty.

10. A case which shows that the drug, whose value we are illustrating, is sometimes attended with negative results when given as a hypnotic draught. We have a woman-patient here who has been an inmate over two years, and who, some years ago, was treated at another asylum for an attack of melancholia, from which she recovered. On the return of mental failing, it assumed the form of intense maniacal excitement—a change in phase which is usually regarded as of evil omen, and apparently with the best of reasons. The woman had scarcely passed a quiet night for upwards of eighteen months, and by day was continually shouting, quarrelling, singing, and getting into all sorts of mischief. Powerful opiates were often tried in the case, and never once with the slightest benefit I am sorry to have to add that the chloral hydrate has not proved more useful. It has been given in doses graduated from twenty grains up to seventy-five grains, but it did not appear that one additional wink of sleep was obtained from its exhibition. There might have been no harm, perhaps, in exceeding the last-mentioned dose, but, considering the marked good effect of doses many times smaller in other cases, and that no symptom giving any forecast of improvement in this instance was observed, it was not deemed advisable to push the remedy. It may not be out of place here to observe that the condition of this woman's brain, at occasional seasons, appeared to constitute an instance of what can scarcely be considered other than partial repose of the mental faculties, short of what we regard as ordinary sleep. Without entering upon the question, which I have, however, nowhere seen discussed, as to what is the minimum of sleep that will satisfy the requirements of physical human nature, I positively know, from the most trustworthy source, that of sleep, in its usual form of visitation, this female patient has for months together got next to none; yet her vigour of constitution and the functions of physical health remained all the while unimpaired. Within the last few months a change for the better, with which medicine has no connexion, has taken place in some of the symptoms, but chiefly in that of the noisiness during the night. Although the mind during the day is nearly as maniacal and demented as formerly, a disposition to be noisy at night has now entirely left the patient.

11. Another instance of marked disappointment in my experience of the medicine occurred in the case of a woman who presented many features in common with the case last described. The woman is 38 years of age, and, during my period of office here, was previously under treatment for an attack of melancholia, having been discharged recovered after a residence of five months. She returned to the Asylum in three months after going home, with an attack of general mania. Opiates in very large doses, both as a partial sedative at intervals in the day and as hypnotic draughts at bed-time, were often given with very temporary—though very marked—advantage. The first specimen of chloral hydrate received here was on the occasion of a visit from Mr. Reynolds, of Leeds, and was set apart for this patient's use. Although, however, draughts of equal strength to those given in the case last mentioned were administered, not the slightest improvement was noticed in her nights of wearing, exhausting excitement, and sometimes incessant restlessness. Our faithful and intelligent night-nurse declared in this instance in favour of the virtues of the older remedy—viz., the muriate of morphia. This case, some time ago, also underwent a change in its phase independently of special treatment, the mind having somewhat cleared up spontaneously, and nights of fair sleep being now frequently obtained.

From a study of these cases the following conclusions on the virtues of chloral hydrate given as an hypnotic draught seem fairly deducible:—1. In very many bad cases of noisy habits during night it is a powerful and efficient hypnotic, and more certain than an opiate. 2. The effects of the drug do not fail of development through long continued use of it in an uniform dose. 3. In the most intractable cases of noisy habits it is probably of less service than an opiate—such cases, it would seem, as those of intensely maniacal and excited patients who in a previous attack of mental derangement presented the symptoms of melancholia.

Given thus, then, as an hypnotic draught, the chloral hydrate appears entitled to a high position in the future of lunacy practice. As the progress of recovery proceeds apace with the establishment of sound sleep, it is obvious how, as a therapeutic agent, its effects must be in a very large degree curative and remedial. This remark applies to attacks of acute disease. But surely, in the chronic insane, that mental agony produced by the constantly-returning presence of delusive voices and visions in the long nights of maniacal clamour and excitement is an object scarcely less worthy of attack and of relief than is the sensation of pain in those who are of sound mind. The collateral happy results of this artificial rest are not to be measured except by those who are themselves the nervous, timid, and excitable neighbours of patients whose constant habit it has been to "make night hideous" by their cries.

The eleven cases recorded here are selected as being some of the earliest which were used to test the efficacy of chloral hydrate in this Asylum. But it has been largely employed in a great number of other cases, including some of acute mania, of hysteria attended with suicidal impulses, and of general paralysis accompanied, as it so often is, with dangerous and distressing restlessness. It is an anxious matter to remove a suicidal patient from a dormitory to a single room, because in the latter, with all the means at our disposal, a patient bent upon self-destruction might probably concoct a plan to compass the ghastly purpose. A medicine which will enable such a patient to pass tranquil nights among watchful neighbours in an associated room is one whose precious service cannot be over-estimated. I have not been able to verify the observation, put forth upon respectable authority, that the hypnotic effects of chloral hydrate are sometimes postponed for twenty-four hours; that a draught given to-night, for example, will not affect the patient's sleeplessness to-night, but will cause it to vanish to-morrow night, without repetition of the draught. Should such apparent connexion between supposed cause and effect arise, it seems to me it would be very difficult to establish its reality unassisted by imagination.

It only remains for me to add that any attempts which I have made to substitute chloral hydrate for opium as a partial sedative by day have been attended with negative results. I gave up using it for this purpose, as morphia was found far more useful. Thus, to a restless, meddling, and noisy general paralytic, aged 30—puerperal case—who is in the third stage of her disease, twenty-five grains of chloral hydrate were given at intervals, but her excitement was not subdued until she had full doses of morphia. The chloral has made some patients sleep in the day-time, but has produced no tranquillising influence during their waking hours.

My best thanks are due to Mr. Broadhurst, F.R.C.S., the Medical Superintendent, for his kind countenance and help in testing so far the uses of this drug in lunacy practice.(a)

ACUTE RHEUMATISM IN THE TROPICS.

By JOHN SULLIVAN, M.R.C.P. Lond.

During the course of my practice in Havana, I have frequently observed what modern pathologists teach—viz., that disease of the heart, which sometimes accompanies or succeeds an attack of acute rheumatism, may be the precursor, or antecedent, or often independent, of rheumatism in the muscles or joints.

A person, while in a state of profuse perspiration, or to mitigate the inconvenience attendant upon great heat, removes his upper clothing, and exposes himself to a sudden change of temperature. Soon afterwards he complains of pain in the loins, but—unlike lumbago, in which the pains shoot downwards—the pains shoot upwards, along the course of the dorsal muscles, deviating on each side to the shoulders. Soon the patient begins to feel a sense of tightness and pain over the præcordial region; pulse strong, jerking, irregular; and he feels compressed, as within a vice, the sense of constriction passing from before backwards. Should these symptoms be neglected, an endocardial murmur will soon be heard, especially towards the apex. Or the patient may be seized with a pain in the chest; with a hard, dry cough, and symptoms of pleuritis.

During the year just passed, I have treated five cases of acute rheumatism, all ushered in in the manner just related. I treated the first case as one of heart disease, without having duly taken the cause into consideration, by cupping, blistering, digitalis, cal. c. opio, etc.; but the heart affection returned shortly afterwards with the same intensity. Having traced the cause of the disease to rheumatism, I adopted means for the elimination of excretory matter. The remaining four cases of heart affection, from the same cause, I no longer treated locally, but constitutionally, and with good effect. The heart affection becomes permanently relieved on the development of rheumatism, whether muscular or arthritic.

In most cases, the subjects of the above affection are of a cachectic habit of body, suffer from dyspepsia and defective assimilation, and are generally persons of irregular habits.

I have no theory, but merely make a statement of facts that rheumatism may primarily attack the heart or other internal organ previous to or without its making its appearance in the fibrous tissues or muscles.

In the treatment of the above cases, an excellent opportunity was afforded me of testing the value of the alkaline treatment as laid down by Drs. Garrod and Fuller. It never fails to alleviate the articular or muscular pains, when pushed to the extent of rendering the urine alkaline.

Occasional cases of acute rheumatism will occur, especially in cold climates, which apparently resist all known remedies; but it would be fatal to the interests of Medical science and of humanity to be guided on this account by the opinions of Drs. Gull and Sutton, who deny the efficacy of medicine in this disease, and would have us trust to mint-water and cotton wadding. Their ideas would appear to coincide with those of the famous Gil Blas during his Medical career, that all that a successful Physician had to do was to stand gravely, and with folded arms, behind the patient's chair, and occasionally pat Nature on the back.

It is the duty of the Physician to guide Nature, and to correct her when she is at fault, and if it be universally acknowledged that the phenomena of rheumatic fever are owing to the presence of a vicious principle in the blood, it is his duty to endeavour to eliminate it, although it must be admitted that in some cases he may not be so successful as he might have reason to expect.

The following interesting case was seen with me by two eminent Physicians in Havana (Drs. Bustamante and Delvalle) in the beginning of the present year:—

Mr. B., an English merchant, and long resident in this island, complained of pain and a sense of constriction over the præcordial region, stiffness, and pain over back and shoulders. Had suffered on previous occasions from pains over loins, but never from rheumatism in the joints; knew that gout had existed in his father's family; had felt, some time back, a twinge in the great toe, but it soon passed off, without any constitutional or premonitory dyspeptic symptoms; pulse full and jerking; urine scanty and high-coloured; heart's impulse strong; murmur audible; considerable præcordial anxiety. Having administered a brisk purgative, ordered a mustard foot-bath, mustard poultices to calves of legs, strong stimulating liniments over joints, to be repeated every two hours.

2nd Day.—Slight arthritic pains; a swelling had already invaded both wrists and left knee. Poultices of linseed-meal to be applied to painful joints, the hot-water having been previously saturated with bicarbonate of potash. To take every four hours one drachm and a half of pot. bicarb., one of pot. acet., and five grains of pot. bromid. in peppermint-water. Towards night pains greatly aggravated. Ordered ten grains of Dover's powder, with five of pot. nit.

3rd Day.—Pains still more intense; urine high-coloured, but more copious. Continue mixture every three hours. Ordered an injection of warm soapsuds-water. Dover's powder at bedtime.

4th Day.—Great pain over loins, down the course of the sciatic nerve. Ordered dry cupping over loins, and next lin. aconiti c. chloroform. Heart greatly relieved. Gave cal. gr. iij. and opii gr. j. at bedtime.

5th Day.—The alkaline mixture having created great nausea, ordered in diminished doses in state of effervescence with large excess of pot. bicarb. Pains general and severe; perspiration clammy, acid, but not excessive. Ordered a warm bath, to which a strong decoction, made with half a pound of stramonium leaves, was added. This is a favourite anodyne bath in Cuba, called a chamico bath, and a very admirable and useful one it is. Great relief obtained; slept better.

6th Day.—Continue mixture; repeat injection; repeat cal. and opium pill at bedtime.

7th Day.—Take pot. iod. gr. v. and pot. bicarb. gr. x. ter die.

9th Day.—General improvement, but erratic pains pass from one joint to another. Ordered a small blister below left nipple, to guard against metastasis to the heart.

10th Day.—Continue pot. iod. mixture; repeat stramonium bath; give quin. gr. j., cicutæ gr. iij. at bedtime.

11th Day.—Right knee very painful. Give the pot. bicarb. and pot. iod. mixture.

13th Day.—General improvement; urine very abundant; great deposit of lithates. Ordered quin. gr. j. and sodæ bicarb. gr. iij. ter die.

15th Day.—Repeat quin. and sodæ; continue pot. iod.

19th Day.—Convalescent. The alkaline treatment, with some modifications, to be continued for a fortnight.

This has been one of the most severe cases of acute rheumatism that I have met with, and I candidly believe that, under the old treatment, its duration would have occupied a period of sixty instead of nineteen days.

From a consideration of this case, confirmed by a few previous ones, I infer:—1. That acute rheumatism fixes itself upon the heart without having previously exhibited any affinity for the tissues of other parts. 2. That when that affinity towards the heart is diverted to external parts, the heart becomes sensibly and permanently relieved; and 3. That the alkaline treatment is the best calculated to neutralise the *materies morbi*, to shorten the duration of the disease, and to guard against pericarditis and valvular disease of the heart.

Havana.

One of those disclosures which, when they come, lead us (the *Oswestry Advertiser*) to wonder that plague and pestilence are not more common and destructive, was made at the Newton Local Board last week. The sanitary condition of one locality was described as deplorable; large quantities of the most noxious accumulations had recently been removed—in fact, the Doctor's report was, "that there was one mass of putrid matter where the people were living, and from thirty to forty baskets of this filth had been carried up in one day." At the same meeting, however, a motion that the Board provide for the more effectual scavengering of the town was defeated by six votes to five.

(a) Our patients very seldom complain of the bad taste of a medicine. It has been usual to prescribe a draught containing sixty grains in a two-ounce bottle of syrup and peppermint water, by which the really disgusting taste of chloral is very fairly disguised.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

LIGATURE OF THE SUBCLAVIAN ARTERY FOR TRAUMATIC AXILLARY ANEURISM.

(By Sir WILLIAM FERGUSSON.)

It is barely a month since we reported the operation of ligature of the subclavian artery by Sir William Fergusson, at this Hospital. At the date of the publication of that report the man was doing fairly well, but he has subsequently died. Since then, Mr. Maunder, at the London Hospital, and Mr. Gay, at the Great Northern, have both tied this vessel; Mr. Gay placing the ligature on the second part of the vessel, and accomplishing the proceeding with no very great difficulty, being chiefly hindered by the free venous bleeding which obscured all but the very first stages of the operation. On Tuesday, April 11, Sir W. Fergusson again undertook the same task under circumstances of some urgency, so that, owing to there being no time to give public notice, the attendance in the theatre was comparatively small. Several Hospital Surgeons, however, were present, including Mr. Gay and Mr. Skey. Dr. Liebreich also attended, and showed great interest in the proceedings. The operator was assisted by Mr. Wood and Mr. Henry Smith. Owing to the large size of the axillary aneurism, the shoulder was much raised, and the artery proportionately difficult to reach. A single incision was made, extending from near the sternum along the inner two-thirds of the clavicle, and then—profiting, doubtless, by the lesson taught by Mr. Gay's case—Sir William at once passed a double ligature round the external jugular vein, which stretched, swollen, across the centre of the wound, and, dividing this between the threads, turned the ends aside and proceeded with the dissection with very little bleeding. A source of embarrassment was afforded by the uncertainty as to the identity of the anterior scalenus muscle when this was reached. Sir William could not, at first, be sure that he had not to deal with the leash of nerves passing down to the brachial plexus; but when this point was cleared up the rest of the steps were rapidly accomplished, the thread passed easily from behind upwards, and, the pulsation in the tumour being found to have entirely ceased, the wound was closed, and the patient returned to bed, the whole operation having occupied about twenty minutes.

Sir William then proceeded to comment upon the case. The patient, he said, was a healthy young man, who five or six weeks previously met with an accident, a pitch-fork falling against him and wounding his shoulder. One prong entered his side and grazed a rib, but did not penetrate the chest, and seemed to do no harm. The second prong, however, entered at the anterior margin of the deltoid muscle, and probably damaged the axillary artery. Both wounds healed by first intention, but soon afterwards a pulsating swelling was noticed in the armpit, and the man came up to the Hospital to consult Sir William, with a tumour the size of an orange situated high in the axilla. It was clearly a case for grave consideration, and the man was suffered to lie quietly in bed for some days; but as the aneurism was then observed to be rapidly increasing, Sir William at once made up his mind as to its treatment. Now, here was a wounded vessel, and the Surgeon is justified in such cases in cutting down and tying the artery above and below the opening. But there are exceptions to the best Surgical rules, and the question to consider here was whether the deligation of the vessel at a point nearer to the heart would not be attended with less danger to the patient. It was obvious that the torn vessel could not be exposed without cutting through both pectoral muscles, and so causing a very extensive wound; besides which, the vein might itself be injured and need interference. Now, the less the bulk of a wound the less the danger, and, looking at the magnitude of such a cyst as this, and the probability of great loss of blood in its exposure (for it is far easier to talk of compression of the subclavian artery in books than to do it), Sir William decided to leave the ordinary rule and to go nearer to the heart. The one objection to this procedure would be, of course, that collateral circulation might feed the torn vessel. This objection, however, although abundantly proved in regard of the brachial artery, had never yet been established in this locality, and Sir William thought it safe to risk this danger. As to the operation itself, it was considerably more difficult than had been anticipated in so young a subject, and one so free from fat. This was owing to the large size of the tumour, which had increased wonderfully since admission, and caused the shoulder to be much raised, whilst the pressure on surrounding parts had engorged the veins and given rise to troublesome venous oozing. The swollen external jugular vein lying right in the way, it was thought better to tie it and cut it across than to hold it aside for the rest of the operation. The omo-hyoid also being in the way had been divided. It might seem strange that any doubt could exist as to the anterior scalenus muscle, but in the living subject things are not always so clearly recognisable as in the dead-house, and it was difficult to distinguish between the muscle and the leash of nerves occupying nearly the same position in the wound.

Sir William then referred to the late instances of the same operation being performed in London, and explained that he had thought it right not to delay a single day in the present case, when on his visit on the preceding afternoon he had found the swelling to be so rapidly enlarging.

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Medical Times and Gazette.

SATURDAY, APRIL 22, 1871.

THE SMALL-POX EPIDEMIC.

During the week that ended last Saturday, no fewer than 265 deaths from small-pox were registered, being the highest weekly number yet recorded. In the previous week the number registered was 214, and the Registrar-General thinks it probable that part of the increase belonged to that week, in which the registration was somewhat interrupted by the occurrence of Good Friday. But even allowing for this, the rise in the small-pox death-rate must have been very considerable. We were quite prepared for it by the knowledge of the serious extension of the disease during the last fortnight in the Northern and Southern suburbs of the metropolis. We are again reminded that the highest weekly number of deaths during the various epidemics which prevailed during the thirty-one years, 1840-70, was 102 in the last week of 1840. After distributing the Hospital deaths as far as is practicable, the order in which the districts stand for small-pox mortality is—the South districts, 84 deaths; the North, 76; the East, 57; the West, 30; and the Central districts, 18 deaths. The greatest increase has taken place, then, in the North, where Islington and Somers-town are the principal sufferers. In the South districts the disease was most fatally prevalent in Southwark and Battersea. The return of the Health Officers' Association appears to indicate an increase of the disease last week in the Central districts also.

This continuance, and, in some parts of London, the great increase, of small-pox, are taxing severely the resources of the Asylum Board. Notwithstanding that they have drafted some 300 convalescent females to Islington, it has been found necessary to devote some of the beds in the "old workhouse" there to the use of acute female cases. The Board, therefore, at a recent meeting, determined upon fitting up the *Dreadnought* Hospital Ship for the reception of 200 convalescents. This will not take very long, but, even when it is done, we make bold to say that the accommodation provided will still be short of the requirements of the metropolis at the present time. In one small district of Islington, for instance, we hear that within a radius of little more than 100 yards, there have occurred during the last fortnight or three weeks no fewer than forty-one cases of small-pox in a poor population, and of these only six cases have been removed to the Hospital, and the result is that the disease is spreading rapidly from house to house. And this is only an example of what is happening in other parts of the metropolis. Persons who may be willing enough to go to the Hospital when first attacked, become unwilling when they discover the trouble that is involved in the attempt to obtain admission, while in other instances the delay arising from a deficiency of beds is, after a day or two, fatal to any idea of removal at all. How much better it would have been if each parish, at any rate each parish on the outskirts where land is obtainable, had erected its own temporary Hospital sheds, without relying, as most of them have done, upon the accommodation provided by the Asylum Board. Strictly, it was no part of the duty of that Board to provide accommodation for other than paupers, and had they taken this view of their duty, and refused admission to all others, no doubt the existing Hospitals would have been more than sufficient. However, they have taken a higher standing than this, and we think properly. But that they have done so, and have admitted artisans, clerks, shopmen, and servants, without inquiring into their antecedents, rather than lay themselves open to rebuke, is no good reason why the metropolitan vestries should not have performed their part, which they were equally bound to do as administrators of the Sanitary Act, 1866. We hold, therefore, that if the Hospital accommodation is not sufficient for the occasion, the blame should not be laid upon the Asylum Board, but upon those local authorities who have thought fit to shirk an obvious duty rather than burthen the local rates.

Taking this view of the situation, we commend for study the letters to the *Times* written by Surgeon-Major Atchison, and recently reprinted in the form of a pamphlet. He says, "instead of the *costly*, injurious, and *tardy* system of congregating the sick in Hospitals, asylums, or improvised lazarettos in a hitherto uninfected neighbourhood, why not apply the simple remedy we at once resort to in India—viz., pitch tents in some high and airy situation, quarantine the encampment, and on the subsidence of the disease, disinfect or burn the camp? " . . . As regards details," he says, "take a map of London and its districts—and the same rule applies to every city, town, or village in England—mark out the commons, waste lands, or other unenclosed spots nearest to the suburb attacked, erect a few tents, wooden huts, or roomy sheds (and at first they need not be many), place them under the charge of the district or divisional Surgeon, and thereto should be carried every variolous case of whatsoever kind, description, or class, without favour or distinction. Let them be near a river where there is a current of pure air, taking advantage of thatched barges or covered steamers; near the sea, or our harbours, blockships, or well-ventilated vessels at anchor—common sense directing the locality and suitability to individuals—but on no account brick or walled enclosures and pest houses." No doubt this would be an economical as well as effectual way of dealing with such an epidemic as the present; but its adoption would not be quite so easy in London as the writer imagines. Unenclosed land sufficiently near London is scarcely to be found, and hence a site would have, in most instances, to be purchased or rented. The obtaining sites has been one of the greatest difficulties which the Asylum Board has had to encounter. But still, they are obtainable; and every parish on the borders of London should possess a site which they could use on the occasion arising. Forethought, however, is no distinguishing virtue of metropolitan vestries, especially when it means anticipation of further expense. One thing is certain, however—namely, that the adoption of some such scheme as that sketched out by Mr. Atchison would be true wisdom and true economy.

OUT-PATIENT HOSPITAL REFORM.

A MEETING has been called for Thursday, the 20th inst., to receive a report from the committee appointed some time ago to consider the subject of out-patient Hospital administration, by a meeting held for that purpose in the rooms of the Royal Medical and Chirurgical Society. This report has been the work of certain sub-committees rather than of the main body itself, and deals with the subject as connected with general Hospitals, special Hospitals, general and special Dispensaries, and Poor-law Dispensaries. The following are the resolutions to be submitted to the meeting to be held at the rooms of the Royal Medical and Chirurgical Society on Thursday, April 20, at 8 p.m.:—

"1. That an improved administration of Poor-law Medical relief, in accordance with the Metropolitan Poor Act of 1867, is essential to the reform of the out-patient administration of the metropolis.

"2. That, in furtherance of the above resolution, and in order to limit the pauperising tendency of the present system of gratuitous relief at Hospitals and Dispensaries, all free Dispensaries should be under the control of the Poor-law authorities, so that a proper system of inquiry may be instituted previous to the administration of gratuitous Medical relief.

"3. That, in order to encourage a feeling of self-respect among the working classes, and that they may secure for themselves during health the necessary Medical attendance in sickness, it is desirable that the system of provident Dispensaries should be largely extended, both by the conversion of the present free Dispensaries and by the foundation of others.

"4. That, for the reasons given in the preceding resolution, and in order to improve the clinical teaching of the out-patient department of the general and special hospitals, it is very desirable that the present unrestricted system of gratuitous relief at those institutions be curtailed, partly by the selection of cases possessing special clinical interest, and partly by the exclusion of those who on social grounds are not entitled to gratuitous Medical advice.

"5. That the practice of receiving payments for medicine or Medical advice from the out-patients of Hospitals is undesirable.

"6. That the governors of Hospitals ought in all cases to provide some honorarium for the staff of the out-patient department.

"7. That a committee be appointed to memorialise the President of the Poor-law Board, the governors of the various metropolitan Medical charities, and the Society for Organising Charitable Relief, to assist in carrying the foregoing resolutions into effect, and to take such other steps as they may think requisite."

The discussion of these in detail had better be reserved until after the meeting, which takes place too late for us to give a full account this week; but we venture to make a few remarks on the report relating to general Hospitals, these being the institutions with which, from the necessity of our avocations, we are best acquainted. And first we would show that this sub-committee do not propose that root-and-branch system advocated by some; they propose to reform, not to destroy; and yet we miss in their report some of the simplest, most practical, and most effectual of reforms. They say, and most justly, that nowadays, when apprenticeship has practically ceased, students have not the means they formerly had of thoroughly mastering the details of the sick-room. Well, the nearest approach they can attain to their future every-day duties is in the maternity charity now connected with every Hospital, and the out-patient room. As has been pointed out over and over again, it is not ghastly operations or skilful feats of minute diagnosis that make up the sum-total of a man's life-work; it is the "little trifling cases" which occur to him most frequently, and these, also, most abound in every out-patient room. The committee say that out-patient practice should be more utilised for the purposes of instruction. Quite so; but whose fault is it that it is not? Why, that of the men engaged in it themselves. Perhaps the most admirable sample of practical teaching to be encountered in any London school is to be seen in the out-patient room of one of our largest Hospitals, and the crowd of students show how it is appreciated. It is true, to carry out such a system efficiently some pains are necessary. It is not at all instructive for the student to see patient after patient appear and disappear with the simple question "How are you to-day?"—answer, "Better;" then go on. But if a definite hour is fixed for the attendance of students, and if they are not kept at it too long—an hour is quite enough; if, moreover, the cases are *selected* for attendance at that hour—and in large Hospitals two subjects may be selected for each day, and strings of patients be in attendance—the result is speedily apparent. The out-patient room of a popular teacher—that is, one who strives to make the student learn—will be crowded, though others may be empty. This committee fix the maximum attendance of the Physician or Surgeon at three hours; that is quite enough. But, taking away the teaching hour, two others remain to dismiss the ordinary cases and to study those worthy of study for next hour of instruction. Thus out-patient practice may be, and is actually now, fully utilised for teaching purposes.

The sub-committee tells us that the out-patient departments of general Hospitals are abused by workmen, who ought, instead, to join sick-clubs and benefit societies. Surely the members of that sub-committee know, or ought to know, that the grossest abuses of these intended charities are committed in the name of, and frequently by, these societies. Presuming on the never-failing help extended by such Hospitals, these societies are perhaps *most* frequently got up without any Medical advice. Sickly members may join as well as healthy ones; when they fall ill they are told to go to the Hospital for relief. Having been attended to, they calmly pull out a blank form, often of a most complicated description, and say, "Please, sir, do you mind filling up my schedule; otherwise I shall not receive my money from my club." If you reply, "Why don't you go to your club Doctor," they tell you, "Because we've got none." Nay, more, the folly of this system is rendered still more apparent by the fact that malingerers are constantly pestering out-patient Physicians and Surgeons merely for the sake of obtaining such certificates. A drunken tailor has a three days' debauch, beginning on Saturday, ending, with his money and all available pawning material, on Monday. On the Tuesday he appears at the Hospital with foul tongue, hot hands, pallid countenance, and miserable demeanour. He is prescribed for, but that was not what he wanted; it was the means of renewing his drinking bout, or of "tapering it off," at least; and so a dirty piece of paper is produced, thrust under the Physician's nose, with a peremptory request for signature. Sick-clubs will not be the saviours of society under their present system of management. Why, some of the largest of them have already discovered the comparative cheapness of such a mode of obtaining Medical advice for their members, and accordingly subscribe tolerably liberally to certain Hospitals, in order that they may have an unlimited supply of out-patient letters at their disposal. So common is the practice that the other day, a labouring man having applied for a certificate of ill health, and being refused by the sitting officer, on the ground that the patient came to be treated, not to have certificates signed, reported his ill-success to his club. He was immediately pronounced a malingerer, and two members were delegated to wait on the gentleman in question to ask the reason of his refusal to comply with a request so often and so successfully reiterated. The suppression of this alone would be at all events the introduction of the thin end of the wedge.

The sub-committee recommend the abolition of governors' and subscribers' letters. They, nevertheless, constitute one of the most important means at our disposal of checking improper patients. It is true that some give a letter to any applicant, but many take the trouble to find out the actual condition of the patient, and abstain from giving until assured that the individual is deserving. Have the committee any experience on the subject of free admission and admission by letter? It is to be had, and conclusively shows that the latter system is deterrent of the worst class of cases—those, namely, where nothing is the matter. There is no Hospital in London where anyone really ill would be turned away without help. If the patients are in such a condition as to be injured by going in search of a letter, the Physician or Surgeon has the power of permitting a continuance of the casual letter with which they have been provided. We do not for one moment contend that the system is not abused—we are painfully aware that it is so daily—but then, if it is worked badly, it may also be worked so as to do good—in other words, it is not the system, but the mode of working it, which is at fault.

And what do they propose to put in the place of out-patient departments? Provident dispensaries and poor-law dispensaries. Provident dispensaries worked as at Northampton, where it is calculated that many thousands of the inhabitants are eligible; where three Medical men make a fair income out of the dispensary, and the others not attached to it are starved out. Without a real working committee—that is to say, one which will carefully enter into the circumstances of each applicant—such dispensaries mean exactly the same thing as out-patient departments, only the money comes in in twopences, not in guineas, and the Medical man gets a share. The charity is of the same quality in both. In poor-law dispensaries, of course, the working Medical men are to be paid, but they are to bring all difficult cases to the Hospital Physician or Surgeon for consultation, of course without a fee—that is to say, the Hospital Physician or Surgeon is to do State work unpaid—a principle to which we quite object.

Far be it from us to hold that we have already reached the millenium, and that our present system is perfect; but in its place we must have something better than moonshine.

Suppose the whole scheme recommended by the sub-committee accepted by any number of general meetings, who is to enforce its provisions?

THE WEEK.

TOPICS OF THE DAY.

There was a meeting of the Committee of the Royal College of Physicians, on the subject of the conjoint examination scheme, on Tuesday evening. No day, we believe, is yet fixed for the meeting of the delegates from the three Corporations for the discussion of the amended scheme proposed by the Committee of the Council of the Royal College of Surgeons.

Clinical examinations were instituted at the College of Surgeons on Tuesday. Surgical patients for the purpose were brought to the College from King's College, St. Bartholomew's, and Guy's Hospitals. The Court of Examiners have now done everything that modern experience suggests to make their examinations as perfect as they can be. We have no hesitation in stating our belief that the examinations as tests for ordinary practice have been raised to a maximum of efficiency, and we hope to hear of no more efforts to depreciate them unless some real evidence of their insufficiency be forthcoming.

We have had a long correspondence sent us which has taken place between the Committee of the Manchester Medico-

Ethical Association and the editor of the *British Medical Journal.* We are averse to entering on other people's misunderstandings, but as our attention has been specially called to the matter by the parties concerned, we may simply say that the correspondence relates to resolutions adopted by a meeting of the Committee of the Manchester Medico-Ethical Association approving of the *Lancet* Medical Bill, and disapproving of the line taken by the British Medical Association and its journal in the matter of Medical Reform. The editor of the *British Medical Journal* refuses to publish a notice of the proceedings of the Committee in question unless the names of the mover and seconder and of those present are sent him, together with the minutes of the meeting. This is declined on the part of the Committee by the secretaries. It seems to us that, on all common principles of literary morality, the editor is perfectly right in his refusal. In the first place, we maintain that no editor deserves his position who cannot be trusted with the responsibility of using his own judgment as to what matters he shall allow to appear in the journal over which he presides. The editor is responsible; he is presumed to know what is best for the interests both of his journal and his readers. On this point the editor must be autocratic, or he is nothing. Secondly, it does not even appear that all the members of the Committee of the Manchester Association are members of the British Medical Association; therefore it is difficult to conceive on what grounds they require the latter body to publish their censures on itself. Thirdly, the *Lancet* Bill is so unpopular, as Mr. Forster lately assured the editor of that journal, that we think the editor of the *British Medical Journal* was quite justified in demanding all possible evidence that any influential body of Professional men would have the boldness to support it. Surely, before publishing the resolutions of a committee of a provincial association, the editor of a public journal has a right to ask of how many the committee consists, and how many were present at the meeting.

We are glad to say that Mr. W. H. Smith is returning to the charge in reference to the land reclaimed by the Thames Embankment. It will be the height of injustice if the population of the metropolis, who have paid for reclaiming the land, are robbed of it as a pleasure- and recreation-ground, in order to swell the revenue of the Crown, which has not paid one farthing of the tax which reclaimed it.

ST. THOMAS'S HOSPITAL.

In view of the approaching completion of the new building, the governors of this Hospital have resolved upon at once increasing the Medical staff. We believe applications will be invited from gentlemen as candidates for the following appointments:—Physician, Assistant-Physician, Surgeon, and two Assistant-Surgeons. We look forward to the staff of the Hospital being strengthened by the addition of some names well known as having advanced the science and art of Medicine.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A general meeting of this Association will be held at the Freemasons'-tavern, Great Queen-street, Lincoln's-inn-fields, on Wednesday, May 3, at 7·30 p.m. precisely; when the President, Dr. Rogers, will give an exposition of the causes which led to the enactment of the Medical Charities Act (Ireland) comment on the clauses, which particularly interest the Profession, show the results, offer some suggestions for the modification of Poor-law Medical relief in England, and for the utilisation of Poor-law Medical Officers as Deputy Health Officers in their respective districts, as recommended in the report of the Royal Sanitary Commission. Subsequently the sense of the meeting will be taken on the various questions raised in the president's address. We trust there will be a good attendance of the members of the Association and of the Profession generally.

THE MEDICAL PROFESSION DURING THE SIEGE AND THE REBELLION OF PARIS.

The letters of our Paris correspondent, which record the self-sacrifice and devotion of the Paris Physicians and Surgeons during the siege, give also a vivid picture of the mode in which Medical affairs are managed under the Commune. The Medical School closed, the Professors dismissed, a ridiculous attempt to set up a new Medical School by a kind of universal suffrage amongst students and *grinders*, threats of the punishment due to deserters levelled against Medical men who refuse to serve in the Communist army, unlicensed Practitioners acting as Surgeons-in-chief at the Hôtel de Ville, attempts to pillage the Hospital funds and to supersede the directors: such is the happy state of things. The Hospital wards are filled with wounded, and our correspondent believes that the losses of the Communists in killed and wounded are serious, though by a system of bringing them in from the field at night the amount of loss is concealed from the Parisians.

THE CLINICAL SOCIETY.

The last meeting of the Clinical Society was signalised by numerous papers and paucity of discussion. The first and most important was a communication by Dr. Broadbent on the Therapeutic Virtues of Phosphorus in Skin Diseases. Its value he primarily inferred from its belonging to the same chemical series as arsenic; it was put to the test and found to answer. The phosphorus was given dissolved in olive oil. The latter portion of the meeting was occupied with the reading of a paper which, in all essential detail, had already been brought before the Pathological Society by its author, Mr. Lawson Tait. The only grounds for such procedure would be the interest attaching to the mode of treatment; but even that had been referred to previously. It is really too bad to waste valuable time in bringing before one Society what has already been presented to another. Of course, it is quite possible to have a case worth discussing from both its clinical and its pathological side, but it would be much better if that could be done at one society instead of two; at all events, we may decidedly say that, if the Clinical Society can only have second-hand papers, containing absolutely nothing new in them, it had better cease to exist. Its work has been so excellent, the average of its papers so high, that it is a pity the Society should be dealt with in such fashion.

CRIMINAL LUNATICS.

The managers appointed under the Prisons (Scotland) Administration Act, in their second report just issued, make the following observations with regard to criminal lunatics in that country. They state that in a considerable proportion of the instances where persons indicted for crimes are placed at her Majesty's disposal on the ground of lunacy, there is a complete recovery from the disease; but it is liable to recur. In the majority of cases it follows on excessive drinking. Kept absolutely sober, with vigilant Medical supervision, suitable diet, and regular habits, the person who has committed murder is restored to reason. But if he is at large he will probably take to drinking again, with all its dangerous results. It has been put to one high Medical authority after another, whether a person who in a fit of insanity has killed a fellow-creature is more liable to be in a condition to repeat the act than anyone who has never been under the influence of insanity? The answer invariably was that in one class of cases only could a negative answer be given—in the case of women who had committed violence under the influence of puerperal mania, and had lived beyond the age of child-bearing. Under the existing law in Scotland all criminal lunatics who have recovered must either be detained in the general prison or be left at large. When they fall on the parish they cannot be put into an asylum or otherwise dealt with like lunatics, because they are not Medically certified to be insane. The managers, on the other hand, state that it is not favourable to the preservation of the mental health of these persons, that those who have recovered their reason should be placed in continual association with absolute lunatics. A Bill now in the hands of the Lord Advocate contains a clause for the conditional removal of inmates of the lunatic department in the general prison. This clause contains a condition of liability to removal back of such persons to the lunatic department in the general prison if necessary.

AN EPISODE IN THE EPIDEMIC.

When the Asylum Board took over the old Islington Workhouse for conversion into a convalescent Hospital, they took over with it a number of patients who were being treated there under the direction of the Islington guardians. These were removed to Hampstead, and then, as the bedding and furniture were not, in the opinion of the new occupiers, fit for the use of their Hospital, an application was made to the guardians to take them back. This was refused, and hence all the infected articles were put on one side, and stored in some disused apartments, the guardians further stating that they should hold the Board liable for everything left in the building when they took possession. On March 25—that is to say, a fortnight after the transfer—the Board resolved that the Islington guardians should be requested to inform them whether they will authorise the destruction of the articles left, as, in their opinion, it was most undesirable for the health of the district that the bedding, which must be full of infectious matter, should be thus retained. Still, the guardians remained obstinate, and now the Medical Officer of Health, Dr. Ballard, has stepped in to cut the knot, and has served a notice upon the Asylum Board to disinfect the articles within twenty-four hours. In the event of their not doing so, we hear that it is probable that the whole will be destroyed under the authority of the vestry, leaving the guardians to take any remedy they please or may be advised to take. A pretty triangular duel! It is by the exhibition of childish jealousies of this kind that local boards so commonly bring themselves into contempt.

ARMY HOSPITALS AND AMBULANCES.

We defy anyone to read the report of the discussion of Monday night, in the House of Commons, on this subject, without forming very hazy conclusions on the matter. Whether this obscurity is the result of incorrect reporting, of imperfect knowledge on the part of the Government advisers, or their desire to obfuscate their questioners, would be hard to say. As an example, Sir Henry Storks, on behalf of the Government, in reply to questions addressed to him by Mr. Alderman Lusk, stated, among other things, that it is the intention of his right honourable friend (Mr. Cardwell) to have a Hospital corps placed entirely at the disposal of the Medical officers, for the purposes of Hospital during peace, and in time of war a corps for the assistance of the wounded after an action. From the expression, "entirely at the disposal of the Medical officers," we had inclined to the conclusion that the present relation of Medical officers to the Army Hospital Corps would undergo some considerable modification, rendering unnecessary the intervention of military officers, except, perhaps, in a position subordinate to the principal Medical officer at Netley, the head-quarters of the Army Hospital Corps, or to the principal Medical officer of an army in the field. We were about to congratulate the authorities on having at last come to a common-sense conclusion, likely to be satisfactory to Medical officers and advantageous to the public service; but on reading on a little further, we find Mr. Cardwell allege as a reason for the necessity of having a colonel as Commandant, and a lieutenant-colonel as his Assistant, at the Royal Victoria Hospital, Netley, that Netley is the head-quarters of the Army Hospital Corps. The fact is that the functions of the Commandant and his Assistant at Netley, so far from being limited to the command of the Army Hospital Corps as their *raison d'être*, extend over the discipline of the whole establishment, including that of the Medical officers themselves, and, as Colonel North, speaking from the military point of view, very plainly put it, would render necessary the presence of an officer of even higher rank at Netley, instead of striving to save £200 or £300 per annum, as the allowance to the Assistant-Commandant. Sir H. Storks, also, in the distribution of the Inspectors-General of Hospitals, was rather out in his count in giving one to the head-quarters of the Army Hospital Corps and one to Netley, the two places being the same. Mr. Dalrymple's promised resolution as to the organisation of General Military Hospitals has not been put. We hope he may yet find an opportunity of giving expression to his views.

COMMUTATION OF PENSIONS.

Our naval and military brethren, retired from their respective services, who have been hesitating as to the propriety of accepting the doubtful benefit of commutation of their pensions, are about to have the question decided for them in the negative by the Chancellor of the Exchequer, who, on Tuesday night, in reply to a resolution moved by Mr. Monk, and seconded by Mr. Alderman Lusk, in favour of extending to the whole Civil Service the privilege of commuting pensions now enjoyed solely by the War Office and the Admiralty, stated that, after the year's experience of the Pension Commutation Act, he had determined to restrict the privilege to persons who receive pensions on account of the abolition of their offices. We cannot say that much will be lost by the withdrawal of the privilege, the terms of commutation having been far from liberal, as we pointed out at the time of their publication, giving, as an example, that the expectation of life of a healthy man, aged 42, according to Finlaison's tables, is 25·74 years, and that actuaries in calculating the purchase of annuities allow 21·5 years to a man of 42, while the Commutation Act of 1870, to a man of that age, allowed only 13 years.

FEMALE STUDENTS OF PHYSIC IN MIXED CLASSES.

Dr. Mary Dodds, M.D., writes to the *Scotsman* on behalf of mixed Medical classes of male and female students, and uses the whimsical argument that male students do not like the other sex to be present because they feel under a restraint and unable to practice "rowdyism." She argues further that this association is beneficial to the male students:—

> "Indelicacy is the plea now put forth againt women studying Medicine in the same classes with men. It is no doubt true that women, thoroughly educated in Medical science, lose some of that sentimental, hypocritical mock-modesty which has been acquired by a false system of education, but true modesty is exalted. Why should it be indelicate for men and women to study together the several branches of Medical science? The truths taught there are vitally important to both; and, best of all, experience has demonstrated that the presence of the one sex has an influence over the other for good.
>
> "Again, why are men so much concerned about the morals of women? Has not nature endowed women, as well as men, with minds of their own, to think and judge for themselves what they are best fitted for? Then why not let them exercise that faculty of discrimination? Is it really because those young disciples of Esculapius have such exalted respect for women that they thus prate about indelicacy? Or is it that they cannot act in their accustomed rude manner when women are present? I do not believe it is the former; there may be some truth in the latter. But I incline to the belief that there is something behind all this. Touching the purse is oftentimes worse than touching the conscience."

We may use Mary Dodds's own argument, and ask whether men are not provided with minds of their own? whether they are not able to judge of the propriety of mixing young men and women in classes for anatomical demonstrations?

DR. J. R. CORMACK AND THE SECOND SIEGE OF PARIS.

Dr. J. R. Cormack, who withstood all the miseries and hard military Medical duties of the siege of Paris by the Prussians, now finds that the second siege by the Versailles Government brings even yet more hardships and peril. In a letter, dated the 8th inst., published in the *Scotsman* of April 13, he says—

"I used to think it strange and terrible to get into a battle five or six miles from Paris; but to have had a battle of days' duration, with wounds as terrible as any I have ever seen, and the missiles coming often within less than a mile of my house, is bewilderingly sad when one has a spare moment for thought, which at present is not often.

"Personally I am all right—only worried and downcast at this ruffianly revolt in Paris. In my slight business relations, however, with the Commune, I have been courteously treated; and when I appeared yesterday in the Avenue de la Grande Armée and elsewhere among the insurgent reserves, I was saluted right and left. My professional calling and status was indicated by my *képi* which I wore during the first siege, and from prudential reasons have resumed during the second. It proclaims my utility and neutrality."

The following is a vivid picture of what occurs in the bombardment. Dr. Cormack was suddenly sent for to accompany one of the American *ambulances volantes*:—

"A shell had burst into the *boulangerie* and *patisserie* of M. Champion, 44, Avenue de la Grande Armée—a shop at the corner of the Rue des Accacias, and close to the Protestant Church of M. Bersier, the famous preacher. The family had just finished their meal in the back parlour, when the shell exploded among them. M. Champion received a dangerous wound on the abdomen, besides various minor contusions. His wife had her left leg carried clean off some inches below the knee, and she had a lacerated wound above the same knee. The right lower extremity was contused in many places, but not lacerated; there were numerous bleeding, but not serious, wounds on the head and face; there was a formidable flesh wound on the left arm. The poor woman was in an alarming state of collapse. This woman's sister had seven wounds in legs and arms. The shell, besides wounding these three people, killed one of the bakers, who was conversing with his master just as the shell burst. Feeling the danger of remaining in the place where the wounded were, I said that I would do the needful at once, but as for future care of any of the patients I could not undertake that, except in my own Hospital—16, Rue d'Aguesseau—where I could at once receive Madame and her infant of 8 months—a fine baby. We got her by half-past four into her bed in a private comfortable room in my Hospital. Thanks to her wonderful courage and good sense, large doses of opium, and some light nutriment, she has wonderfully rallied."

GUY'S HOSPITAL.

The Governors of Guy's Hospital, on April 19, elected E. Cock, Esq., Consulting Surgeon; T. Bryant, Esq., Surgeon; J. R. C. Davies Collay, Esq., Assistant-Surgeon.

DR. MOUAT'S LECTURE AT THE ROYAL UNITED SERVICE INSTITUTION, WHITEHALL-YARD.

A lecture will be delivered at three o'clock on Friday, April 21, by Surgeon-Major F. J. Mouat, M.D., F.R.C.S., H.M.'s Bengal Army, entitled, "A Visit to some of the Battle-fields and Ambulances of the North of France."

FROM ABROAD.—BARON LIEBIG ON SCIENTIFIC RELATIONS WITH FRANCE—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

The address delivered by Baron Liebig at the meeting held on March 28 to celebrate the 112th anniversary of the foundation of the Bavarian Royal Academy of Sciences, contains the following passage with respect to the future relations between French and German men of science:—

"The Academy will perhaps seize the present occasion to declare openly that there exists no national hatred on the part of the Germanic peoples against the Roman races. We regard the great evils which the French people formerly inflicted upon Germany as a disease, the sufferings caused by which are forgotten as soon as the remedy has been applied. The peculiar disposition of the German, his linguistic acquirements, his knowledge of foreign nationalities, and the past and present state of his civilisation, lead him to be just towards other peoples, frequently even at the risk of being unjust towards himself; and thus it is that we recognise what we owe to the great philosophers, mathematicians, and naturalists of France, who have been in so many matters our masters and our models.

"It is now forty-eight years since I repaired to Paris in order to study chemistry. An accidental circumstance drew Alexander von Humboldt's attention towards me, and a simple word of recommendation from him induced Gay-Lussac, one of the greatest chemists and physicists of his age, to propose to me, a young man of 20 years of age, to continue and complete, with his co-operation, an analysis which I had commenced. He introduced me as his pupil and his assistant into his laboratory, and my career was henceforth fixed. Never can I forget the benevolence with which Arago and Thénard received the German student; and how many of our countrymen, whether Medical men, physicists, or orientalists, could I enumerate who, like me, recall with gratitude the recollection of the efficacious support that was accorded to them by the French *savants* in the accomplishment of their scientific investigations! An ardent sympathy for all which is noble and great, as well as a disinterested hospitality, constitute some of the finest features of the French character; and these qualities will ere long manifest new life and activity on the neutral ground of science—a ground upon which the best minds of both nations should meet each other. This indissoluble fraternity of French and German *savants* will gradually dissipate that bitterness with which French national feeling, so deeply wounded by the success of a war which has been forced upon us, is filled towards us."

Professor Billroth's fifteenth letter is entirely occupied with the subject of secondary hæmorrhage as observed in gunshot wounds. He observes that, as to the mode of its occurrence, this arises more frequently from the reopening of a wound temporarily closed in a vessel than from a new aperture produced in the vessel during the suppurative process. A ball, striking an artery, carries away more or less of its substance, but the jagged tissues within the track of the wound become (as in *écrasement*) so blended together that the escape of blood is prevented. That injuries of the arteries and veins do not at once give rise to extensive coagulation of blood is shown in two of the cases formerly mentioned. If the crushed tissues of the wound-track, which close the aperture in the vessel and become fixed in their position through the fibrinous coagulation, do not mortify or get loosened by suppuration, the aperture may remain closed and healed, and the only question then will be whether the cicatrix is sufficiently firm to prevent a subsequent formation of aneurism after the vessel has again become more or less permeable at the injured spot. A rapid primary healing of this kind is, indeed, of very rare occurrence, at least in deep-seated parts; but undoubtedly it may occur, for, owing to the enormous richness of the muscular tissues in capillary vessels, there may be little, or even no, gangrenous action in the track of the wound. If, during the period in which the aperture in the vessel is only closed by the fibrinous agglutination of the tissues, any forcible separation of the wound, through movements or other mechanical force, takes place, bleeding is produced. So it is, also, when the fibrinous coagulation becomes purulent, or the matted-together tissues are separated in a gangrenous state. Bleeding may then indeed be prevented if the vessel, by means of its circular fibres, has become and remained for some time contracted into a solid cord, which, with small arteries, may easily be the case. Or the bore of the vessel at the injured spot may have become firmly closed by a solid coagulum, which may pass into the condition of a thrombus, completely obstructing the cavity of the vessel. Whether such a thrombus will permanently succeed in preventing bleeding must depend upon its solidity, the amount of suppuration around the vessel, and the vital energy of the implicated tissues. Thrombus, in the great majority of cases, is only a provisional formation, which sooner or later disappears through molecular diminution, or through absorption by the vessels which form within it and rapidly enlarge. If it retain its firmness and its cohesion to the inner wall of the vessel until the wound in front of the aperture of the artery has healed, no hæmorrhage will occur.

The second cause of secondary hæmorrhage is the production of an aperture in the walls of the vessel during the course of the suppurative process. This may occur in different modes. 1. The wall of the vessel, crushed by the projectile, undergoes partial mortification without being torn through. On the separation of the eschar, however, an aperture is produced. 2. A splinter of bone or the sharp edge of the projectile may be in close contact with the vessel, so that the pulsations of the latter give rise to a permanent friction, which ends in the production of ulceration. 3. The suppurative process, without any known reason, takes on an ulcerative character, and the wall of the vessel, softened by inflammatory infiltration, gives way. In all these cases hæmorrhage may be prevented, or, at least, delayed by thrombosis of the vessel.

Thus, hæmorrhage and large or small traumatic aneurisms may easily result from gunshot wounds. Billroth has not been able to undertake, on the present occasion, the laborious investigation requisite for the further pathological elucidation of these cases; but, from the labours of such able pathologists as Hoffmann, Klebs, Arnold, Recklinghausen, and Cohnheim, who have been hard at work in different localities, he expects important results. In the meantime he proceeds to consider what, in the present state of our knowledge, are the most certain and durable means of arresting these hæmorrhages. In speaking of styptics, he points out how rarely in hæmorrhages, which are so often accompanied by fractures, the agent can be directly applied to the aperture, and that if coagulation could be secured by its means, how doubtful its durability would be. Local compression cannot be long continued without endangering the vitality of the part to which it is applied. Digital compression of an arterial trunk is certainly a useful measure where it can be employed. Applied to the subclavian or carotid, the patient cannot bear it for long; but it is more supportable on the femoral and brachial. In the cases in which Billroth tried it, although aided by the co-operation of skilful assistants, he did not obtain any durable results, the bleeding recurring twenty-four or forty-eight hours after the cessation of the compression. Whether its influence might have proved more durable had it been recurred to again and again, day and night, cannot be determined; and, indeed, military practice is ill-suited for testing this point, seeing the difficulty of obtaining the necessary number of hands, which, even in civil Hospitals, are not always to be had in sufficient abundance. The remarkable success which has attended the employment of this means with which Vanzetti has enriched our methods of treating aneurism, proves, undoubtedly, that under certain, though certainly not clearly defined conditions, digital compression, continued for hours and days, may lead to the formation of an efficient solid thrombus. Whether such a thrombus would remain firm in all cases, or would remain so in contact with a suppurating wound, is a question not to be decided *à priori*, but by experience.

Among operative procedures, Billroth observes the seeking for and tying the bleeding vessel is the most anatomically correct; but while referring to some cases in which he performed the operation, he draws a graphic picture of the difficulty and often the impossibility of executing it in a granulating wound, owing to the friability of the vessels and their difficulty of access. In most of such cases, after much loss of blood has been incurred in the attempt, the main artery after all has to be tied. Beck, Stromeyer, and others advise a bolder resort to such ligature, and congratulate themselves on the results which they have obtained. The opinions of men of such experience, joined to the ill-success he has met with in other modes of treatment, have induced Billroth to resort to ligature of the principal trunks of the vessels at an earlier period. He is, however, not altogether satisfied with the results. The want of skill on the part of Surgeons and the fear of the occurrence of gangrene were at one time regarded as obstacles to the performance of the operation. One of these no longer exists, while the fear of gangrene was greatly exaggerated. Many Surgeons, however, still object to tying the large vessels in their continuity, on the ground that the hæmorrhage is not thereby definitely arrested, and that new bleeding takes place at the seat of ligature. The first of these objections is contradicted by the experience of the cases here recorded, as the bleeding in all these was definitely arrested until death or recovery. The second point calls for more attention—viz., the subsequent hæmorrhage at the point of ligature, or, as it is more commonly termed, the premature coming away of the ligature. Although, as a general rule, this is longer in coming away in proportion as the vessel is larger, so that time would seem always to be allowed for the acquisition of sufficient firmness and adhesion by the thrombus, yet it too often happens that the pressure causes complete or partial mortification of the walls of the vessels, which is followed by bleeding. In other cases, although the ligature has come away late, there has been insufficient solidity of the thrombus, and hæmorrhage has occurred. Still more remarkable are the cases in which dissection has shown that one or several days after the ligature even of large arteries no thrombus at all, or only a very imperfect one, has been discovered. In considering the proportion of cases in which such hæmorrhage occurs, Billroth finds that in his twenty-three cases of ligature there were seven in which it took place; and, comparing these with seven recoveries, the proportion is very large. The other twelve cases are excluded, as they died either in consequence of hæmorrhage or pyæmia, with the ligature still adhering. Such a result shows how important is further investigation into the anatomical conditions which prevail after ligature, for the purpose of clearing up some of the doubtful points which remain, and the improvement of our means of treatment. Reference is made to the copious literature upon this subject, exhibiting the great difference of opinion that has prevailed as to the agency of thrombus in the arrest of bleeding. As the results of his own investigations, Billroth regards the thrombus as becoming gradually, in place of the coagulated blood, a solid, vascular, connective substance, rich in cells; but, even thus organised, he considers it decidedly only as a provisional formation, which afterwards disappears, leaving the artery pervious, this terminating in a conical point passing into the cicatricial tissue. The excellent statistical papers which have been published in the *Archiv für Klin. Chir.* supply an enormous mass of materials for estimating the frequency with which hæmorrhage occurs after ligature of the large arteries.

(To be continued.)

Unhealthy Buildings.—The Holborn and Whitechapel Boards of Works have resolved to take proceedings under the Artisans' and Labourers' Dwellings Act. At their meetings, last week, the Medical Officers reported that some houses in Union-court, Saffron-hill, and Black Horse-court, Spitalfields, were unfit for human habitation, and the surveyors said nothing short of demolition would meet the evils complained of. The Boards have called upon the owners to show cause why the houses should not be pulled down.

Hackney District Board of Works.—Dr. Tripe, Medical Officer of Health, reported to the meeting of the Board, on Friday evening, that forty-nine cases of small-pox had occurred in the district during the past fortnight, being the greatest number in any fortnight since the outbreak of the disease; and there had been for the three weeks, ending April 8, thirty-nine deaths from small-pox. The Board also considered the report of the Sanitary Committee, in which they expressed an opinion that no effective measures could be taken for the suppression of the Clapton Small-pox Hospital. The matter was discussed at some length, and it was eventually resolved to obtain the opinion of counsel and of some high Medical authority, as to whether the establishment in question really constituted a nuisance within the meaning of the Act.

THE AUTUMN TOUR OF A DRESSER, 1870.

Part II.

As we might naturally have expected, our journey to Metz, at that troubled time, was neither direct nor speedy—in fact, our train came to a full stop on arriving at Mannheim about midnight, and, owing to the lateness of the hour, we had considerable difficulty in procuring lodging for the night. Our party, which now amounted to about thirty, had to put up with shake-downs, composed of our blankets and knapsacks, on the bare boards of the floor of the *salle à manger* of a very third-rate hotel. Owing probably to the want of bedding, we were not much troubled with any of the vermin which are generally supposed to frequent Continental bedrooms, but we experienced great annoyance from various odours, whereat, as the "divine Williams" has it, "our noses did feel great indignation." However, our sojourn at this delightful place was not destined to be of long duration, as the Herr von Sangen, the Chief of the Sanitäts Corps, under whose directions we for the present were, gave the signal for departure at 3.30 a.m. We had on leaving Mannheim to cross the Rhine by a bridge to Ludwigshafen, where we took our train to Saarbrücken.

In anticipation of the much-dreaded French invasion, this bridge, like others on the Rhine, had been mined, a fact of which I was disagreeably reminded by a stalwart Prussian sentry, who, without the slightest attempt at an explanation, violently twitched my cigar from my mouth, and stamped every vestige of light out of it. Recollecting that we were under a species of military despotism, I thought it prudent to take no further notice of this violation of my privileges as a British subject than could be conveyed in some good sound English adjectives, which did not seem to have much effect on the offending private.

This slight episode concluded, we reached our train without further adventure, and, after safely stowing away our ambulance-waggons and sick-litters, we proceeded without further adventure on our way to Saarbrücken. We had plenty of opportunities at small country stations of testing the merits of *wurst*—the national sausage—with which it is currently reported each soldier is invested as with a girdle at the commencement of a campaign. I must confess that, as we had generally to eat it raw, I never could taste it without direful misgivings as to its trichinous nature. After my experience of *wurst*, I cannot wonder at the accounts I have heard of the extent of the existence of trichinæ in the German nation.

After a prolonged delay at Neuenkirchen—a species of German Clapham Junction—we reached Saarbrücken, having to content ourselves with a horse-box as our carriage, seatless, and even strawless, late in the evening, where we had to stay for the night. Outside the station, exposed to the rain and cold, and without a covering to shelter them from either, were 1600 French prisoners, mostly Alsatian Mobile Guards and Turcos, mingled together, who looked much dejected, and who, the latter especially, were not of the sort one would like to meet in a lonely country lane at midnight.

As we had been obliged to come to Saarbrücken—*i.e*, in a horse-truck—we could not be expected to be over-nice in the matter of lodging, and consequently we were sufficiently thankful to be housed for the night in one of the sheds attached to a temporary Hospital situate in the outskirts of the town—Saarbrücken.

It may not be uninteresting to say that it is a moderately large town, of about 15,000 inhabitants, surrounded on all sides by hills, with a river dividing the old town of Saarbrücken from the new town of St. Johann.

On the following morning, about 4.30, we left this place for Forbach, and on our way through the town saw unmistakable signs of the French bombardment, from the adjacent hills, which at the commencement of the campaign signalised the Prince Imperial's "baptism of fire." The station and several other buildings of the new part of the town bore very visible evidence of the accuracy of the French artillery on this occasion—an accuracy which certainly did not characterise their subsequent proceedings.

We then proceeded to Forbach, having ensconced ourselves, as comfortably as was possible, in an open truck containing an ammunition-waggon, in charge of two sentries. By very slow degrees—that is, by going ahead for a mile or two and then stopping one or two hours—we at last reached Forbach, a town not quite so large as Saarbrücken, on Wednesday, August 24. We were here detained a few hours, and as trains came up in quick succession from the front, laden with wounded, we had numerous occasions of dressing and rendering other services, such as controlling hæmorrhage, rearranging bandages, etc., which were very gratefully received by the subjects of them. During this delay at Forbach, I noticed that at this place, as, indeed, at all the others between Forbach and Metz, the ground was strewed for yards with "charpie"—a peculiar kind of lint used exclusively by the Germans during the war. We considered it very incompetent for its purpose, as, on being removed from a wound, it gave considerable annoyance both to patient and operator in every case, from its small detached shreds adhering obstinately to the exposed surfaces, and requiring the aid of forceps for its removal. The only warm refreshment procurable here and elsewhere was bouillon and "coffee soup," for such the latter was in truth; the former is a soup composed of Liebig's extract and boiling water, which proved invaluable to all engaged, combatants or non-combatants, in the campaign.

We were again stopped on our way to Metz, at a small station five or six miles from Forbach, called Bayning-Merlbach, where we had to stay all night in trucks, exposed to a drenching rain, no straw, and with very slight covering; very fortunately, we managed to procure a sheet of tarpaulin from a neighbouring truck, which, on being placed over the roof of ours, sheltered us in some slight degree. In this delightful situation we remained seven or eight hours, nothing to eat or drink, with the exception of some exceedingly sour wine.

On Thursday morning, we proceeded as far as St. Avold, the scene of the late encounter, where we ascertained that the French peasantry, on the previous night, had been pulling up the rails and firing on trains, and had completely blocked up the line by upsetting a huge truck lengthwise across the rails. We being in an ammunition train, were compelled to go back again to Forbach, of which place I was getting heartily sick. Arriving here about 4 p.m., we managed to get a tolerably good meal and a bed in the town—which was full of German soldiers—which in some degree compensated us for our previous privations. Next morning, I am thankful to say, we turned our backs on Forbach, not to visit it again for a considerable period. We proceeded—bound for Courcelles, a place we were not destined to reach.

About twenty miles further on, we reached Falquemont, where we had to stop for the night, sleeping on this occasion in our second-class carriage very comfortably, the rails having been torn up, and being in process of repair next morning. We had to stay here several hours. Our breakfast consisted of *schwarz-brot* and *schnapps*, both of the vilest quality; and, after discussing it, we occupied ourselves—as at Forbach—in attending to the filthiest of wounds, which previously had only been dressed hurriedly on the battle-field. On leaving, our orders were to proceed to Remilly, where we arrived late in the evening, and where we learnt that we should have to go on the following Monday morning, in company and under the protection of one of the *Proviant Kolumnen* of the 9th Armée Corps, which was starting for the lines of investment round Metz.

We occupied ourselves on Sunday, at Remilly, by visiting the various extempore Hospitals. The first we went over had been improvised in the national schools of the town, and was devoted entirely to the most severe cases of acute dysentery, of which there were about 100 in two rooms. The place was extremely ill-ventilated, and under the charge of but one Assistant-Surgeon, who hailed our advent as a god-send. His treatment—opium, in moderate doses—of these patients had proved ineffective; the average of mortality was three per diem. As he eagerly solicited any suggestions, we recommended the remedy most in vogue during the American civil war, of which the following is the prescription:—"℞ Bismuthi alb., gr. x.; pulv. kino co., gr. x.; pulv. acaciæ, gr. x. Ft. pulv., M. Sig.—The powder to be taken three or four times a day without moisture." This powder was introduced amongst us by Dr. Charles Mayo. We had not much time to learn the result of our suggestion on this occasion, as we had to visit the other Hospitals in the town.

The next was in the house of one of the principal residents, who, on the outbreak of hostilities, had abruptly left the place. It was devoted to the most seriously wounded cases which we had as yet seen, and was under the charge of a Staff-Surgeon-Major (*i.e.* an Ober-stabs-arzt) and two Assistant-Surgeons; we accompanied them on their morning round, and witnessed their mode of dressing, with which we were not by any means pleased. The poor wretches who had been severely wounded a few days previously at the front, on their arrival here, especially those who had experienced compound comminuted fractures of the limbs, had the injured parts cased entirely in plaster-of-Paris bandages. The plaster was applied in layers over cotton placed next the skin. The outlet over the wound was exceedingly small compared with the size of the wounds, and these bandages never were changed, hence the pus, being unable to escape in sufficient quantity, burrowed in the neighbouring structures, necessitating, in order to save the patient from pyæmia, free incisions along the whole course of the limb; and in many cases this proceeding was fruitless, for the unfortunate victims invariably died of pyæmia. I saw enough of the use of this bandage in compound fractures to make me view it with the utmost condemnation. This room was extremely ill-ventilated, owing, I conceive, to the prevailing objection among Germans to fresh air in their houses, the atmosphere being so bad that, to use a common expression, it could almost be cut with a knife. Visiting another room, matters were even worse; in fact, I fancied for a few moments that I had entered a ward devoted to gangrene of the lung. In it was a patient who had received a severe gunshot wound, the ball penetrating the anterior wall of the thorax of the right side between the third and fourth ribs, and lodging at the bottom of the pleural sac. This unfortunate man was treated thus: the officiating Surgeon, after pouring about a pint of a solution of Condy's fluid and warm water into the orifice, proceeded with the aid of an assistant to hold the patient over the side of the bed while he coughed out of the orifice the mingled fluid and pus from his pleural sac!

In another room was an interesting case, where both plates of the vertex of the skull—about the size of a half-crown piece—had been removed by a fragment of shell, leaving the dura mater and the pulsations of the brain exposed; no indication of hernia cerebri. This case was treated with simple water-dressing of charpie. No carbolic acid was used at this Hospital. We saw several other cases which need no special mention, with the exception, perhaps, of one where the ball had penetrated both walls of the thorax, entering the subclavian fossa and making its exit through the lower border of the scapula. This patient, at the time I saw him, was dying of pleuro-pneumonia.

Leaving this place, we proceeded to another private house, which, under the direction of Professor Benecke, had been fitted up as a temporary Hospital. The Professor, who spoke English like a native, took us round his cases, giving us a short and lucid *clinique* of each. Of the arrangements here I cannot speak too highly, the rooms being well ventilated, and the cleanliness as well as the health of every patient being well regarded. Here, as elsewhere, valuable assistance was rendered by numerous Sisters of Mercy. Professor Benecke had collected in one room between twenty and thirty of the most interesting cases of gunshot injuries to the head and neck, one of which deserves mention. The ball had entered the face behind the angle of the lower jaw, and had passed through the antrum and floor of the orbit, carrying away the corresponding eyeball. As the injury had been but recently inflicted and the parts were contused, no diagnosis could be formed of its extent, nor any favourable prognosis.

Much pleased with our visit and our courteous guide, of whom we entertain the most respectful memory (Professor Benecke is a civil Surgeon, and was doing voluntary service), we took our leave, and employed ourselves for the rest of the day attending to the wounded passing through the railway station.

Monday morning, at 3.30, we were up and at the appointed rendezvous, and our departure did not take place before past five o'clock. While waiting for the waggons, on which we were not allowed to travel, we were drenched through by a heavy shower; we ascertained that we should reach, after two days' march, St. Marie-aux-Chênes, which was the head-quarters of Prince Louis.

We reached Corny, a town on the Moselle—some six miles south of Metz—that evening, and were fortunate enough in getting some properly cooked meat and some tolerably good wine, which possessed the true flavour and bouquet of Moselle wine. This night we had to bivouac with the column on anything but dry ground. However, we managed to build up a good fire with vine sticks, which we were compelled to steal from the nearest vineyard, and so comforted ourselves for a good night's rest.

Professor Haidinger, one of the most eminent of our European mineralogists, has recently died at Vienna.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending Mar. 11.	Mar. 18.	Mar. 25.	April 1.	April 8.	April 15.	April 15. Sent to Hospital.
West—							
Chelsea	6	6	5	6	?	—	—
St. George, Hanover-square	7	19	10	11	12	16	15
St. Margaret and St. John, Westminster	27	?	?	?	?	—	—
St. James, Westminster	3	8	4	4	8	8	6
North—							
St. Pancras	69	63	65	44	122	107	—
Islington	23	34	49	26	45	58	27
Hackney	41	31	24*	29	31	—	—
Central—							
City of London	17	13	13	13	7	16	8
St. Giles-in-the-Fields	10	?	5	8	?	11	7
Holborn	3	3	2	3	4	8	7
St. Luke's	27	18	12	25	20	20	16
East—							
Whitechapel	32	15	33	15	19	14	?
Poplar	?	?	?	11	?	—	—
South—							
St. Mary, Newington	19	?	28	23	27	34	22
St. Olave, Southwark	9	1	11	5	3	3	1
St. George-the-Martyr, Southwark	17	5	?	9	19	30	9
Lambeth	28	33	33	17	32	24	37
Clapham	17	29	22	13	40	28	16
Battersea	13	?	?	?	?	—	—
Wandsworth	?	3	5	10	13	6	3
Putney	1	?	?	?	?	1	1
Streatham	?	2	3	3	4	7	1
Camberwell	14	13	4	4	?	—	—
Greenwich	?	?	—	—	—	—	—
Lewisham	16	2	?	2	4	—	—
Plumstead	1	4	6	4	19	5	—

* Return imperfect.

FOREIGN CORRESPONDENCE.

FRANCE.

The Medical Profession during the Prussian Siege.

Paris, April 8.

After careful inquiry and investigation as to the part taken by the Profession and the intelligent persons of Paris in general during the late siege, I find, much to my satisfaction, that their conduct in caring for the sick and wounded has been most admirable. All the large public buildings, the Luxembourg, the Tuileries, the Grand Hôtel, the Hôtel du Louvre, La Belle Jardinière, etc., etc., were placed at the disposal of the ambulances. The greater part of the rich inhabitants of the city, who remained, took wounded into their own dwellings, where, though food was worth its weight in gold, everything that money could purchase was provided for them.

As regards the Medical and Surgical staff, their devotion and self-denial during the siege are worthy of the highest praise. On the days on which battles were fought, or the nights following, the whole *personnel* of the Hospitals was at work, performing the necessary operations and dressings. It was from exposure of this kind that we lost Dr. Cocteau, one of our young and distinguished Hospital Surgeons, who contracted pneumonia in passing an intensely cold night, after the battle of Champigny, at the St. Antoine Hospital, which establishment received no less than 1200 wounded on that night. All the Hospital Surgeons, without exception, had, in addition to their ordinary duties, three or four ambulances to attend to; it was also upon them that devolved the services of the military Hospitals, such as the Val-de-Grâce, the Gros Caillou, etc., of which the Surgeons were absent since the commencement of the war. The Professors of the Faculty held their consultations daily, each in a certain district of the city, with the younger Surgeons left in charge of the wards, thus controlling and deciding all grave cases in the ambulances of their quarter. Even the veterans, for many years retired from the Hospitals—MM. Ricord, Blache, Brignet, Guérard, and others—wished to pay their tribute in those sad circumstances, and give proof of their zeal by placing themselves at the disposal of the ambulances. Dr. Ricord, president of the Ambulance de la Presse, though 70 years old, was present at every engagement, picking up and dressing wounded under heavy fire. As to the Physicians of the arrondissement, they, too, did their duty; while the older ones attended the ambulances at the different Mairies, the younger took service in field battalions, where a goodly number met death—among others, Dr. Cogrelette, who was killed at the battle of Buzenval while attending a wounded soldier.

In the presence of such untiring devotion of every description on the part of the Paris Medical Profession, it is, indeed, surprising that their conduct should have given ground for the least criticism from abroad. If blame is due to any part of the Paris population, it should fall to the *personnel* of the so-called "Military Intendance," who, from the beginning to the end of the war, in Paris and everywhere else, have displayed a revolting carelessness and incapacity; thus, it has occurred many and many a time, that the Intendance sent wounded to ambulances remote from large Hospitals, without having made the least preparations for their reception, and sometimes even without having taken the trouble to inspect the localities beforehand. Fortunately, however, and at the request of the Profession, the Hospital administration charged itself with providing and managing the greater number of the ambulances, thus supplying the defects of the Intendance.

And I find that the good population of Paris, and especially the Medical corps—and in this the whole press is unanimous—proved itself equal to the circumstances by their patriotism and devotion to the sick and wounded during the whole duration of the siege; and if sometimes the Hospital administration failed, it is upon the Intendance, and it alone, that the blame should fall.

(*From our own Correspondent.*)

How Medicine Flourishes under the Commune.

Paris, April 19.

In the present state of affairs, it would be rather a difficult task to give you any Surgical or Medical news from Paris, the disorder being such that really there is little going on to interest the English reader. But I may say something of the doings of the Commune and the manner in which that body manages, or rather expects to manage, Medical schools, Hospitals, ambulances, and the like; for you must know that the Reds not only propose revolutionising state and politics, but everything appertaining to learning and education as well. Since the Medical School was closed, because none of the Professors were willing to be dictated to by M. Naquet, the new Dean appointed by the Commune, a decree has this day appeared, so that education might not suffer, calling upon the Physicians of each district to assemble at their respective Mairies on Saturday, April 22, and elect two delegates from every district; for the Medical students to gather at the School of Medicine on the same day, and elect ten delegates; and for the so-called *Professeurs libres* to consult with their colleagues, Drs. Dupré and Rambaud, two disappointed private teachers of anatomy, and elect three delegates. These chosen representatives, of which the number (if full) will be thirty-three, are then to meet the following day and draw up a plan of reorganisation for the Medical School, which plan shall afterwards be submitted to those members of the Commune now representing the former *Ministre de l'Instruction Publique*, and, finally, to be discussed and voted upon in a public meeting by the whole Commune. Your readers will laugh at this decree, as we do over here; and if in all the districts of Paris the gathering of Physicians on Saturday next will be as fully attended as I have good reason to believe the one I am living in is sure to be, great difficulty will arise from the outset in finding the two called-for delegates.

Not a day passes by but what, among the thousand-and-one decrees which the Commune is so liberal with, we, the Medical Profession, do not come in for our share too. Of course, no honest man takes notice of them. Field Surgeons are in great demand, and the Dictators of the Hôtel de Ville tell us that when every citizen in the battalion is present, ready and anxious to fight the Monarchists, the Surgeon and Assistant-Surgeon are invariably absent, and therefore a gentle warning has been issued to the Medical staff, who, some months ago, in an honest war, were attached to battalions which are now figthing for plunder, that, in case of a like recurrence, they are to be considered deserters, and shall be punished as such. A *confrère*, who, at the defeat of Asnières, the day before yesterday, assisted some of these wounded ruffians, received abuse in return (of course, after the work was done), and was even called *un Prussien*, a name which, by-the-bye, is now considered the greatest insult that could be offered a Frenchman. Seeing that the reorganisation of the Medical service of the National Guards is entirely deficient, the Commune of Paris decrees:—

"1. To form a battalion of Medical officers for the field, composed of 120 Doctors and Health Officers, and 400 Medical students.

"2. This battalion shall number six companies, each company to have under its orders one apothecary-waggon, six ambulance waggons, and 120 *infirmiers*, carrying thirty stretchers.

"3. A Medical station shall be created in every arrondissement of Paris, provided with two Doctors. This station is charged with delivering certificates of exemption, and with verifying the more serious cases of illness at home.

"4. All Physicians and students, from 19 to 40 years of age, are thus incorporated into the field battalion.

"5. Medical officers above that age shall alone be admitted to serve at the district stations.

"6. Doctors are to receive pay of captains in the field—7 frs. 50c.; Health Officers that of lieutenants—5 frs. 50c.; and students, 5 francs a day.

(Signed) "Drs. Pariset and Rastoul,
"Members of the Commune."

It is useless to add that the names of these honourable colleagues, as well as those of Drs. Herzfeld and Courtillier—one Surgeon-in-Chief at the Hotel de Ville, the other Principal Surgeon of the Federal Army—will be strangers to the English reader, as well as they are unknown to any of us. But I can inform them that Dr. Herzfeld is a graduate of the Jena College, and, therefore, not allowed to practise in France, and that Dr. Courtillier is a distiller of perfumes, and, consequently, not much better read in Medicine.

Stealing and robbing being *à l'ordre du jour*, the Hospitals, of course, had to come in for their share. Fortunately, these establishments never contain great sums, and as soon as the proceedings of the Commune became known to the executives of the *Assistance Publique*, they managed to make their way to Versailles, cashbox and all, containing over 1,000,000 francs. Thus far the Directors of Hospitals have remained unchanged; but, judging from a recent circular sent them by the Commune, one would think a pretext is being looked for (if, indeed, they need one) to have them removed. After the fight at Clamart Meudon and Châtillon, ten days ago, wounded men arriving at the Hospitals seemed to have been obliged to wait for some little time in the corridors or the courtyards before being carried to the wards and placed in beds—a delay quite natural from the great number of wounded which these establishments were obliged to take care of all of a sudden and without notice. And such a delay is the more excusable if we take into consideration that the ambulance waggons of the Commune make it a point to transport the wounded at night, so as not to frighten the National Guards or let the Parisians know that they have any wounded at all. But to those who visit the Hospital, secresy of this kind can be of no avail. The very night that the Versailles troops attacked the forts on the south side of Paris, the Hospital Beaujon alone received sixty-four wounded, although the next morning Citizen Cluseret, the acting Minister of War, had it placarded all over the city that the losses of the National Guards only amounted to "one killed and two wounded!" Funeral processions, draped in huge red flags, can be met with in the streets of Paris at any time, and, indeed, they are rather too frequent to allow reports like the above to be believed, even by the most credulous. The bringing out of a train of ambulance waggons in day-time came near being a serious matter for Dr. Chenu, the Director of the International Society for the Wounded. The Commune found that such display might discourage the troops; and hence the arrest of Dr. Chenu and his son at the Conciergerie. They were taken there in the morning; but when night came, and finding that no preparations had been made for food or bedding, they were discharged without a hearing.

The Ambulance de la Presse has received, since the beginning of the rebellion, 2400 to 2500 wounded. Every Hospital has received a greater or less number, and many of them have been taken to their homes, so that the whole number of National Guards wounded cannot amount to less than 5000. As to the dead, it is difficult to form anything like a correct estimate; but, judging from the Beaujon Hospital, which I mostly visit, their number must be considerable; and specially do I find their percentage large: out of 203 entries there are 48 deaths. Among the wounded in that establishment are three women, two of them *cantinières*, the other a Belleville woman, wounded while fighting in line with the men.

Living, as I do, in the Arc de Triomphe quarter, it is of daily occurrence to hear of half-a-dozen innocent persons, often women and children, killed or wounded by shells from the Versailles batteries. The farthest that these missiles have come, thus far, is to 163, Boulevard Haussmann. Provisions have gone up wonderfully, and, since the Versailles forces are carrying on a regular siege, it is not unlikely that many an article of food will be wanting before order is restored.

GENERAL CORRESPONDENCE.

INSTRUCTION IN MENTAL DISEASES AT EDINBURGH.

LETTER FROM DR. DYCE DUCKWORTH.

[To the Editor of the Medical Times and Gazette.]

SIR,—Inasmuch as your journal is the medium for introducing Professor Laycock's lectures on Medical Psychology to the Profession, and as his teaching of this subject has lately called forth some controversy in another periodical, I shall be glad if you will permit me, as a former member of Dr. Laycock's class, to bear my humble testimony as to the great value of his course.

The study of mental pathology, according to the Professor's method, was certainly rendered more attractive to the general student than would otherwise have been the case, and a wide scope was given to the subject, which could not have been secured by mere descriptions of morbid mental states. In fact, the teaching was most philosophical, and of such a character as could only emanate from one who was at once both a profound thinker and acute observer, and also a first-rate practical Physician. The systematic instruction was subjected to clinical tests at an asylum which we visited regularly, and, indeed, a directly practical bearing was maintained throughout the course. I believed at the time, and I think so still, that I was fortunate to be instructed by one who was so far in advance of his day as a thinker and teacher, and I feel bound to acknowledge here the assistance I have derived in the ordinary practice of Medicine from an application of Dr. Laycock's principles, especially as set forth in his lectures on Medical Psychology. I know, also, that others can offer similar testimony upon this point.

I say nothing of the increased opportunities now afforded in various schools for the study of insanity, but I beg to remind your readers that Professor Laycock was amongst the first Physicians in Great Britain who systematically and clinically taught this subject, and the Edinburgh School owes him—and, I believe, tenders him—a recompense of gratitude for his steadily and successfully maintained efforts.

April 17. I am, &c., DYCE DUCKWORTH, M.D.

[To the Editor of the Medical Times and Gazette.]

SIR,—A controversy having arisen in another journal between Professor Laycock and others upon this very important subject, I am induced, as an old Edinburgh student, to forward you these few remarks from practical experience. Professor Laycock's rival correspondents "J. B. T." and "B. W." are both of opinion that Psychological Medicine should be included in the course of lectures on the Practice of Medicine. In the first place, I would remind those gentlemen that only six months' attendance at lectures on the latter subject is required for the degree, and it certainly is impossible, considering its great extent, that it could be forced into a smaller space of time. Doubtless, the difficulty could be surmounted by obliging the student to attend two courses on the Practice of Medicine; but even then I question whether the psychological teaching would be so well carried out and arranged as it is at present, for during the summer session students have fewer classes to attend, and consequently more spare time; the season of the year is also better adapted and more agreeable for travelling to the different asylums for clinical instruction. With regard to this class, I can only say that, among the intelligent of the Edinburgh students, it is more highly appreciated than any course delivered in the University. It is difficult to understand, as "J. B. T." suggests, that the Physician of the present day should be contented with simple descriptions of insanity as it exists—as a bodily disease; and even then he can have but a vague notion unless he is, to a certain extent, learned in metaphysics. It is needless to refer to the words quoted by "J. B. T." from Griesinger, Professor Laycock having sufficiently commented upon his remarks in a letter to the *British Medical Journal* of the 8th inst., and in which he, doubtless, thoroughly convinced that gentleman of his error. In conclusion, I must add that it is indeed lamentable, in the present state of Medical education, to find gentlemen who possibly hold high positions content themselves with the dogmas of past ages. I am, &c., J. T. S.

April 17.

HAMMOND'S "QUARTERLY PSYCHOLOGICAL JOURNAL."

LETTER FROM DR. GEORGE E. DAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you permit me to state, through the medium of your pages, that, having been requested to contribute a quarterly letter on the Progress of Psychological Medicine, Anthropology, and Medical Jurisprudence in this country to the *New York Quarterly Journal of Psychological Medicine* (edited by Dr. Hammond), I shall esteem it a great favour if gentlemen writing on these subjects will kindly forward to my address any memoirs, books, etc., that they may wish me to notice?

With regard to books, I must request it to be distinctly understood that they will be duly returned to their respective authors, and that they cannot be accepted as presentation copies. I am, &c.,

GEORGE E. DAY, M.D., F.R.C.P.,
Late Professor of Medicine in the University of St. Andrews.

Furzewell House, Torquay, April 14.

ON THE TEMPERATURE OF THE BODY IN TETANUS.

LETTER FROM DR. JOHN W. OGLE.

[To the Editor of the Medical Times and Gazette.]

SIR,—When bringing before the Clinical Society, in October last, a case of recovery from tetanus,(a) I drew attention to the fact that, during a considerable period, and at a certain stage of the attack, the temperature of the patient, in addition to its being unusually high, was found to be augmented in the evening. I was thus led to offer the suggestion that possibly this diurnal variation in a case of true tetanus might be found to obtain generally or even universally. Since then, I have had no opportunity of making further research as to temperature in this disease; but Dr. W. W. Keen, of Philadelphia, has sent me an account of a case of tetanus which was under his care(b) in St. Mary's Hospital in that city, in which for several days, during a part of the illness, the evening temperature was markedly higher than in the morning. Dr. Keen gives a table showing the diurnal state of the pulse, respiration, and temperature, and observes that he does so in response to my suggestion above alluded to, and for comparison with other cases.

Encouraged by this timely contribution on the part of Dr. Keen, I am induced to ask such of the readers of your columns as may meet with cases of tetanus if they will have the goodness to note and record the morning and evening temperature of such patients with a view of testing the suggestion. Especially, I suppose, might regularity of variations as to temperature be anticipated in those cases which, according to some observers, have more or less of an intermittent or periodical character; and, if variations are observed, it may be that fluctuations may exist which are peculiar to one or other form of tetanus. It would be a point of interest to inquire further upon what such variations depend, and a question to be asked whether they have any relation to such changes in the texture of the spinal cord as are found to have come on during some attacks of fatal tetanus. I am, &c.

JOHN W. OGLE, M.D.

(a) *Medical Times and Gazette*, October 22, 1870.

(b) *Medical Times* (Philadelphia), March 1, 1871.

THE POLICY OF GARRISONING INDIA AND OTHER WARM CLIMATES BY IMPERIAL TROOPS.

[To the Editor of the Medical Times and Gazette.]

Sir,—Supposing for a moment that the physical condition of the men composing it has anything to do with the efficiency of an army, and that the object of our legislators is not merely to have so many units on paper, called men, perhaps the question might be asked whether it would not be an improvement on our present system of one Imperial army for home and abroad in times of peace, to have two armies, one for the United Kingdom in times of peace and for foreign service (especially in Europe) in times of war, and another army, totally distinct from it, for the garrisoning of India, our colonies, and other foreign possessions, especially for those situated within the tropics, or bordering upon them? Surely, most people will agree that a man who has served several years—say even five or six—in a hot climate, is not fit for a year or two, after his return to Europe, to endure the hardships of a campaign in the depth of winter. Can we always insure, to regiments returning from India and other hot climates, these one, two, or three years in comfortable English barracks? Supposing that war breaks out suddenly between ourselves and Russia, for instance, would Government not probably recall every man that could be spared, or who it was thought could be spared, from India, etc., etc.? And how would these men get on in a campaign against Russia in the snow? Fancy fighting that power with an army partly composed of tropical invalids!—for invalids those who have spent years in a warm climate are, as far as their power of standing wet and cold is concerned. Excellent service they would do if left in a climate to which their constitutions had become assimilated; but not all at once—if, indeed, ever—in a cold, damp country. Imagine a dozen regiments collected from such places as the East and West Indies, China, and Ceylon, and sent at once to face such a winter, on a campaign, as the Prussians have just gone through. What would be the death-rate? How many really effective men would remain out of the twelve regiments at the end of the first month? It surely would be very much better if all idea of holding our tropical possessions, if not our other foreign possessions (hardly any, except Canada, knowing what frost means), by Imperial troops were given up, and men for these places specially enlisted. It probably would not be difficult to form a local army for India; and why not for other places? If the thing ever is done, let it be done thoroughly. Numbers of men who have served ten or twelve years in the East Indies (and who are probably about as fit to stand a campaign in an European winter as a Hindoo) would volunteer for a Local Indian European Army at once. They have become accustomed to the country, and like it; and first-rate soldiers while in a hot climate they are. Some men at home fancy they would like the East, and would enlist for service there. By getting the one class into a tropical army we should secure the services of men whose constitutions had undergone the change which long residence abroad in hot countries in most cases produces (or, at any rate, if there be no such thing as acclimatisation, they have proved their power to live in a warm climate), while ridding the Imperial army of those who would probably be useless for a winter campaign in a cold climate. On the other hand, many who would not enter our home forces would enlist for the troops for India especially. If all the Imperial troops in Hindustan and other hot countries were recalled, those wishing to remain being allowed to volunteer for the local armies, it is probable that we should find that a very considerable number would so volunteer, and, with the addition of recruits from Europe and India, a tropical army could be got together in a very short space of time, while by the recall of the present Imperial troops serving abroad, many a constitution would be saved from becoming thoroughly assimilated to that possessed by the natives of the tropics. India already possesses a local Medical, a local Commissariat Department, local European officers for her native army, and local officers belonging to the large Indian Staff Corps employed in various kinds of duty. Why not make everything local? Why have two distinct Medical Services—the British and the local? Would it not save that over-taxed country something to hand over all Medical duties there to the local service, and recall the British Service, who, with increased land forces at home, might find their present numbers none too great? If either Medical Services must be increased, let it be the Indian, and let it take over all the Medical duties of that country. Surely this would be a more simple plan than the much-talked-of amalgamation. The West Coast of Africa has a local Medical Service. Could it not be developed into a general tropical service out of India or into a colonial corps? The constitutions of officers, strange as it may appear, become fitted for a hot climate, or, at any rate, unfitted for hardships in a cold one, much in the same way as those of the men. Hoping that these views may be considered sound, and that the nation may be spared the spectacle of tropical soldiers breaking down by the thousand in the next winter campaign in which we may become engaged in Europe or America,

I am, &c., X. X.

REPORTS OF SOCIETIES.

◆

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 11.

Thomas Curling, F.R.C.S., etc., President, in the Chair.

Dr. Alexander Silver read a paper

ON A CASE OF RETROGRESSIVE LABIO-GLOSSO-LARYNGEAL PARALYSIS.

The patient, W. G., was a man, aged 53, by trade a carriage-smith, twice married, and temperate. He had been generally healthy, but in his history there were certain facts pointing to syphilitic infection. He had previously been an in-patient at the Middlesex Hospital for incomplete right hemiplegia and left facial palsy, with difficulty and indistinctness of speech. He was gradually recovering, when he was again seized and brought to Charing-cross Hospital, where he was seen by Dr. Silver. On the morning of January 5 he was able to swallow his breakfast and to speak indistinctly. By noon on the same day he could neither speak nor swallow; the right corner of his mouth was drawn downwards, and an abundant tenacious saliva flowed from it. When admitted, his right eyelid drooped, and his mouth was dragged over to the right side; his lips were thick and blubber-like; and from the depressed corner of his mouth flowed an abundance of thick viscid saliva. He could not close his mouth, even imperfectly; he could not protrude his tongue beyond his teeth. There was some degree of paralysis of the soft palate, for his respiration was snorting; but food or drink did not regurgitate through his nose. His intelligence was perfect, but when asked to speak, only the rush of air through the open powerless larynx could be heard. He had complete command over his limbs; he could lift both legs off the bed, and smartly withdrew either when the sole was tickled. His senses were perfect, but dull. His bowels were obstinately confined. His breathing was very imperfect and shallow; respirations 36 a minute; pulse 120, and very feeble. His appetite was unimpaired, and his power of taste uninjured; for a time he was fed solely by the stomach-pump. Notwithstanding the quick pulse and rapid respiration, his temperature for long remained at 97° in the axilla. The breathing was mostly abdominal, but there was slight action of the intercostal muscles. Expiratory power was most deficient. From the period of his admission up to the present time the patient has continued to improve in every respect. As to treatment, iodide of potassium was given in scruple doses three times a day. Occasional blisters were also applied to the back of his neck; and latterly localised electrisation was employed to exercise the paralysed muscles, which responded to the stimulus with unusual facility. The case was called *retrogressive*, to contra-distinguish it from the *progressive* form of the malady, to which alone Duchenne would limit the name of *true* labio-glosso-laryngeal paralysis. This form tends to get well, whilst that referred to by Duchenne ends invariably in death.(a) The name is the more appropriate as the case in many respects closely resembles one of the progressive variety read backwards. The state of this patient seemed, when first seen, identical with that of one suffering from the progressive form of the disease just before its fatal termination. At any moment the patient might be carried off, as if the case were progressive; but the tide once fairly turned, there was a chance of recovery, however gradual. These different morbid conditions evidently depended on lesions of certain nerve trunks or roots. Thus the paralysis of the lips would imply paralysis of a portion of the facial on both sides, but this nerve was apparently more affected on the left side than on the right, since the mouth was drawn to the latter. Again, the paralysis of the muscles of mastication implied loss of power in the motor branch of the trigeminus. The paralysis of the tongue—that is to say, his inability to protrude it beyond his lips—would imply paralysis of the hypoglossal. The inability to swallow, and the respiratory and cardiac complications, pointed to the implication of the vagus; whilst the loss of voice was due to paralysis of the cerebral portion of the spinal accessory. It so happens that one section of the medulla oblongata made and figured by Dr. Lockhart Clarke illustrates this to a nicety. In it are displayed the hypoglossal and spinal accessory springing from their nuclei, and lying between those and the central canal, the cut band of fibres constituting the long root of the facial. Injury to the medullary substance at this level would inevitably occasion more or less loss of voice, both as regards articulation and phonation, with paralysis of the orbicularis oris. Higher up, where the hypoglossal nucleus has almost disappeared, there is to be seen another descending band, closely connected with the descending band of the facial, at this level greatly increased in bulk. This new band constitutes the descending, or motor, root of the trigeminus, which, speaking broadly, presides over the muscles of mastication, and which (for it has been traced downwards to the level of the lower portion of the olivary body) is thus brought into exact accord with the facial and hypoglossal. At first, the most dangerous symptoms were cardiac and respiratory, and this imperfect action of the heart and lungs is exactly what follows section of the pneumogastrics in one of the lower animals. Their inhibitory action on the heart is thus removed. Here, therefore, the nerve affected would seem to have been the vagus, and that, too, at its nucleus rather than in its course. Finally, as to the saliva, a partial paralysis of the corda tympani, and a withdrawal of its influence from the sub-maxillary gland, might, by overturning the normal balance between it and the sympathetic, produce a flow of thick and tenacious instead of normal saliva, and so relegate the phenomenon to the same site as the others—that is to say, a minute space on the floor of the fourth ventricle and upper portion of the medulla oblongata.

(a) For a sample case of the latter, see the *Archives de Physiologie, Normale et Pathologique*, for July and August, 1870.

Dr. Drysdale said that in syphilitic patients there was often hemiplegia and loss of speech. Such a case had been under his care not long ago. He thought there could be no doubt of the syphilitic nature of the present case. He thought the lesion would be the result of a soft deposit, not of a bony node.

Mr. Barwell had seen several of these cases with Duchenne. In some, one side was affected more than the other. He asked how certain muscles of mastication remained unaffected, whilst others were so early in the case.

Dr. Broadbent concurred with the previous speakers in their high estimation of the value of the communication. He agreed with Dr. Silver that the group of symptoms met with in labio-glosso-laryngeal paralysis was indicative simply of lesion in a certain part of the medulla oblongata; and this, though usually degenerative in character, might be due to other morbid changes. Duchenne and Trousseau, in prefixing the term progressive, and in insisting on a certain definite course as a feature of the disease, had, as in the case of locomotor ataxy, diverted attention in some degree from the endeavour to fix upon the exact seat and nature of the lesion, which was the really important question in affections of the nervous system, by setting up a type to which cases were to be referred. In a case which had been under Dr. Broadbent's care for some time, there were all the symptoms described by these observers; but the access of the paralysis was sudden, and there was little subsequent change, facts which pointed to hæmorrhage as the probable cause. He also differed from Duchenne in the interpretation of some of the symptoms. The respiratory movements are impaired in these cases, and, according to Duchenne, expiration is especially enfeebled. Expiration is, however, mainly due to the elasticity of the lungs, partly, also, to the elasticity of the thoracic parietes, very little to any muscular action; and in labio-glosso-laryngeal paralysis, the feebleness of expiration is proportionate to, and consequent upon, the feebleness of the antecedent inspiration. Coughing and sneezing, which are instanced as expiratory actions gravely impaired, are rendered impossible by the impossibility of closing the larynx and fauces, an act which is necessary for the production of the explosion of the cough or sneeze. While accepting generally Dr. Silver's admirable demonstration of the seat of the lesion, Dr. Broadbent considered it probable that it involved an elongated longitudinal tract along the middle line at the back of the medulla, rather than a limited transverse segment. The nuclei of the motor nerves involved—the spinal accessory, hypoglossal, facial, motor division of fifth (the last more deeply situated)—succeed each other from below, upwards, around the spinal canal, and alongside the middle line of the floor of the fourth ventricle; and he did not see how they could all be implicated at any one point, especially without affection of some sensory nucleus laterally situated at the same level in the medulla. It was more difficult to decide what was the nature of the morbid change; it could not be degeneration, since the patient was recovering. The probable alternatives were, as Dr. Silver had said, hæmorrhage and syphilis, and each presented difficulties. Possibly there might be a small blood-clot in the upper end of the spinal canal and in the groove along the middle line of the floor of the fourth ventricle.

Dr. J. Harley remarked on the distribution of the disease. In the earlier history of the case the motor centres were affected, and apparently were so when the present malady came on. It would be worth while, therefore, to take into consideration the possibility of general softening.

Dr. Silver, in reply, thanked the Society for the reception his paper had met with, and especially referred to Dr. Broadbent's able criticism. He hardly thought, however, the explanation given by Dr. Broadbent, as to site, was correct, as parts not immediately on the surface of the ventricle were affected. With regard to Dr. Harley's criticism, he pointed out that the perfect intelligence and perfect sensation of the patient militated against the notion of general softening.

Dr. Robert Lee read a paper "On Amputation of the Cancerous Breast." The object of this communication was two-fold—first, to describe a case in which a woman, from whom whom both mammæ had been removed, was delivered of a child; and, secondly, to point out the different opinions of eminent Surgeons and Physicians as to the desirableness of amputating the breast in cancer, the danger of the operation, and the frequency with which it is needlessly performed.

Mr. Spencer Wells asked if the tumour weighing a pound and a half was cancerous.

Dr. Lee said the tumours removed were not cancerous. True cancer always returned, and these had not. Breasts used to be freely removed in Edinburgh; most of the patients recovered from the operation, but many again returned, and some died in the country. Amputation was no cure for the disease.

Mr. George Cooper was anxious to hear an expression of opinion as to the propriety of the operation. His experience was that cancer returned outwardly or inwardly. In one patient on whom he had operated two years ago, the disease had not yet returned.

Dr. John Harley did not remember a single case of recovery; he did not even think the operation prolonged life.

Mr. Barwell was of opinion that no single individual could say decidedly whether or not the operation was beneficial. Statistics could alone prove that, and they showed the operation prolonged life. After five years without return, the patient was safe. He knew two cases of ten and seven years' standing respectively.

Mr. Hulke felt bound to say that he never hesitated about the operation when it could be done fairly. It was not a final cure, still it prolonged life, and greatly lessened suffering, both mental and bodily.

Mr. Birkett said people ought to have full histories before publishing cases. Dr. Lee's first case was not of the slightest value, nor had it any bearing on the discussion. Patients often came saying they had cancer, when they had nothing of the kind. When the whole gland was not removed, pregnancy would naturally cause the portion retained to enlarge. Statistics showed that, when treated with escharotics, in all patients over 40, the disease returned. By judicious operation they might do all Mr. Hulke said. He knew of some living ten years, many from five to ten years after operation, even when the breast had been ulcerating before removal. Of all operations in Surgery, amputation of the breast was the most successful. There was not a greater mortality than 5 per cent. at Guy's. He himself had only lost one patient.

Mr. J. B. Hill agreed with what had been said. He knew a patient who had been operated on fourteen years before.

Dr. Lee said Mr. Paget's statistics showed a mortality of 10 per cent. He himself had seen people die from the effects of the operation.

We (says the *Mechanics' Magazine*) may hope to see water-pipes, not only conveying water, but filtering it at the same time, since it is found that iron prepared in a spongy state, by calcining finely divided iron with charcoal, is a superior deodoriser to animal charcoal. Sewage water passed through a filter of spongy iron is completely purified. A spongy-iron filter renders water beautifully transparent, and apparently free from organic matter.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, APRIL 15.

DR. DRUITT, President, in the Chair.

A CONVERSATION took place as to the practicability of carrying out the Act giving power to close houses unfit for human habitation. It appeared that in some parishes the Act had been put in force, and that this was feasible when the Medical Officer was supported by the surveyor.

Dr. ILIFF called attention to the arbitrary powers given to water companies. He thought in no case ought power be given them to cut off the supply of an article so essential in every respect as water.

It was agreed that the President should represent the matter to Mr. Lefevre.

After some conversation, in which there was almost unanimous testimony to the increase of small-pox in the metropolis, except in the parish of St. John's, Southwark, and to the entire cessation of the desire for revaccination,

The PRESIDENT read a paper on

PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS.

It has occurred to me that the physical education of the children of the poor would be a profitable subject for discussion by Medical Officers of Health at the present time. As is very well known, the Elementary Education Act, 1870, has given an impulse to popular education, and has called into existence School Boards endowed with ample powers for the establishment and regulation of elementary schools. The Board will have to consider, not only what is abstractedly best in a system of education, but what is attainable with due regard to the wants of the poor children, and the necessity of not pressing too hard on that iniquitously over-weighted body, the ratepayers. I will venture briefly to consider the subject in the light of the experience I gained when Medical Officer of Health of St. George, Hanover-square.

We may begin with the school premises, for which, as a first condition, we require space, and (if I may repeat a now common parody on a famous saying) for the second condition we require space, and for the third, space. We require spacious schoolrooms, spacious offices, and spacious yards or playgrounds—and, unfortunately, in a crowded town space is the element most difficult to secure. Great towns now, like Saturn, devour their own children; ground is so rapidly covered with buildings—the landowners and builders care so little for anything besides converting a worthless field into valuable house property—all provision for the health and recreation of the community is so disregarded, that it is to be hoped that the Legislature will some day forbid the erection of more than a certain number of houses or the accumulation of more than a certain number of people within a given area, and will require a certain space of ground to be set apart, first of all, for the education and recreation of the young. But at present, in the older parts of towns, enormous sums of money have to be paid for narrow and insufficient plots of ground.

With regard to schoolrooms, certain rules as to minimum of space, combined with sanitary condition, are laid down by the Privy Council. No school is entitled to receive any annual grant from this source unless it is "held in a building certified to be healthy, properly lighted, drained, and ventilated, supplied with offices, and containing in the principal schoolroom at least eighty cubical feet of internal space for each child in average attendance;" and the regulations require that this cubical space shall include eight square feet of area. Of course the room must be ten feet high, but cubic space is not to compensate for deficient floor-space, and the eight square feet superficial are demanded, however high the room may be. It is stated, and will not be denied, that a school cannot be properly worked, nor the children assembled in class, with a less amount of floor-space; but it seems to me quite below what is desirable. I find that a boy's seat and desk require four square feet; and space in a class, at least, three square feet per boy. But, so far as space is concerned, the worst part of most schools are the galleries or raised tiers of seats in which the infants are placed, as closely packed as flower-pots in a greenhouse. The warmth and ventilation are most difficult subjects, but space is the best safeguard here. The less the space in proportion to the number of children the greater must be the necessity for currents of air, and the greater the danger from them. The room must not be too cold nor too hot and stuffy; but on all these points I have nothing new to offer.

In the next place, the *offices* of a school demand free space. It is most objectionable to do what must perforce be done in crowded neighbourhoods (as, for instance, in building the Hanover Schools in South Molton-street, in the parish of St. George, Hanover-square)—to take for a site a simple parallelogram, formed by pulling down a house in a street, and blocked in between houses on either hand. It should be a fundamental rule that the offices should stand on an adjoining plot of ground, and by no means be thrust into one corner of the parallelogram occupied by the main schoolroom. The offices comprise—(1) The staircase, which should be spacious and well ventilated. (2) The cloak-room, for depositing the children's outer clothing. This is a matter of great practical importance. The cloak-room should be large enough to allow the children's coats and hats to be arranged in an orderly way, so that they may be found without confusion, and may be freely exposed to the air. In too confined premises, as in the school I have mentioned, the clothes are put in an indiscriminate heap into a basket, or into a dark closet. Not only is considerable time wasted in sorting them out and alloting them at the end of the school-time, but the stench, the diffusion of vermin and of zymotic disease may be imagined which result from the placing together a mass of old foul garments, hot, sodden with perspiration. If the staircase and vestibules are spacious enough, there is no need of a separate cloakroom. (3) The next portion of the offices comprises the *latrines*, which are found in practice to be one of the most unexpectedly important and troublesome parts of a school building. It may be calculated that each child will pay one or more visits during each school-time; the worst-conditioned children make it a constant pretext for absenting themselves and loitering; and the apparatus used requires to be efficient, but simple. There is no doubt that the earth-closet system is the best where it can be had; with water in any shape the results are very disgusting without constant superintendence, and any apparatus requiring nicety would soon be spoiled or destroyed.

The fourth portion of the offices is the lavatory, and in most schools there is some provision of water, soap, and towels for washing hands and face; but this is a department which might be extended infinitely with the greatest benefit to all concerned. In schools in respectable neighbourhoods it is customary to send the children home if they have not clean faces and hands, but this would be fruitless in poor districts. In these it would be as great a charity to wash the children as to teach them, and I most respectfully urge that a copious apparatus of boilers, baths, and laundry ought to play a conspicuous part in the elementary schools of the future.

Amongst the apparatus which come under this head, must be mentioned a copious supply of water for drinking, cool and filtered. Children are always prone to drink for the relief of the various sensations that go by the name of thirst, and it is essential that the water should be pure. I am ashamed to confess that, in a school of which I am one of the managers, for some years the children used to drink the water from a cistern over the room containing the closets and urinals, which water, when analysed by Mr. Wanklyn, was found to contain a very large amount of ammonia and organic impurity, whilst that from neighbouring cisterns not exposed to similar volatile impurities had the ordinary composition of Grand Junction water.

The next item is a yard or space for play, which must be considered an essential part of a perfect school. No child can keep his faculties employed at a stretch for three hours on lessons or sums; and although, by varying the lessons, and interposing a little marching or singing in the schoolroom, some relief is given, still the children are breathing hot and dusty air, and it would be infinitely better to allow two or three minutes' run in a playground than to let the children go and skulk in the waterclosets, which is the present alternative. Of course, any healthy games, or exercises, or drill are impossible without a playground. Half the moral training is lost unless children's conduct can be seen when at play. But at many of the schools in the west of London ground is so scarce that the idea is an impossibility and an absurdity. At the same time, children are not allowed to march or be drilled, or even to play at any game such as "prisoner's base," in Hyde-park. It seems hard that, whilst organised bands of ruffians, with trumpets and drums, are allowed to take possession of the parks on Sunday afternoons for the propagation of doctrines of blasphemy, anarchy, and pillage, that the children are not allowed the same privilege for the benefit of health and discipline.

Having finished with the buildings and appurtenances, we now come to the children—their condition, and the respects in which it needs improvement; and I venture to say that the Medical Officer of Health who really desires to do his duty will find few more useful ways of spending an hour than by visiting the national and elementary schools regularly and often. Not to say that he will find out the existence of epidemic disease, which is always first learned through the absence of children from school, he will be able to inspect the arms of all new scholars, and certify to their vaccination—a fact which ought to be duly entered on the school registrar. What I propose for others, I did myself whilst Medical Officer of Health; and I may say that, had this been done, we should not hear of the discreditable announcement made in some quarters lately, that 10 to 50 per cent. of the children in certain schools were found unvaccinated in the present epidemic of small-pox.

The vaccination examination will disclose the state of personal cleanliness, which, in my opinion, should be the first subject of education, physical and moral, and which deserves to go before the three R's, and next only to religious teaching. Whoever has examined poor children's vaccination will be surprised at the miserably dirty state of skin; the *high-water mark* on the neck and arms, where the pretences of washing cease; and the innumerable varieties of flea-bites of different dates. The poorly nourished state of the skin, sometimes moist and sodden, sometimes rough as a file, and with all the sebaceous glands plugged, will also attract attention. The clothing, too, is wonderful for its quantity, its antiquity, and its rottenness. It is amazing how many wraps some poor women put on their children. Most children, if allowed, wear a frowsy woollen comforter round their necks all school-time. Outside, probably, may be a cleanish pinafore, giving a neat and tidy look to the child; under this, layer after layer of leprous rags in a state of decomposition, which have served the members of a family one after another for ten years, and are too rotten for buttons, but are fastened together by pins (I have counted as many as ten layers, comprising the pinafore, including fragments of old waistcoats and a hareskin). As for the feet, it is lucky that the examination for vaccination had nothing to do with them. The same examination is sure to reveal skin disease, usually psoriasis—rarely scabies, so far as my experience goes. Bearing in mind that I have had to do with the children of the better class of servants and artisans in the richest parish in the world, I may explain that these poorly-dressed children have been found in those schools which belong to the poorest nooks and quarters behind Grosvenor-square—the children of jobbers, day-labourers, stable-helpers, improvident and out of work for a quarter of the year. Sometimes I am told that they are infested with bugs and fleas in ragged schools; but anyone would be astonished to learn what the masters and mistresses say of the prevalence of lice, even amongst children outwardly clean and stylishly dressed. In theory it may seem an act of charity for a householder to take a growing girl into his house, and let her assist in housework, see how housework is done, and have her food for her trouble; but I am assured that it is not possible to take girls into houses in this way, for fear that they should import these parasites, and that the small tradespeople and others who employ girls of this sort usually get more than they bargain for. The galleries in infant schools can only be kept free by the greatest care. Under these circumstances, personal cleanliness may well take precedence of vocal music and general deportment in rate-supported schools.

I would therefore urge, as the first part of the establishment of an elementary school for a poor district, the setting apart large space and sufficient apparatus for a lavatory. Children should be taught how to wash; they should be taught to love washing, and they should be made to do it. We want a catechism of cleanliness, and I should like to write one if I had time. At present the masters and mistresses do not dare insist on cleanliness of person and neatness of dress to the extent which is requisite, from the fear of offending the parents, and lest these should take their children away from school. With compulsory attendance there should be no difficulty on this score. If a warm room be provided, with warm water, soap, and towels, with washing-places separated by proper screens, and if a "washing beadle" for the boys, and woman for the girls were to attend alternate days, and teach the children how to wash their entire bodies effectually and pleasantly, I believe no branch of education would be so pleasant and popular, or attended with better results to body and mind. Children should be taught the disgrace of a dirty skin and the pleasure of a clean one, and this would be a better preparation for a temperate life than all the venomous capucinades of the teetotalers.

Children also want to be taught the care of the hair, how exquisite are its colour and polish when quite clean, and how unnecessary are the filthy greases and essences used to disguise dirt. I understand that chemists in low neighbourhoods take immense sums over the counter in pence on Sunday mornings by the sale of scented oil for the hair. That most useful weapon, the small-tooth comb (than which nothing acts better in polishing and cleansing each individual hair) is, I am told, out of vogue amongst the poor, who consider that the possession of one of these useful engines would be equivalent to a confession of verminosity. Attached to the school lavatory should be a small laundry, where the girls should be taught to wash, iron, and mend their own and their brothers' clothes. This would be a most useful industrial lesson, and a needful appendix to the instruction in needlework which is given in all girls' schools.

It may be hoped that it will be in the power of the school-manager, under the new School Board, to discountenance the tawdry finery at present so common. There are many avenues to evil in human nature—love of sex, idleness, love of gambling, gluttony, love of drink—but few are more destructive than the love of dress, which is part of the sexual instinct, and which induces poor silly girls to squander their wages, and often to barter their virtue, for trumpery ornaments. But I know that our existing school-managers are almost powerless to enforce what they think right: girls' mothers keep them away from school because some artificial flower or bit of Brummagem jewellery is objected to. All this time—while "giving them ruffles when wanting a shirt," or, as the poet says—

> "Like Sappho's diamonds with her dirty smock"

—the under-clothing and skin may be poor, or ragged, or filthily dirty.

Here is room for teaching. Children should learn that civilised beings should show honesty and sobriety in their apparel, not copy the dirt and grease and beads of savages. The hair clean and neatly braided requires no other ornament; colours should be chosen because they look clean, not because they hide dirt; cotton should take the place of the half-putrid shoddy of old woollen garments; and I am certain that health, cleanliness, sweetness, and physical development would be aided, were it the custom for Englishwomen to wear clogs in the street, and naked feet with sandals indoors. On this point a benevolent and clear-sighted lady has written a pamphlet well worth perusal.

I have dwelt so long on these chronically neglected subjects, that I must hurry over that important part of the training of young children which consists in exercising their senses and giving them precision, the more so as there is very little to be improved upon in the present discipline of infant schools. Children are taught to sit still for a time, to look out for and obey the word of command, to move their bodies and limbs at given signals, and to march; they are taught form, colour, and numbers; and the only word I will add will be the hope that vocal music, itself a drill in attention and precision, to say nothing of other advantages, may not be discarded from the programme of new elementary schools.

The last point I will touch upon is the gymnastic, the essence of which is that it shall train the whole body so that the chest shall have the freest and most unembarrassed movement. This is the prime element in physical exercise; which being gained, to stand well, to walk well, to march in time, to have the free play of the shoulder-joints, to be able to throw, to run, climb, and swim, are matters which should be partly taught as regular exercises under a drill-master, partly be left to natural development in spontaneous games. For these, playgrounds are necessary, for want of which town children spend their time loitering about streets and mews, gazing into shop windows, playing pitch-and-toss, and annoying respectable passengers. With or without an exercise-ground out of doors, Tyler's musical gymnastics are, as I have witnessed, a most excellent method of training. They exercise the muscles in movements of rapidity and precision, and accustom the figure to healthy attitudes without putting the least strain upon the muscles.

I believe that what I have spoken of hits the worst blots in the physical condition of the poorer children, and points out the remedies. I don't think what I have urged would be very costly; but if it were, I believe every penny would be repaid by the diminution of sickness, and increased vigour, order, and well-being of the population.

Dr. Stallard expressed his approval of the contents of the paper, but thought there was one omission—namely, the supply of food to poor children. In many cases the children were incapable of giving proper attention for want of proper nourishment.

Dr. **Druitt** quite concurred in this, but had considered it as forming a separate subject.

Dr. **Stallard**, speaking of the proposal of the School Board to pay the school fees in certain cases, thought the experiment would have a demoralising tendency. The guardians had already this power, but it was carried out in very few cases.

Mr. **Liddle** thought the only way of avoiding endless disputes was to have some schools entirely free.

Dr. **Ross** was in favour of lower schools, giving elementary education gratis, and higher schools, giving more advanced education, and requiring payment.

Dr. **Kidd**, in answer to the President, said there was the greatest difficulty in instilling proper habits into those who came forward as recruits.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 4, 1871.

Mr. Hilton, F.R.C.S., President, in the Chair.

A report was read by Mr. **Hulke** from the Committee on Mr. Wagstaffe's specimen of Fibrinous Tumour of the Heart. The report entirely agreed with Mr. Wagstaffe's description.

Mr. **Balmanno Squire** exhibited a living specimen of Elephantiasis Græcorum from Pondicherry, East Indies. The patient was 24 years of age, but looked 50, and the disease was of seven years' standing. The history of the case supported the view that hereditary causation was not essential, if there was such a cause at all, the disease being due to climate.

Dr. **Tilbury Fox** thought that the disease was propagated by intermarriage. Many of the cases sent home were cases of syphilis and not of elephantiasis.

Mr. **Frederick Churchill** exhibited two Tumours of the nature of Mole Transformations, both limited to the cutis, and not associated, as far as could be ascertained, with similar growths elsewhere. He said: In the fourteenth volume of the Society's *Transactions* Mr. Bryant described a melanotic tumour developed in a mole, associated with secondary growths in the axilla, abdomen, etc. This is the only instance of mole transformation which I have been able to find recorded in the *Transactions*. I have two tumours of this nature to show to the Society this evening, both limited to the cutis, and not associated, as far as could be ascertained, with similar growths elsewhere. The first tumour was developed from a mole in the lumbar region. The patient, aged 45, first came under my notice in December of last year. She had noticed a slight button-like elevation of the skin over one of the lumbar spines from childhood. It was of a dark-brown colour, flat, and smooth. In July of last year she fell downstairs and injured her back. The mole-like growth, which had previously remained stationary, now increased rapidly. Two months later the tumour was as large as a grape, prominent, and pedunculated. A fine silk-thread was twisted around the neck of the tumour, but no attempt was made to strangulate it. The thread was worn for two months, when it was removed, as it did not check the growth. A thin watery discharge oozed out from the base of the tumour. She also had some pain in it. I advised her to have the tumour removed as soon as possible, and three or four weeks later (February 13, 1871) she returned, prepared to submit to the proper treatment. A wide margin of healthy integument was removed with the growth. The wound was quite healed three weeks after the operation. There has been no recurrence of the growth up to the present time. There was no evidence of hereditary or constitutional disease. The surface of the tumour was rough and nodulated, mottled of a dark-grey colour. It was attached to the skin by a very narrow peduncle. It was evidently a more aberrant form of growth than the wart-like tumour removed by Mr. Sydney Jones, although apparently developed from the same structures. A vertical section through the centre of the growth showed a radiated arrangement of light and dark bands from the centre to the circumference. The main bulk of the tumour had a single peduncle. There were wart-like growths on the surface. At the base of the tumour there were other distinctly pedunculated growths; these were much darker than the other parts of the tumour, and more deeply pigmented. The structural appearances of the two tumours, so far, resemble one another. Histologically, they are found to differ very considerably. In the more aberrant growth, the tissue is made up of angular cells variously shaped, with bright nuclei, many of them undergoing fissiparous development. Some of the cells contain two or three nuclei; the majority are pigmented. The more deeply-pigmented cells have a quantity of granular matter in their interior. There are, also, some cells arranged in groups. The radiated arrangement of the structure appears to be due to the alternate arrangement of light and dark bands of cells. In the lighter bands, the cells are more distinct, and there is some evidence of fibrillation. Well-defined columns of deeply-pigmented tissue are scattered about over the surface, and follow the more radiated arrangement. The central part contained very little pigment, and the minute structure of the tumour could be more accurately defined by sections taken from this part of the growth. The second of these was a tumour removed by Mr. Sydney Jones from a patient in St. Thomas's Hospital, and I am indebted to that gentleman for the opportunity of showing it to the Society. A young woman, aged 17, had a large mole in the left lumbar region, which had existed from birth. She had not noticed anything unusual about it until three weeks before her admission, when a thick, dark-brown crust peeled off from the surface, and exposed a wart-like, papillated growth below, projecting from the surface of the integument. The area of the growth was six inches by two and a half inches. There was some oozing of fluid from between the sulci of contiguous club-shaped growths. The central growths were larger and more prominent than those at the margin. Portions of the growth were covered by thick, laminated shreds of desquamating epidermis. There was a scaly eruption on the buttock of the same side, and she complained of sore-throat and frontal headache. There was no evidence of hereditary or constitutional disease. Microscopic examination of the growth showed simple increased development of the ordinary elements of the cutis, with an excess of pigment in the Malpighian layer of the derma.

Mr. **Francis Mason** referred to a warty growth removed by him, and shown to the Society at the beginning of the session.

Mr. **Churchill** explained that the interest of the tumours above described was due to their both being developed from *moles*, and not from warts.

Mr. **Hulke** mentioned a case of melanotic sarcoma which he had seen under the care of Sir William Fergusson, in which the normal pigment disappeared from several parts. He had noticed this in other cases.

Dr. **Whipham** exhibited a Tumour of the Liver which he thought presented many of the microscopical characters of epithelioma. Both ovaries were diseased, but there was no recent malignant affection of their structure.

Mr. **Arnott** was unable, from the histological characters described, to agree with Dr. Whipham that the case was one of epithelioma. He could not conceive its occurrence in the liver, although the disease was found to affect the intestine. (Referred to the Committee.)

Mr. **Hulke** brought forward a Large Medullary Tumour of the Belly, with a similar Tumour of the Orbit, of doubtful duration, taken from the body of a child 2½ years of age. The child suddenly died. There was found after death, also, a white mass in the lung, which could be enucleated; and the mediastinal and abdominal glands were enlarged. There were numerous extravasations of blood into the tumours and into various parts of the body. The tumours were histologically seen to be composed chiefly of cells like white blood corpuscles. Perhaps it was a glioma arising from the semilunar ganglion.

Dr. **Hare** remarked that cancer in children was often of many years' duration.

Mr. **Hulke**, in answer to Mr. John Croft, said that there were present the slight elevations of the temperature; and replied to Mr. Fairlie Clarke that the cause of death was probably due to hæmorrhage into the cavities. (Referred to the Committee.)

Mr. **Frederick Churchill** brought forward a specimen showing the effects of Ether Spray on the Skin in Addison's Disease. He said that at the previous meeting of the Society, the question was raised as to the nature of the bronzed skin in Addison's disease. Dr. Fagge considered that the increased pigmentation might be fairly attributed to physiological causes. Pathologists consider that the sympathetic system, exercising undoubted control over the functions of the supra-renal bodies as well as of the circulatory system, have associated the disease of the supra-renal capsules with bronzing of the skin as dependent upon a neurosis of the sympathetic system. No doubt many cases of disease of the supra-renal capsules have been described in which there was no bronzing of the skin, and *vice versâ*. It is generally admitted that the very frequent association of bronzed skin with Addison's disease would make it probable that they must be dependent upon the same cause. Kölliker and others consider the cortical and medullary portions of the supra-renal bodies as functionally distinct. A dense plexus of nerves, derived from the solar and renal plexuses, is found in the medullary portion, so that pathologists now consider it as an apparatus pertaining to the nervous system, while the cortical part is concerned in the elaboration of blood-plasma. Injuries of the spinal cord, in the lower dorsal region, have been found associated with hypertrophy of the supra-renal bodies. The patient on whom this experiment of blanching the skin was tried had injured his back by a fall. If, as supposed, the cortical portion assists in the elaboration of the blood-plasma, under the control of the sympathetic system, it seems reasonable to infer that excessive action of these blood glands would favour increased deposition of pigment when the circulation through the capillaries is embarrassed by imperfect or irregular action of the vaso-motor nerves. This well-marked case of Addison's disease was admitted to St. Thomas's Hospital, under the care of Dr. Bristowe, and fully described by him in the nineteenth volume of the Society's *Transactions*. Those who watched the case from day to day considered that the depth of tint varied very much, and I was anxious to ascertain how far the variation in colour might be due to partial stasis of blood in the venous capillaries. For this purpose, I selected a deeply-bronzed part in the left flank, and directed a jet of ether spray upon it. A patch of skin the size of a florin was immediately blanched. The partially detached epidermic scales were raised from the surface as white flocculi. The bronzed appearance of the skin returned as soon as the circulation in the part was restored. During the period that the skin was frozen, it appeared as white as the natural skin. Other portions of the skin were also frozen, but this was the only patch that became permanently blanched. The same experiment was tried on a negro, but the skin, though paled, was not blanched. The patient was sent to a convalescent institution, and returned to the Hospital in a dying state two months later. The frozen portion of skin had desquamated, including the epidermis with its pigmentary layer, exposing a patch of blanched skin, which appeared to retain all the normal elements except the pigment layer.

Dr. Greenhow asked if a cicatrix had formed, and observed that if so, the result would be explained, because the epidermis would be destroyed; if the epidermis is not destroyed, irritation has been observed to deepen the colour.

Mr. Churchill replied that there was no cicatrix, and that the pigmented part faded into the blanched tissues.

Dr. Murchison suggested that the cold may have paralysed the nerves of the part, and prevented the deposit of fresh pigment.

Mr. Croft observed that the effect of cold is to paralyse the superficial nerves of the epidermis, and render the colour lighter.

Mr. Churchill, in answer to the President, replied that he could not say whether the temperature had been maintained.

Dr. Murchison brought forward a specimen of Typhoid Ulceration of the Intestine, from the body of a man who had died suddenly from fatal hæmorrhage into the intestine on the twenty-seventh day of the disease, and in whom there had been constipation. There had been severe headache, but no eruption present—in fact, the symptoms were negative. He brought forward the case—not a very unusual one—to disprove the common notion that continued fever with constipation is typhus, and with diarrhœa, typhoid fever. The case presented numerous other interesting clinical features.

Dr. Douglas Powell observed that the remarks of Dr. Murchison applied in many cases to ulceration of the intestines in phthisis, even when the ulcers are old.

Dr. Murchison also exhibited a specimen showing Perforation of the Appendix Vermiformis, consequent on an accumulation of vegetable and fæcal matter, taken from the body of a girl who died six days after symptoms of acute peritonitis commenced. The symptoms could not be traced to injury or any other cause. It had been shown by Dr. Crisp that this occurrence was much more common in males than in females. Dr. Crisp said that he thought it to be due to the fact that boys use the right leg, as in football, more than girls.

Epidemic at Malpas.—The patients suffering from the complaint prevalent for some time in Malpas are rapidly improving, and very few cases have been reported lately. At the last week's meeting of the Board of Guardians it was decided that the inspector of nuisances should prepare a plan of the main sewerage, with the view to place the town in a good and complete sanitary condition.

OBITUARY.

JAMES LOW WARREN, M.D.

At Sunny Bank, Southsea, on the 8th of the present month, died, at the ripe age of 81, Dr. James Low Warren, formerly Surgeon of the 7th Hussars. Dr. Warren entered the service in 1815, joining the army of occupation in Paris after Waterloo; he served on the staff in the West Indies until 1825, when he was appointed Assistant-Surgeon of the 6th Dragoon Guards. He was promoted and gazetted to the 7th Hussars in 1836, and served with them throughout the Canadian rebellion of 1838. He retired from the army in 1848, having completed a period of thirty years' full-pay service. Such are the main points in Dr. Warren's honourable and useful military career; but his name will be remembered by many of our readers as having been most unjustly and wrongly maligned by part of the Medical and general press in connexion with the Hounslow inquest of 1846. The discussions raised by that inquest, however, and the attacks which were made in consequence upon Dr. Warren and his brother military Medical officers, led, mainly through the instrumentality of our literary progenitor, the *Medical Times*, to the complete vindication of Dr. Warren's character, and the utter discomfiture, in a court of law, of the late Mr. Wakley, then coroner of Middlesex, who, probably in order to pander to popular sensibilities and sympathies, was led to promote charges, which he ought to have known were worthless and unfounded, against the honour, humanity, and Professional character of Medical officers of the highest standing in the British army. The result, however, was the triumphant acquittal of Dr. Warren and his colleagues by all thinking men.

The story of the inquest is doubtless in the memory of many of our readers, but it still has its interest, especially when we remember that the experiments made in the direction of abolishing flogging in the army do not—as recent experience in India has shown—appear to have been productive of a higher state of discipline and subordination in that service, and as, moreover, the use of the lash in dealing with civil culprits has been attended with an undoubted diminution of certain outrages against life and property. The story of the inquest was, then, this:—A man, named Frederick White, of the 7th Hussars, aged 27, of dissolute habits, was tried by court-martial for striking his superior officer with a poker, and was sentenced to receive a hundred and fifty lashes. The punishment was inflicted on June 15, in the presence of Colonel Whyte and Dr. Warren, the Surgeon of the regiment. The culprit bore the punishment very well, was taken into Hospital under the care of Dr. Warren, and there made what appeared to be a rapid recovery. He was so well on July 4 that he assisted in cleaning out the ward, and volunteered to wash out an out-building of the Hospital. He was to have been discharged well, but on July 6 the thermometer, which had been previously at 88°, suddenly fell 20°. White complained of pain in his side and over the region of the heart. He became worse, and died, after five days' illness, on July 11. A post-mortem was made twenty-four hours after death by Staff Surgeon Dr. John Hall, in the presence of Dr. Warren and the Assistant-Surgeon of the regiment, Dr. Reid. The post-mortem showed that the man had died from recent endocarditis and pleurisy. There was recent effusion of lymph and serum in the left pleura, and endocarditis on both sides of the heart. A portion of the integument of the back was dissected off, and, with the exception of some discoloration of the cutis vera, was found to be quite healthy. A certificate of the cause of death was given by Dr. Warren and his colleagues to the effect that the man had died from inflammation of the pleura and of the lining membrane of the heart, and that his death was not connected with the corporal punishment received on June 15. The case, however, was reported by a clergyman to Mr. Wakley, who deemed it right to hold an inquest. No objection to this could be taken, but other proceedings of the coroner were utterly unjustifiable. He infringed the Act of Parliament under which he acted by not summoning Dr. Warren and the other army Medical officers who had attended the case to give evidence. He had two post-mortem examinations made, one by Mr. Day, of Isleworth, who was led by it completely to agree with the army Medical officers as to the cause of death, and one by Mr. Erasmus Wilson, who believed he found (although the body was decomposed) some pulpy softening of the multifidus spinæ muscle, which, he thought, was the result of the punishment, and to which he attributed the inflammation in the contiguous pleura; but at neither of these examinations did Mr. Wakley allow Dr

Warren, Dr. Hall, or Dr. Reid to be present. These gentlemen were not permitted to give evidence as witnesses at the inquest, and Dr. Warren was only allowed to make a statement, not on oath, as though he had been a culprit on his trial for murder or manslaughter. The jury returned a verdict to the effect that the man had died from the flogging. Mr. Wakley presided at a monster meeting, to protest against flogging in the army, at Exeter Hall, and the journal of which Mr. Wakley was editor, and a large portion of the press, took up the cry, and with it cast the most flagrantly unjust aspersions on the characters and conduct of the officers concerned. Under these circumstances the then editor of the *Medical Times* published a leading article, which, after the manner of the day, was by no means written with a pen dipped in honey, but which plainly stated that Wakley's conduct was stimulated by the want of a public sensation to help his fortunes at a coming election, and which completely defended and exonerated the army Medical officers who had been attacked. The result of this was, that Mr. Wakley applied to the Court of Queen's Bench for a rule calling upon the printers and publishers of the *Medical Times* to show cause why a criminal information should not be filed against them for libel. The rule was granted, and the case was heard by Lord Denman, Justice Coleridge, and Justice Wightman. The *Medical Times* was defended by Mr. Cockburn, and, after a patient hearing, the Court unanimously decided that, under the circumstances of Mr. Wakley's conduct throughout the case, the rule must be discharged.

Never did a journal obtain a greater victory in the protection of personal character and the vindication of public justice, and never did a public functionary meet a greater humiliation. The result, as we have said, was a triumphant exculpation of the army officers whose Professional conduct had been assailed, and especially of Dr. Warren, who had sustained the Medical responsibility of the punishment and of the subsequent treatment of the culprit.

We have felt it our duty, in justice to the memory of Dr. Warren, an honourable and conscientious man, to place on record again the history of these occurrences, which could not fail to have caused him great annoyance. Army Medical officers, acting, as they do, under orders, are fully entitled to the support of the Medical press.

We have little to add. Dr. Warren, the following year, retired from the army, and enjoyed his well-earned rest for thirty years. The verdict of the Profession and the thinking part of the public on his conduct throughout the trying scenes we have narrated was well expressed by the emphatic declaration of the Duke of Wellington, then Commander-in-Chief, that "had Dr. Warren not acted as he did, he would not have performed his duty to his country."

MR. THOMAS BROWN, OF ST. MARY-AXE,

Was born in the City of London, in the year 1803. He was educated at Chigwell Row, and afterwards apprenticed to Mr. Lewis, of Heydon-square. He received his Medical education at the united Hospitals of St. Thomas's and Guy's. He was a pupil of Mr. Tyrrell, and commenced private practice in St. Mary-axe, 1825, and continued there until within a few weeks of his death. Mr. T. Brown was a most enthusiastic lover of his Profession, and took a great interest in all departments of science. He was conspicuous for his benevolence, amiability, remarkable modesty, and retiring disposition. He was a member of the Council of the Hunterian Society for many years, and became treasurer on the retirement of Dr. Cooke. He was also a member of the Court of Assistants of the Society of Apothecaries. He leaves to lament his many excellent qualities a numerous family; amongst his sons are Dr. Burton Brown, formerly of Guy's Hospital, and now principal of the Medical College of Lahore, and Mr. Gordon Brown, of St. Thomas's, who succeeds him in his private practice. He died on April 15, of idiopathic anæmia.

DR. OGDEN, OF BISHOPWEARMOUTH.

The late Dr. Ogden, graduated in Edinburgh and Paris, after which he became Honorary Physician to the Bishopwearmouth Infirmary. His practice was very limited, being mostly confined to a few friends and poor neighbours, to whom he always gave kind and judicious advice. His principal pursuit was the development of chemical science as applied to the arts, in which he displayed great ability and industry. He was successful in his pursuits, and was very much esteemed in private life. We are not aware that he was author of any publications. For the last two years he was afflicted with paralysis. He died, unmarried, in the 66th year of his age.

CHARLES HOUSLEY, M.R.C.S., OF PORT ELIZABETH, CAPE OF GOOD HOPE.

Our readers at the Cape of Good Hope will, we are sure, peruse this obituary notice with much regret. Mr. Housley, to whom it refers, was educated at Merchant Taylor's School, and commenced his Medical studies at Wakefield, in Yorkshire, where he was the fellow student and companion of the late Mr. Milner, the Medical Superintendent of the convict establishment, of whose death we gave notice some three years ago. After fulfilling his apprenticeship with Mr. Horsfall, of Wakefield, if we are not forgetful, Mr. Housley went through his studies in London, and passed the College and Hall in the years 1837-8. He then entered the navy as a Naval Surgeon, and for two years served in the *Medea* during a cruise on the coast of North America. On quitting the service, he began practice at Mitcham, in Surrey, but soon removed to London, and practised there until the time of the Crimean war, when, on the formation of the Army Works Corps, he was recommended by Sir Joseph Paxton, with whom he had been long acquainted, to fill the post of Medical Superintendent of the Corps. Obtaining this post, he accompanied the Corps to the Crimea, and remained with it until the capture of Sebastapol and the close of the campaign.

On his return to London, he resumed practice, first in Manchester-street and then at Haverstock-hill, when, hearing that there was an opening for a Medical man at Port Elizabeth, he migrated to the Cape in the year 1858, and settled there. He rose rapidly into practice in his new home; was made Surgeon to the volunteer artillery corps, and was frequently in charge of her Majesty's troops stationed at the port. He was also elected one of the Surgeons to the Provincial Hospital. In the midst of his career he became, about four years ago, conscious of failing health; he detected himself that he was suffering from diabetes, and he was distressed with abdominal pain when subjected to any unusual exercise. He, nevertheless, continued to perform his duties until the beginning of the present year, soon after which he rapidly broke down in physical power, pulmonary mischief being added to the other maladies. He came, consequently, to England, to obtain the advice of his old Professional friends, and arrived in London in the latter part of February. For a short time the severity of his symptoms somewhat abated, but he continued gradually to sink, and died calmly on Friday week last, April 14, at the house of his nephew, Mr. S. J. Housley. He was attended to the close of his illness by Dr. Richardson and Dr. Garrod.

Mr. Housley, when in health, was a fine, vigorous man, of an active and genial turn of mind; he was straightforward in all he said, and possessed a sincere love for his Profession. He married Miss Tipple, of Mitcham, and has had three children, two of whom, with their mother, survive. He was in his 55th year at the time of his death.

MEDICAL NEWS.

Royal College of Physicians of London.—At an extraordinary meeting of the College, on Monday, the 17th inst., the undermentioned gentlemen, having conformed to the by-laws and regulations, and passed the required examinations, were granted licences to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery:—

Branfoot, Arthur Mudge, M.R.C.S., Guy's.
Clayton, Robert Palmer, M.R.C.S., Norton House, Broughton-lane, Manchester.
Dayman, Barnfield, M.R.C.S., 24, Jewin-crescent, Aldersgate-street, E.C.
Garratt, William, M.R.C.S., 70, Asylum-road, Old Kent-road, S.E.
Gramshaw, Henry, M.R.C.S., Ampthill.
Hamilton, Andrew, L.S.A., Whitley, Reading.
Hicks, John Sibley, L.F.P.S. Glasg., 2, Erskine-street, Liverpool.
Hood, Donald William Charles, M.R.C.S., Guy's.
Jay, William Eugene, Willunga, South Australia.
Lloyd, Thomas Llewellyn, M.R.C.S., The Infirmary, Burton-on-Trent.
Lovell, Francis Ottley, M.R.C.S., St. George's.
Palmer, James Foster, M.R.C.S., 201, Sloane-street, S.W.
Pearce, Joseph Chaning, M.R.C.S., London.

And the following candidates, having passed in Medicine and Midwifery, will receive the College licence on their obtaining qualifications in Surgery recognised by the College:—

Noad, Henry Carden, St. George's.
Reston, Henry, 6, Dorset-street, Stretford, Manchester.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the [illegible] inst., viz.:—

Addy, Boughton, Southport, of St. Thomas's Hospital.
Batchelor, Ferdinaud Campion, L.R.C.P. Edin., and L.S.A., Brixton-hill, of Guy's Hospital.
Bouser, John Hanbury, Sutton-in-Ashfield, of St. Thomas's Hospital.
Boreham, William Todman, L.R.C.P. Edin., Cantley, Norfolk, of the Charing-cross Hospital.
Burroughs, George Edward Elton, L.K. & Q.C.P. Ire., and L.S.A., Littlehampton, Sussex, of the Charing-cross Hospital.
Chislett, Francis Herbert Oakley, Kingsland-road, of the London Hospital.
Coomber, Francis, Enniskillen, of Guy's Hospital.
Drew, William Thomas, L.S.A., Stow-in-the-Wold, Gloucester, of St. Mary's Hospital.
Holmes, Robert Andrew King, M.D. Queen's Univ. Ire., Coagh, co. Tyrone, of the Dublin School.
Ker, Hugh Richard, Tipton, Staffordshire, of Guy's Hospital.
Maybury, Horace Mansell, Frimley, Surrey, of St. Thomas's Hospital.
Munro, David, M.D. Queen's Coll., Kingston, Canada, Kingston, of the London Hospital.
Nicholl, David Charles, Carmarthen, of the Edinburgh School.
Parry, Thomas William, L.R.C.P. Edin., Carnarvon, of the Edinburgh School.
Pellereau, George Elie, Mauritius, of University College.
Pritchard, Richard Henry, L.S.A., Treborough, Somerset, of Guy's Hospital.
Reston, Henry, L.R.C.P. Lond., Stretford, Lancashire, of the Manchester School.
Rose, William, L.S.A., High Wycombe, of King's College.
Smith, George John Malcolm, Edinburgh, of the Edinburgh School.
Stafford, Thomas, Ripley, near Derby, of St. Bartholomew's Hospital.
Stamford, William, L.S.A., Swindon, Wilts, of the Middlesex Hospital.
Stiles, Edward Marsh, Chippenham, Wilts, of St. George's Hospital.
Turner, William Mulholland, L.S.A., King's-road, S.W., of the Charing-cross Hospital.
Wharry, Charles John, L.S.A., Woolwich, of St. Bartholomew's Hospital.

The following gentlemen were admitted Members on the 19th inst., viz.:—

Blyth, Louis Gwyn, L.R.C.P. Edin., Weston-super-Mare, of St. Mary's Hospital.
Drew, Henry William, L.R.C.P. and S. Edin., Cape of Good Hope, of the Edinburgh School.
Haines, Alfred Henry, L.S.A., Notting-hill, of Guy's Hospital.
Lycett, John Allan, L.S.A., Scarborough, of the Middlesex Hospital.
Russell, William, L.S.A., Walworth, of Guy's Hospital.

Six candidates out of the thirty-five examined failed to acquit themselves to the satisfaction of the Court of Examiners, and were therefore referred to their Hospital studies for six months. The following analysis of Medical qualifications possessed by the candidates may be interesting:—L.S.A. Lond., 12; L.R.C.P. Edin., 4; L.R.C.P. and S. Edin., 1; L.R.C.P. Edin., and L.S.A. Lond., 1; L.R.C.P. Lond., 1; L.K. & Q.C.P. Ire., and L.S.A. Lond., 1; M.D. Queen's Univ. Ire., 1; and M.D. Queen's Coll., Kingston, Canada, 1. The next "primary" or anatomical and physiological examination will take place this day (Saturday), for which the usual number of 108 candidates have entered their names.

New Fellows.—At a meeting of the Council of the Royal College of Surgeons on the 14th inst., the following Members of the College, having previously been elected Fellows, were admitted as such, viz.:—

Bradford, Edward, Honorary Surgeon to the Queen, and Deputy Inspector-General of Hospitals, Harrow, Middlesex, diploma of Membership dated June 6, 1826.
Brooks, William Penny, Much Wenlock, Salop, May 20, 1831.
Keate, Henry, Shrewsbury, June 20, 1836.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 13, 1871:—

Atthill, Robert Chapman, Stoke Newington.
Bishop, William, Chipping Norton.
Eager, Thomas Cawley, Ripley, Surrey.
Head, William Cave, Lewes, Sussex.
Healey, Thomas St. Clair, Hull.
Latimer, Henry Arthur, Plymouth.

As an Assistant in Compounding and Dispensing Medicines:—

Brunton, Lucius William, Clifton, Bristol.

The following gentleman also on the same day passed his First Professional Examination:—

Chambers, Eber, St. Bartholomew's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Male, H. D., L.R.C.P.L., M.R.C.S.E.—House-Surgeon to the Lincoln County Hospital, *vice* G. Hett, resigned.

Millson, George, L.R.C.P.L. and M.R.C.S., to be House-Surgeon and Secretary to the Scarborough Dispensary and Accident Hospital, *vice* Thomas J. Denton, M.D. Edin., resigned.

Wilkinson, T. M., L.R.C.P.E., L.R.C.S.E.—House-Surgeon to the Lincoln General Dispensary, *vice* H. D. Male, resigned.

MILITARY APPOINTMENTS.

Medical Department.—The second christian name of Deputy Inspector-General of Hospitals Meiklehain, promoted in the *Gazette* of November 29, 1870, is Cuninghame, and not Cuningham, as therein stated. Staff Surgeon Charles William Woodroffe, having completed twenty years' full-pay service, to be Staff Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

Brevet.—To be Inspectors-General of Hospitals: Deputy Inspector-General of Hospitals Robert Henry Rennick, Madras Establishment; Deputy Inspector-General of Hospitals John Henry Orr, C.B., M.D., Madras Establishment.

BIRTHS.

Cooke.—On April 13, at Upper Berkeley-street, Portman-square, the wife of Weeden Cooke, M.R.C.S., of a daughter.

Manning.—On April 5, at Laverstock, near Salisbury, the wife of Henry John Manning, B.A., M.R.C.S., of a daughter.

Murchison.—On April 11, at 79, Wimpole-street, the wife of C. Murchison, M.D., F.R.S., of a son.

MARRIAGES.

Boycott—Hawthorn.—On April 18, at Stapleford, Cambridgeshire, Thomas Boycott, M.D., of Montague-square, London, to Grace Agnew, youngest daughter of the Rev. R. Hawthorn, of Stapleford Lodge.

Laycock—Webster.—On April 18, at the parish church, Mackworth, Robert Charles Richard, only son of the late Charles Robson Laycock, M.D., to Mary Elizabeth, only daughter of Mr. George Webster, of Lower Vicar-wood Farm, Mackworth, near Derby.

Lundy—Miller.—On April 11, at St. Stephen's, Shepherd's-bush, Louis Lundy, Surgeon, Feltham, to Margaret Caroline, fourth daughter of Mr. Robert Miller, Shepherd's-bush.

Parsons—Moore.—On April 10, at the parish church, Moreton-in-Marsh, Gloucestershire, Mr. R. H. B. Parsons, of Stroud, solicitor, to Norah, daughter of Mr. George Moore, M.R.C.S.E., Moreton-in-Marsh.

Pearless—Harrison.—On April 12, at the Church of the Holy Trinity, Roehampton, Charles Durrant Pearless, M.R.C.S.E., L.R.C.P.L., of the Vicarage, Sevenoaks, third son of William Pearless, of the Hermitage, East Grinstead, Sussex, to Louisa Blanche Maud, the younger daughter of William Harrison, of Ellenborough House, Roehampton, and Plaw Hatch, East Grinstead.

Reynolds—Sandys.—On April 12, at St. Gabriel's, Warwick-square, the Rev. Samuel Harvey Reynolds, M.A., Fellow and Tutor of Brasenose College, Oxford, and Vicar of East Ham, Essex, elder son of Samuel Reynolds, F.R.C.S., of Dacre House, Lee, to Edith Claudia, third daughter of the late Rev. Claudius Sandys, Chaplain H.E.I.C.S., Bombay.

Roberts—Bridge.—On April 12, at St. Mary Magdalene's, Paddington, Edmund Humphrey Roberts, Staff Surgeon Army Medical Department, to Isabella Maria Hope, widow of the late Edward Bridge, Captain R.E., and daughter of the late Ven. Archdeacon Bridge.

Seale—James.—On April 15, at Christ Church, Forest-hill, Thomas Seale, Surgeon, of Stonehouse, Devon, to Catherine Coulson, only daughter of the late Trevenen James, of London.

Thomas—Brougham.—On February 16, at Calcutta, Capt. Charles Frederick Thomas, of the 6th Bengal Light Infantry, eldest son of the late Col. G. P. Thomas, of the Bengal Army, to Matilda Emma, daughter of J. P. Brougham, M.D., Presidency Surgeon, etc., Calcutta.

DEATHS.

Brown, Thomas, M.R.C.S., of 16, Finsbury-circus, and 30, St. Mary-axe, on April 15, aged 68.

Bunnett, Henry Jones, M.D., late Deputy Inspector-General of Military Hospitals in Spain, at Manchester-street, Manchester-square, on April 13, in his 84th year.

Cory, Florence Lucy, the youngest daughter of Dr. and Mrs. Cory, at Buckhurst-hill, on April 18, after two days' illness, aged 7 years.

Fenwick, Jane, relict of the late James T. Fenwick, M.D., at Bolton Alnwick, Northumberland, on April 8, aged 67.

Garrett, Mark Brown, Surgeon, at 4, Colet-place, Commercial-road East, on Easter Sunday, aged 59.

Grant, Thomas Walker, M.D., M.R.C.S., of 17, Edgware-road, London, W., on April 8, aged 53.

Guthrie, Hugh, M.D., formerly of the Bengal Medical Service, and Superintending Surgeon Cawnpore Division, at his residence, Grange-road, Upper Norwood, on April 13.

Housley, Charles, M.R.C.S., of Port Elizabeth, South Africa, at 70, Boundary-road, N.W., the residence of his nephew, on April 14, in the 55th year of his age.

Jackson, Thomas, M.D., son of the late William Jackson, Esq., at Hull, on April 10.

Ledsam, Selina, the beloved wife of John Joseph Ledsam, M.D., at 17, Esplanade, Scarborough, on April 12, in her 73rd year.

Maxwell, Henry Douglas, the infant son of Peter Maxwell, M.D., at Stickney, near Boston, Lincolnshire, on April 15, aged three weeks and five days.

Mitchell, Mary, widow of Alexander Mitchell, M.D., F.R.C.S., of the Cape of Good Hope, at Notting-hill, on April 10.

Murray, Thomas Douglas, only son of John Murray, M.D., Wickham, Hants, at Forest-hill, on April 16.

Ogden, Henry, M.D. Edin., at Bishopwearmouth, on April 13, in the 66th year of his age.

Small, George Whytt Oswald, youngest son of Surgeon-Major W. H. Small, late of H.M.'s Indian Army, at 26, Colville-square, on April 12, aged 20 months.

Thomas, Amy Beatrice, youngest and beloved daughter of Dr. Thomas, at 39, Nottingham-place, on April 12, aged 4 years and 10 months.

Thompson, William, eldest son of the late William Thompson, M.D., at Abney-villas, Stoke Newington, on April 17, after a protracted illness.

Warren, James Low, M.D., half-pay, 7th Hussars, at Sunny Bank, Southsea, Hants, on April 8, aged 81.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Assistant Dispensers in Her Majesty's Naval Establishments.—An open competition will take place on April 25.

Bristol Lunatic Asylum, Stapleton, near Bristol.—Medical Superintendent; must have both Medical and Surgical qualifications. A gentleman who has had practical experience in the management of a Lunatic Asylum will be preferred. Applications and testimonials to the Chairman of the Committee of Visitors, on or before May 1.

Cheltenham General Hospital and Dispensary.—Resident Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Mr. D. Hartley, on or before May 20.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

East Ward Union.—Medical Officer for the Borough District. Candidates must be duly qualified, and be registered under the Medical Act, 1858. Applications and testimonials to Mr. John Whitehead, Clerk to the Guardians, Appleby, on or before April 22. Election on the 24th.

Glenorchy, Argyllshire.—Medical Officer for the Parishes of Glenorchy and Inishaie. Candidates must be duly qualified and registered. Applications and testimonials to the Rev. D. M'Lean, Manse, Glenorchy, Dalmally, on or before April 27.

Halifax Infirmary and Dispensary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians. Applications and testimonials to Mr. John Crossley, on or before April 22. Election on the 28th.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, on or before May 9. Election on the 12th.

Manchester Royal Infirmary.—Junior House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Chairman of the Weekly Board on or before April 22.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Newry Hospital.—Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary of the Fever Hospital, Newry, on or before April 26.

Queen Charlotte's Lying-in Hospital, 119, St. Marylebone-road.—Medical Officer.

Royal Portsmouth, Portsea, and Gosport Hospital.—House-Surgeon; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Secretary, on or before May 3.

Royal Surrey County Hospital.—Assistant Honorary Medical Officer. Applications to the Rev. C. R. Dallas, Farncombe Rectory, Godalming, on or before April 27.

St. George, Hanover-square, Dispensary.—Honorary Surgeon-Dentist; must be duly qualified. Applications and testimonials to the Hon. Sec., on or before April 24.

South Staffordshire General Hospital, Wolverhampton.—Dispenser; must be a Member of the Pharmaceutical Society. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29.

South Staffordshire General Hospital, Wolverhampton.—House-Surgeon; must be a Fellow or Member of the Royal College of Surgeons of London, Edinburgh, or Dublin, and a Licentiate of the College of Physicians, London, or be L.S.A. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29. Election on May 9.

South Staffordshire General Hospital, Wolverhampton.—Physician; must be M.D. or M.B. of the University of Oxford, Cambridge, London, Edinburgh, or Dublin, or F. or M.R.C.P. London, Edinburgh, or Dublin, not practising midwifery or pharmacy. Applications and testimonials to the Secretary, on or before May 13.

Unst, Shetland.—Medical Officer. For particulars, apply to Mr. T. Edmondston, 9, Albany-street, Edinburgh.

Westminster General Dispensary.—Honorary Physician; must be M.D. or M.B., and be registered. Applications and testimonials to Mr. J. Potter, Secretary, on or before April 24. Election on the 27th, at 11 a.m.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Coventry City.—The Second District is vacant; salary £63 per annum.

Thingoe Union.—Mr. George King has resigned the Brockley and Rede District; area 2390; population 585; salary £13 18s. per annum.

APPOINTMENTS.

Berwick-on-Tweed Union.—Thos. Davidson, L.R.C.P. Edin., L.R.C.S. Edin., to the Tweedmouth District.

Bootle Union.—Wm. B. Griffith, L.R.C.S. Edin., L.R.C.P. Edin., to the Muncaster District.

Central London School District, Salterne.—G. Littlejohn, M.B. Edin., M.C. Edin., L.R.C.P., L.S.A., to the School.

Dursley Union.—Joseph H. Benson, M.R.C.S. Eng., L.S.A., to the Uley District.

Havant Union.—Wm. F. Bennet, M.R.C.S. Eng., L.S.A., to the Warblington District.

Petworth Union.—Henry J. Hunt, L.R.C.P. Lond., M.R.C.S., L.S.A., to the Third District.

Plomesgate Union.—George Jones, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P. and S. Glas., to the Framlingham District.

Redruth Union.—Robt. S. Hudson, L.R.C.S. Ire., M.D., M.C. Queen's Univ., Ireland, to the Redruth District.

Reigate Union.—Wm. Chessall, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Southern District.

Sleaford Union.—Wm. Brocklesby, M.R.C.S. Eng., L.R.C.P. Edin., to the Osbounby District.

Warminster Union.—Robt. L. Willcox, M.R.C.S. Eng., L.R.C.P., L.S.A., to the Longbridge Deverill District.

Dr. Rumsey, of Cheltenham, one of the Crown nominees on the General Medical Council, has resigned his seat on that Board.

Mr. L. C. Miall has been elected to the Curatorship of the Leeds Philosophical and Literary Society, vacant by the death of Mr. Denny.

Dr. Falconer, of Bath, Professor Humphry, of Cambridge, and Professor Lister, of Edinburgh, have been elected British corresponding members of the Harveian Society of London.

Dr. Smart, of Tunbridge Wells, has been thrown from his horse, and lies in a very precarious state.

Aberdeen University.—It was resolved at the half-yearly meeting of the General Council of the University, held last week in the Hall, Marischal College, to institute bursaries for students in the Medical Faculty of the University.

Collegiate Examinations.—At the recent examination for the diploma of membership of the Royal College of Surgeons, six patients from different metropolitan Hospitals were introduced, upon whose respective cases the candidates were examined, and required to state their treatment. The result was very satisfactory, as on the first night, out of twenty-four, there were only four rejected, and on the second and last night two, making a total of six out of thirty-five candidates examined. Mr. F. B. Curling, F.R.S., the recently-elected examiner, in the vacancy occasioned by the resignation of Mr. Solly, took his seat as a member of the Court of Examiners. The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates on the 14th inst.:—1. Pyæmia: its causes, symptoms, effects, and treatment. 2. Ligature of the posterior tibial artery in the lower third of the leg. Specify the extent, direction, and situation of your incision; the parts necessarily divided or to be avoided in the operation. Give the precise relations of the artery where tied. 3. Describe the various forms of inflammation which affect the conjunctiva, their symptoms, causes, and appropriate treatment. 4. Mention in order the several tendons around the knee-joint, and give the relations of each to adjacent parts. 5. Describe the symptoms, progress, and treatment of fracture of the spine in the cervical and in the dorsal regions, and state the causes of death in such cases. 6. How may the production of "lymph" as the result of inflammation be accounted for? Describe its minute structure in its different forms, and the changes they may undergo. The following were the questions on the Principles and Practice of Medicine submitted to the candidates on the 15th inst.:—1. A robust man, 45 years of age, is suddenly seized with a violent pain in the abdomen, attended with sickness, shivering, and tendency to collapse. What may be the causes of the attack, and how would you treat it? 2. What do you understand by the term croup? Describe the complaints included in it, and their treatment. 3. Enumerate the diuretic medicines contained in the British Pharmacopœia, mentioning their special uses and doses.

Sanitary State of Oxford.—Mr. Clarke's plans of main sewerage have been adopted by the Local Board, and submitted to the Secretary of State for his approval.

Baby-farming.—A baby-farming case, which has just terminated fatally, has just occurred at Oakhill, Somerset. The victim is an infant three months old. At the inquest, Dr. Garland, the coroner, elicited that the child was taken by a quack doctor, immediately after birth, to a woman who has charge of three other children, and who has been paid 2s. 6d. per week for taking care of the child. Two days before the death of the child the parish Doctor was sent for, who said that the child died of emaciation produced by want of proper food. The inquiry was adjourned.

Health of Eastbourne.—Some time since very erroneous reports as to the salubrity of the town were extensively circulated. We proved their incorrectness at the time. It is now worthy of record that during the months of January, February, and March, when the mortality throughout the kingdom is greater than in any other quarter, in Eastbourne, containing between 10,000 and 11,000 inhabitants, there were only 18 deaths, or less than 7 per 1000 per annum. Such a fact requires no comment, and is a sufficient answer to all those who seek to disparage this favourite sea-side resort.

Small-pox prevails to an alarming extent in Mexico, Tampico, and Colima.

Three ships have arrived in the Thames, during the past ten days, with cases of scurvy on board. The Board of Trade have ordered official inquiries as to two of the vessels; the third belongs to Portugal.

A woman in Waterford died on Monday from drinking twenty-six glasses of whisky. The liquor was stolen from a spirit store, and the man who gave it to the deceased is in custody, charged with being accessory to her death.

At the Lambeth Police-court on Saturday, there was another prosecution for transmitting infected clothing without the necessary precautions having been taken, and a fine of 20s. was inflicted, with the alternative of fourteen days' imprisonment.

At an inquest held on Monday on the body of the late Judge Advocate-General, a verdict of death from natural causes was returned. The deceased, who had suffered from heart disease for several years, died on his 45th birthday.

At a meeting of the Lancashire Relief Fund, held on Saturday, it was resolved to apply the balance unexpended to the erection of a Convalescent Hospital for the working classes in the cotton manufacturing districts. A sub-committee was appointed to arrange details, with the Earl of Derby as their chairman.

By the Indian mail which arrived on Monday, we learn that a serious riot was reported to have occurred in Assam, vaccination being the cause to which it was ascribed. It is supposed that the vaccinators must have pushed their operations with undue pertinacity to have created so much excitement.

The fifth annual report of the Museum and Lecture-rooms Syndicate, at Cambridge, has been issued. The Syndicate are satisfied with the progress that has been made during the past academical year. The number of students is on the increase. There is at present, they report, a great deficiency of suitable rooms for public demonstrations, and, in particular, there is no place where microscopical investigation or dissections can be carried on.

The Pontypridd Board of Guardians have increased the salaries of their Medical officers as follows:—Dr. H. N. Davies, of Lower Ystradyfodwg, from £7 10s. to £20 per annum; Mr. W. Rhys, of Upper Ystradyfodwg, from £7 10s. to £20 per annum; Mr. Davis, of Mountain Ash, from £15 to £20 per annum; Mr. J. Leigh, of Llanfabon, from £13 to £20 per annum; and Mr. W. Morgan, Workhouse, from £20 per annum without medicine, to £40 per annum, including medicine.

We are informed that memorials in favour of stopping the sale of intoxicating liquors during the whole of Sunday, in Ireland, have been adopted by over sixty corporations, including Dublin, Belfast, Limerick, Waterford, and Clonmel, eighty-four poor-law unions, and the boards of government of seventeen county and city gaols. Petitions have also been signed by over 1000 Irish magistrates, 31 bishops and deans, 67 county and city coroners, 57 chaplains of gaols and asylums, 13 chairmen of quarter-sessions, and 10 clerks of the Crown, all of which have been presented to the Chief Secretary for Ireland.

By the mail from Buenos Ayres, which arrived on Monday, we learn that on the 11th ult. the city had been again visited by a fearful epidemic, second only in its ravages to the cholera of 1867. The mortality was chiefly amongst the stations of the natives. The death-list from the beginning showed barely twenty English names, and although large numbers had been attacked, more than three-fourths recovered. During the six days ended March 11, the death-rate was over 100 daily. The Doctors and clergymen of all denominations were doing their duty fearlessly, and six of them had fallen victims to the epidemic. Disregard of proper sanitary arrangements is undoubtedly the cause of these constantly-recurring epidemics, and it is hoped that city improvements, similar to those of Rio de Janeiro, will be carried out. From Monte Video we learn that, in consequence of the enforcement of a strict quarantine, there was no appearance of disease at that place.

The "Dreadnought" Hospital Ship.—The Metropolitan Asylums Board have obtained the loan of the *Dreadnought* Hospital Ship, which is still moored off Deptford Creek, from the Lords of the Admiralty, and are about to fit her up as a convalescent establishment for small-pox patients drafted from Stockwell and Homerton. It is expected that the *Dreadnought* will be ready to receive patients in about a fortnight.

Economic Reform by the Poor-law Guardians of Yeovil.—The out-door paupers have been in the habit of receiving their weekly allowance at the Corn Exchange, to save them walking to the poor-house—a distance of a mile from the town. £5 rent for the Exchange will now be saved by compelling the old people to walk out regularly for their allowance. It is computed that each one will walk 104 miles a year, at a saving of 4d. per head.

Wimbledon-common.—The Wimbledon Local Board recently petitioned the Home Secretary for powers to acquire compulsorily a portion of Wimbledon-common for establishing a sewage farm. The Home Secretary refused to grant their request, inasmuch as the Legislature considers open spaces and commons should be preserved, as much as possible, for the benefit of the public.

Hydrophobia in Wigan.—On February 14, Joseph Witter, residing in Adelaide-street, Wigan, 9 years of age, was bitten by a dog. As speedily as possible he was taken to the Dispensary, where the wound was cauterised. The wound healed, and the boy was apparently well up to Sunday last when symptoms of hydrophobia set in. He was taken to the Dispensary on Thursday week, and died on Monday morning.

A New Hospital for Wiltshire.—Last week, the Marchioness of Ailesbury laid the foundation-stone of a new Hospital, to be erected in Savernake Forest, about a mile from Marlborough. A cottage Hospital was opened about five years ago near the site of the new building, the expenses being paid by the Marquis and Marchioness of Ailesbury, and the movement proved so beneficial to the poor of the different parishes in the Marlborough district, that it was determined to build a permanent Hospital. The estimated cost is £3000, towards which about £2750 have been promised. The Marquis and Marchioness have contributed £1300, besides presenting the site.

Custody of Testamentary Documents.—The will of the late Sir John D. Harding, Q.C., D.C.L., formerly Queen's Advocate, has been admitted to probate under peculiar circumstances. The will was executed and duty attested in the year 1863. Subsequently, the testator became insane, and threw the will into the fire. The testator's attendant rescued it when partially destroyed, and, with the aid of the draft, it was proved as the testator's will. This case has led to a suggestion that Medical men might be appointed as temporary official custodians of wills of, at least, lunatic patients. At all events, they might be constituted commissioners under the Probate Court for the due registration and custody of wills throughout the country, as frequently a period of years elapses between the date of the testament and the testator's disease, and, perhaps, no clue remains of the whereabouts of the will or its probable custody.

Sewage Irrigation at Aberdeen.—A most successful experiment in sewage irrigation was carried out last season at Aberdeen. The land experimented upon was rather over eleven acres. The crops sold well, and the yield will be fully £20 per acre, as compared with, perhaps, £7 per acre from the same land under ordinary cultivation. These results were attained under disadvantages—from prejudice against the use of grass produced from sewage, from an unfavourable spring, and from late sowing, owing to delay in preparing the ground for irrigation. This confirms the evidence already obtained as to the success of sewage irrigation, and it should be added that the process is attended with no bad effect to the neighbourhood, in a sanitary point of view.

Extraordinary Disclosures.—The Coroner for East Surrey concluded, on Monday, an inquiry respecting the death of Jessie Jane Beer, aged one year and two months, the daughter of Mr. Beer, who resides at Newington Butts. The inquiry created considerable interest from the fact that a servant, named Norman, aged 16, had had charge of the deceased, and that when previously engaged in several gentlemen's families, no fewer than four children in her charge had died mysteriously. It appeared that, on the 7th inst., Mr. Beer and his wife left home about half-past three to dine with some friends, leaving Norman in charge of the house, and returned about midnight. On entering, he heard violent screams, and going upstairs, found one of the children lying on the floor undressed. The baby was discovered between the bedstead and the wall, quite dead, but when he left home it was in perfect health. Dr. Lees, 112, Walworth-road, said he had made a post-mortem examination of the body, which was that of a fine healthy child. The face appeared to be very red, and on the lips he found two compressed marks. He was of opinion that the child had died from suffocation. Mr. Mullard, detective-sergeant, said he had made inquiries relative to the girl

Norman, and he found that several children had expired under circumstances similar to the case before the Court. The jury returned a verdict—"That the deceased died from suffocation accidentally caused." The father said he was dissatisfied with the verdict, and would take other proceedings.

Health of Scotland.—2763 deaths were registered in the eight principal towns during the month of March, of whom 1368 were males and 1395 females. After allowing for increase of population, this number is 19 above the March average for the last ten years. A comparison of the deaths recorded in the eight principal towns shows that, during March, the annual rate of mortality was 21 per thousand persons in Perth, 23 in Leith, 28 in Edinburgh, 31 in Paisley, 32 in Dundee and in Aberdeen, 38 in Glasgow, and 47 in Greenock. Of the 2763 deaths registered, 1253, or 45 per cent., were of persons under 5 years of age. In Perth, 29 per cent. of the persons who died were under 5 years of age; in Aberdeen, 34; in Edinburgh, 36; in Greenock, 44; in Dundee, 45; in Leith, 46; in Paisley, 47; and in Glasgow 50 per cent. The zymotic (epidemic and contagious) class of diseases proved fatal to 571 persons in the eight towns, and constituted 20·6 per cent. of the total mortality. The rate of mortality from this class of diseases was nearly uniform in all the towns, with the exception of Perth, where it was only 12·5 per cent. of the mortality. It was slightly exceeded in Dundee and in Paisley, from the prevalence, in the former, of whooping-cough, and in the latter, of fever. Fever was the most fatal of the epidemics, having caused 160 deaths, or 5·7 per cent. of the mortality. In Glasgow 6·0 per cent., in Greenock 8·2 per cent., and in Paisley 9.1 per cent. of the deaths were caused by fever. Of the 86 deaths from fever in Glasgow, 35 were attributed to relapsing fever. Of the 160 fever deaths in the eight towns, 68 were tabulated as typhus, 40 as enteric, 41 as relapsing, 2 as simple continued, and 9 as infantile remittent fever.

"We give it as a fact," says the *Court Journal*, "that a lady, who, with her lord and master, had advanced in social position considerably from former times, expressly stipulated with her Doctor that she was to be vaccinated from the lymph taken from a titled person. She mentioned a neighbour, a countess, to whose lymph she said she would give the preference.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Burdon-Sanderson's lecture "On the Arterial Movements" will appear next week.

C.—Bismuth may be given in much larger doses.

A. C.—The subject shall receive attention.

Candidate.—The *Gazette* of Tuesday last states that no examination will be held for appointment to the Indian Medical Service in August, 1871.

E. B. P.—If the Medical attendant declines consultation, and declines to give up the case, you would not violate etiquette by seeing the patient, prescribing for him, and giving your opinion to his friends. Private feuds should not interfere with Professional duties.

St. Pancras.—It is quite true that the St. Pancras Board of Guardians have appointed Mr. Claremont sole vaccinator of the parish, which will be divided into four districts. Mr. Claremont has been for some years one of the parochial Surgeons, and is an active and energetic officer. We understand that he and his deputy will carry out the regulations propounded by the Privy Council effectively. One of our contemporaries made a sad blunder last week in stating that the office of public vaccinator had been established by the Board of Guardians with the view of getting rid of one of their Medical officers who had been obnoxious to them. The fact is that the gentleman to whom reference is made was not a candidate for the office of vaccinator, and, as far as we understand, was not solicited by anyone to become so.

Inquirer asks—

"In the case of a Medical officer holding a Poor-law appointment for some years, such Medical officer not being resident in his district (the appointment is annual), a qualified Medical man comes to reside in the district. The question I wish to ask is, if the newcomer applies for the appointment, is it compulsory on the guardians to elect him to the district on the score of his being resident, in preference to the Medical officer who is non-resident, but has held the appointment for some years? What is the usual course under such circumstances?"

⁂ The *usual course* is that prescribed by the Regulations of the Poor-law Board, which—in force until September 29 last in unions only—are now uniform throughout the country—viz., to appoint, whenever practicable, a fully qualified and resident Medical man as Medical officer. But it can hardly be said to be *compulsory* on the guardians to make such an appointment, since there is no available machinery to compel them to a compliance with the regulations. If they continue to employ the non-resident officer, and furnish the Poor-law Board with a copy of a *special minute* setting forth their reasons, the employment (in the absence of protest from the newcomer to whom you refer) would probably be consented to for another year. But we have known cases in which, in spite of such protest, and by reason of the pertinacity with which the guardians have stuck to the actual tenant of the office, the continued employment of the non-resident officer has, notwithstanding the regulations, been permitted annually for very many years.

Prescriptions against Cholera Morbus and Cancer.—We have received the following announcement in Italian and French, in parallel columns. We give the Italian, with an English translation, as a contribution to the Medical curiosities of the day:—

"L'annunzio seguente è stato affisso nella Esposizione Marittima di Napoli:—

"Vendita di Due Ricette.

"*Gennajo*, 1871.

"Contro il *colera*—lire italiane *centomila*.

"Contro il *cancro*—lire italiane *centomila*.

"Ogni mese, per tutto il 71, si aggiungeranno lire *centomila*.

"Io ho solo sperimentato i due rimedii. L'autore è un nostro napolitano.

"Tutto si è fatto per introdurre l'uso dei detti rimedii, ma indarno. E quindi giusto e insieme umanitario il partito sopra annunziato.

"Indirizzo Guglia-Arcivescovado 159.

"Dottore Paolo Bracca."

[Translation.]

"The following notice has been put up in the Maritime Exhibition at Naples:—

"Sale of Two Receipts.

"*January*, 1871.

"Against the *cholera*, 100,000 Italian *lire* (£4000).

"Against *cancer*, 100,000 Italian *lire* (£4000.)

"Every month during 1871 the price will be raised 100,000 *lire*.

"I alone have tried the two remedies. The author is Neapolitan.

"Everything has been done to bring these remedies into use, but in vain. Therefore the bargain above announced is just and humanitarian as well.

"Address Guglia-Arcivescovado 159.

"Dottore Paolo Bracca."

Does Dr. Paul Bracca think it just and humanitarian that the inventor should lock these precious secrets in his own breast? and how did this ingenious personage come to know that his remedies are valid? Where are his cases?

The Croydon Sewage Farms.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—A paragraph in last Saturday's issue of your journal states that the utilisation of sewage is about to be tried as an experiment at Beddington, where an extensive tract of land is being rapidly prepared for the purpose.

Will you kindly allow me to say that we are laying out an additional 160 acres of land, for the purpose of continuing the process of sewage irrigation, which has been in operation there for the last ten years; that it is not, as you report, an experiment, but is the natural result of that which was experiment ten years since, but is now an established success; and that the additional land is required in consequence of the rapid increase of population in this district, and that we now have nearly 500 acres so farmed as to add to the health of a thickly-populated neighbourhood.

Croydon, April 18. I am, &c., Alfred Carpenter, M.D.

⁂ We are quite familiar with the facts contained in our respected correspondent's letter; the omission of the one word "new" has caused the misapprehension.

Hooping-cough.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—After the long, cold, dreary winter each succeeding spring appears more lovely; the simple snowdrop, the bright crocus, the sweet-scented hyacinth, and the pretty primrose, the green-tipped hedges, and the songs of the birds, all combine temporarily to drive away the cares, worries, and anxieties, even of Medical men. But to us the season is mostly suggestive of spring rashes, bronchitis, and specially of hooping-cough. What a curious complaint this is. Though an infectious disease, especially of childhood, it is occasionally fatal to people of advanced years; and though second attacks are uncommon, they are not so rare as some writers assert. Unfortunately in some instances running on for many months, the constitution receives permanent damage, a tendency to chorea, epilepsy, bronchitis, and vertebral disease being established. Hæmorrhage from the nose, mouth, and ears, ecchymosis of the conjunctivæ, hydrocephalus, hernia, prolapsus ani, and incontinence of urine testify to the extreme severity of the cough, and death from lung collapse appears occasioned. As for the complications, the family history and the child's appearance will give the key as to whether bronchitis, convulsions, or remittent fever may be expected; in several fatal cases of convulsions the mother, whilst nursing, may also be pregnant.

Like the barrister in Pickwick, "only called the other day, in fact about twenty years," my experience, extending over thirteen years, is not worth much, still a great number of cases have been under treatment of whom a few must have been cured. Honestly and fairly all the well-known remedies have been tried, including rue, alum, nitric acid, bromide of ammonium, lobelia, chloral hydrate, and various inhalations. Children have been sent to the gas-works, have spent happy days at Rosherville, or been taken on cheap excursions round the Nore, with refreshments on board and a band of music, still the secret has not been found out. As for bromide of potassium or carbonate of ammonia, their effect appears to increase the mischief by stimulating secretion already too copious. My present idea, whilst keeping an eye on the child's gums, the digestive organs, and the temperature of the room, is to give carbonate of soda and belladonna at periods in anticipation of the paroxysms, occasional doses of castor oil, and bringing out repeated crops of pimples over the lungs, both back and front, with croton liniment. Steer near the wind as possible with the belladonna, using the extract not the tincture, and constantly, carefully increasing the doses; afterwards cod-liver oil, chemical food, and change of air.

In every case of hooping-cough, relations (specially maiden aunts), friends, clergymen, and that nuisance the retired Physician hasten to send by post the one infallible prescription containing cream of tartar and cochineal and Roche's embrocation. Amongst the poor, rubbing the soles of the feet with garlic is very popular. I am, &c.,

Francis R. Hogg, M.D., Royal Horse Artillery.

R. A. Barracks, Woolwich, April 14.

COMMUNICATIONS have been received from—

X. X.; Dr. J. Russell; Mr. Gaskoin; Mr. C. D. Pearless; Mr. C. A. Fox; Mr. Housley; Mr. Le Neve Foster; Dr. D. C. Black; Dr. F. R. Hogg; Dr. Phillips; Dr. Hardie; Mr. Braddon; Mr. H. C. Lawrence; Mr. G. M. Warren; Mr. T. Ogden; Dr. Alfred Carpenter; Dr. Buzzard; Mr. W. Willis; Professor Laycock; Mr. F. Churchill; Dr. N. G. Meacea; Mr. J. Hutchinson; Dr. J. W. Ogle; Dr. J. Burdon-Sanderson; Mr. J. Chatto; Dr. Dyce Duckworth; Dr. Hyde Salter; Dr. T. Clifford Allbutt; Dr. Day; Mr. H. Arnott; Dr. H. Osborn; Mr. T. Ball; Dr. Whitmore; Mr. T. M. Wilkinson; Mr. G. Lawson; Mr. John Clarke.

BOOKS RECEIVED—

Report of the Glasgow Royal Infirmary—Report on Barracks and Hospitals, with Descriptions of Military Posts, by the War Department, Washington—William Logan on the Great Social Evil—Cameron J. F. Stuart Macdowall on a New Method of Treating Wounds (Gruby's System), and the Medical and Surgical Aspects of the Siege of Paris—Dr. E. B. Squire on Anæsthetics—Dr. Taylor (New York) on Dactylytis Syphilitica—Report of the Surrey County Asylum.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Scotsman—New York Medical Gazette—Pharmaceutical Journal—Chemist and Druggist—The Brighton Examiner—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

April 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Gresham College, 7 p.m. E. Symes Thompson, M.D., F.R.C.P.—Lecture II. "On the Organs of Respiration."

Royal Institution, 3 p.m. Mr. Lockyer, "Astronomy."

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Gresham College, 7 p.m. E. Symes Thompson, M.D., F.R.C.P.—Lecture III. "On the Organs of Circulation."

Medical Society of London, 8 p.m. Dr. Douglas Powell, "On some Cases of Obstructive Mitral Disease." Mr. C. F. Maunder will show Patients having good use of Triceps Muscle after Excision of the Elbow; Cause demonstrated by a Dissection. Mr. W. Adams, "On Subcutaneous Section of the Neck of the Femur."

25. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Institution, 3 p.m. William Pengelly, F.R.S., F.G.S., "On the Geology of Devonshire, especially of the New Red Sandstone System."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Jonathan Hutchinson, "On a Series of Cases in which Chancres have been caused by Vaccination." Dr. Elam, "On Partial Acute Idiopathic Cerebritis."

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Hunterian Society, 8 p.m. Meeting.

Society of Arts, 8 p.m. Meeting.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

28. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Clinical Society, 8½ p.m. Dr. Greenhow, "On Diphtherial Paralysis treated by Galvanism." Dr. Gull, "On a Case of Accumulation of Hair in the Stomach." Dr. Henry Thompson, "On a Case of Diabetes treated with Opium." Mr. Cooper Foster, "Case of Naso-pharyngeal Polypus."

Royal Institution, 9 p.m. Prof. Odling, F.R.S., "On the Revived Theory of Phlogiston."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 15, 1870.

BIRTHS.

Births of Boys, 1225; Girls, 1189; Total, 2414.
Average of 10 corresponding weeks, 1860-69, 2063·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	836	886	1722
Average of the ten years 1860-69	738·7	700·8	1439·5
Average corrected to increased population	...	...	1584
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	22	...	5	...	11	...	3	2	1
North ...	618210	116	1	12	3	22	5	5	...	2
Central ...	383321	7	...	4	1	6	...	1	1	1
East	571158	40	3	5	...	18	1	2	3	...
South	773175	80	2	14	...	9	2	3	3	2
Total	2803989	265	6	40	4	66	8	14	9	6

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·706 in.
Mean temperature	48·3°
Highest point of thermometer	66·5°
Lowest point of thermometer	30·0°
Mean dew-point temperature	42·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·36 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 15, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending April 15.	Deaths Registered during the week ending April 15.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2414	1722	66·5	30·0	48·3	9·05	0·36	0·91
Portsmouth ...	125464	13·2	77	45	65·4	35·0	48·8	9·33	0·53	1·35
Norwich	81787	10·9	63	42	64·0	27·5	44·5	6·95	0·44	1·12
Bristol	173364	37·0	123	81	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	39	35	62·7	29·1	46·7	8·16	0·77	1·96
Birmingham ...	378574	48·3	229	182	63·8	29·0	45·8	7·66	0·57	1·45
Leicester	101367	31·7	76	34	62·0	26·5	46·7	8·16	0·53	1·35
Nottingham ...	90480	45·3	59	40	66·6	27·1	47·3	8·50	0·59	1·50
Liverpool	526225	103·0	396	387	62·0	33·4	47·8	8·78	0·70	1·78
Manchester ...	379140	84·5	248	206	62·0	31·0	47·2	8·44	0·85	2·16
Salford	123851	23·9	95	66	60·3	30·8	46·3	7·94	0·97	2·46
Bradford	148030	22·5	81	85	60·8	30·8	46·1	7·83	0·14	1·12
Leeds	266108	12·3	120	124	60·0	28·0	45·1	7·28	0·49	1·24
Sheffield	255247	11·2	202	133	63·0	27·2	44·5	6·95	0·66	1·68
Hull	135195	38·0	83	49	63·0	21·0	42·2	5·67	0·10	0·25
Sunderland ...	103037	31·2	64	69	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	118	98	56·0	31·0	44·6	7·00	0·58	1·47
Edinburgh	179944	40·6	141	99	58·7	30·0	45·0	7·22	1·80	4·57
Glasgow	477627	94·3	415	373	...	...	...	...	...	...
Dublin (City, etc.†)	322321	33·1	‡192	‡175	...	...	...	...	...	...
Total of 20 Towns in United Kingd'm	7336961	34·4	5235	4045	66·6	21·0	46·1	7·83	0·65	1·65

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·71 in. The highest was 29·91 in. on Tuesday morning, and the lowest was 29·17 in. on Saturday at noon.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on the 3rd inst., will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

‡ The usual return from Dublin not having come to hand, averages of the births and deaths in that city in the six previous weeks have been used in order to make totals for the twenty towns.

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C. D. Mapother, Esq., M.D., Professor of Hygiene, Royal College of Surgeons in Ireland, Medical Officer of Health, Dublin, &c.
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ORIGINAL LECTURES.

LECTURES DELIVERED
IN THE
PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

LECTURE VI.—ON THE ARTERIAL MOVEMENTS (*Continued*).

THERE is a sensible difference in time between the beat of the carotid artery and that of the radial. Anyone can satisfy himself of the fact by feeling his own carotid with the left thumb and forefinger while he feels the left radial with the other hand. The precise measurement of the interval is a piece of work which has not yet been accomplished. But for purposes of illustration, we can do it accurately enough with the apparatus which I now shew you. It consists of two horizontal levers, which are supported on the same pillar, and work in the same vertical plane.

FIG. 24.

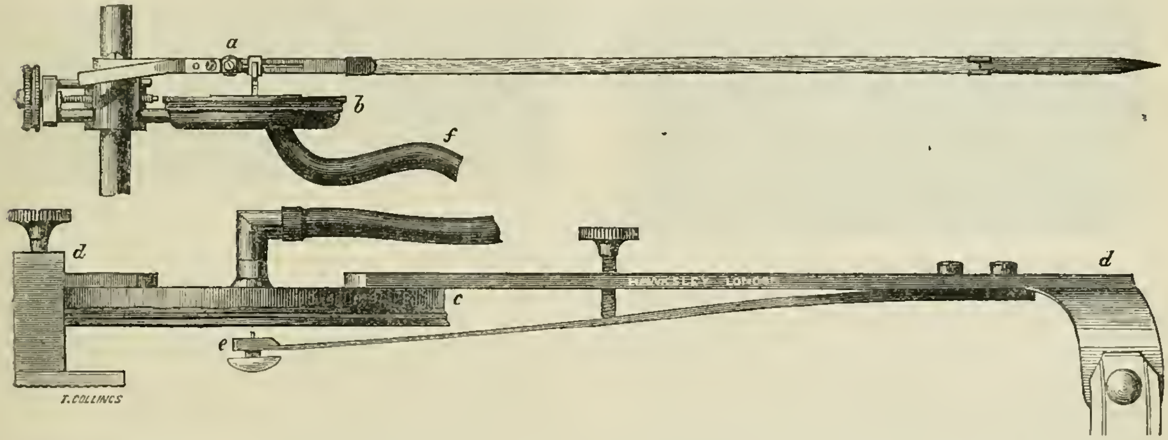
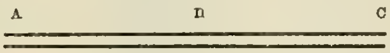


FIG. 24.—Apparatus for recording the arterial movements for long periods. *a*, *b*, recording tympanum and writing-lever; *c*, *d*, *e*, sphygmoscopic tympanum; *f*, a long flexible tube, by which the two tympana are connected. The point of the lever is bent horizontally so as to write on the blackened surface of a cylinder revolving once in a minute or five times in a minute, according to adjustment. The height of the joint (*a*) on which the writing-lever works may be varied by the short adjusting-lever shown in the drawing to the left of *a*. The distance between the vertical bar by which it rests on the tympanum, and consequently the excursion of the point of the writing-lever, can be increased or diminished by turning the milled head.

Close to its bearings (*a*), each lever rests by a vertical bar on the upper surface of an aluminium plate, which adheres to the vulcanite membrane with which the tympanum (*b*) is covered. The cavity of each of the tympana, to which the levers are attached, communicates by a vulcanite tube with that of another tympanum of similar construction, but larger size (one of these tympana is shown at *c*; the other is not included in the drawing). This last, which we may call the sphygmoscopic tympanum, is fitted to a frame of brass (*d*), something like the frame of the ordinary sphygmograph, but of simpler construction. This frame carries a spring (*e*) of the same kind as that of the sphygmograph, which presses on the radial artery, and is fixed in such a position that its movements are communicated to the tympanum, and thereby to its fellow, and to the writing-lever with which it is connected. In this way the radial pulse is written on the cylinder by the upper lever. The carotid pulse is received by a second sphygmoscopic tympanum, which transmits it to the lower lever in exactly the same manner; consequently, as both the levers are of the same length, and their writing ends in the same vertical line, the two expansions, if simultaneous, would be recorded one directly above the other. But as the radial expansion actually happens about a tenth of a second after the carotid, the tracing which corresponds to it is as far behind—*i. e.*, to the left of the other—as the paper progresses in the tenth of a second. As the recorder is at present arranged, one-tenth of a second corresponds to one-fortieth of an inch; a distance much too small to measure accurately. If I wished to determine the time-interval exactly, I should shift the cylinder to another axis of the clockwork, which revolves at a rate five times as great as that to which it is now fitted. I should then have a tenth of a second expressed by a horizontal movement of an eight of an inch.

The reason why time is lost in the transmission of the expansion from centre to periphery, is that the arteries are elastic. Let us suppose a tube, A, B, C (Fig. 25), to represent the arterial system—A the proximal end, C the distal. At the instant that blood bursts suddenly out of the contracting heart into A, it yields to the pressure against its internal surface and expands. In this expansion great part of the sensible motion of the blood momentarily disappears, and consequently, so long as the expansion lasts, produces comparatively very little effect in distending B; but immediately that A becomes tense, the lost, or rather converted, motion again becomes sensible, and adds itself to the motion which the contracting heart is still communicating. And, inasmuch as B deals with the accumulated effect which it receives from A in exactly the same way as A dealt with that which it received from the heart, C is as far behind B in attaining its maximum of distension as B was behind A. This being the case, it is easy to see that the loss of time between A and C, or between aorta and radial, depends on the yieldingness (extensibility) of the tube by which the two points are connected. If the tube is absolutely rigid, there is no postponement; if, though elastic, it is tense at the moment that it receives the discharge, there is scarcely any; whereas that condition of the tube is most favourable to postponement in which it is longest in attaining its maximum of distension, or in which the time taken by any part of it to expand to the uttermost is longest.

FIG. 25.



All this may be illustrated very easily with the simple schema which is described in the last edition of Dr. Carpenter's "Physiology." In that schema the heart is represented by an elastic bag of such size that it can be squeezed with one hand. This bag communicates at one end with a long elastic tube representing the arterial system, at the other with a vessel containing water, the apertures being furnished with valves which open in directions corresponding to those of the heart. If three levers, like these we have just been using, are so arranged as to receive the successive expansion-waves produced by repeatedly squeezing the bag at different distances from their origin, the three tracings are obtained which I have represented on the board (Fig. 27). It is instructive to observe that these tracings have no resemblance to those of the arterial pulse. The reason is, that the contracting hand is entirely unlike the contracting heart. The real heart, like the schematic heart we used at last lecture, contracts suddenly, exerting its greatest vigour at the commencement. The hand contracts gradually, and is, moreover, incomparably weaker, as compared with the resistance to be overcome, than the heart. Hence the expansion of the tube is slow, lasts a long time, and is followed by no rebound. This very slowness of the process enables one to see the steps of it better. In the distal part of the tube, to which the upper tracing corresponds, the expansion culminates later than in the proximal part, because the motion communicated to its contents by the grip of the hand at the outset, does not begin to tell on the former (distal) until the latter is fully expanded. So much the tracings show plainly enough. It must, however, be remembered that the action of a schema of this kind differs so widely from that of the heart itself, that it can only be used as an illustration; the arterial movements are not imitated or reproduced by it.

FIG. 26.

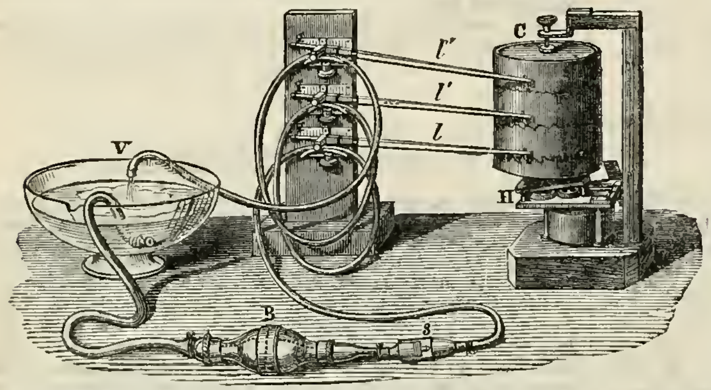


FIG. 26.—Apparatus for showing the loss of time in the transmission of the expansion produced at one end of an elastic tube by squeezing an elastic bag with which it communicates.

FIG. 27.

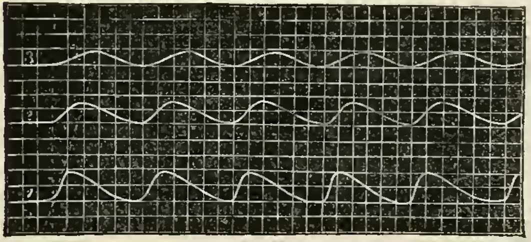
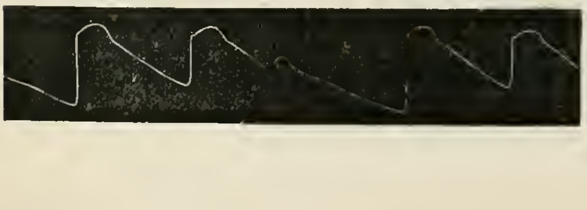


FIG. 27.—Tracing produced by the apparatus, Fig. 26.

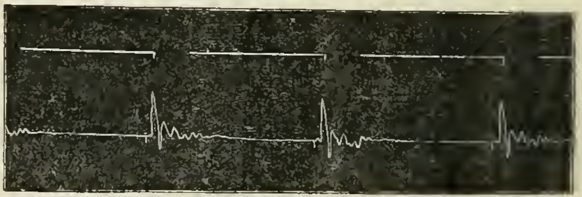
The experiments I have been describing refer entirely to the delay of the transmission of the pulse which occurs between the aorta and the peripheral arteries, and serve only in part to account for the sensible interval of time which separates the shock of the heart, from the radial or any other arterial pulse. This interval is in general much longer than the other, but it differs in different individuals to such an extent as to show that it is dependent on more complicated conditions. There are two reasons for its being so variable. The first is that a certain loss of time is incurred in the heart itself; for, as we shall see in the next lecture, an inconsiderable fraction of a second is required after the heart has begun to contract, for the aortic valve to be forced open. The second reason is that the arterial shock which is felt at the wrist has not always the same significance. The arterial expansion being, as we have seen, not one event, but a series of events, what is felt is sometimes the first, sometimes the second member in the series, according as the one or the other is most prominent. As a rule, the sensibility of the finger is most affected at the moment that the artery attains its acme of tension (*e.g.*, in the pulse shown in Fig. 28, at the moment corresponding to highest point in the tracing), but in a number of individuals the same cause, which, as I pointed out in my last lecture, gives rise to the sudden jerking up of the lever, communicates so smart a sensation of shock or vibration to the finger, that the real pulse which follows it (*i.e.*, the maximum of arterial tension) is either not perceived, or not perceived without the closest attention.

FIG. 28.



The nature of this vibration-effect is both illustrated and explained by the experiment I am about to make with the schema (Fig. 19). If you take an elastic tube, distended with water, and closed at both ends, and give it a smart rap with a hammer at one end, an effect is transmitted along the tube, which, although of an entirely different nature to that which constitutes the pulse, yet mixes itself up with it under certain conditions. This effect is called, from its mode of origin, a percussion-wave. To produce it, I close the communication between the schematic heart and artery, and arrange the lever (Fig. 19) in such a manner that, by striking on it with a hammer (at D), I may produce the required percussion. I arrange the tube under the spring of the sphygmograph (at O), in such a position that the length of tubing between the point of percussion (D) and the spring (O) is equal to two mètres. I then produce a succession of percussion-waves, and obtain a tracing similar to those I hand round, in which the interruptions in the upper line indicate the moment of percussion, the vertical ascents in the lower line the effects. (In the figure, the interval of time between cause and effect corresponds to the portion of the horizontal line which lies between the short vertical scratch and the commencement of the ascent in the lower tracing.)

FIG. 29.



The rate of transmission can be determined by comparative measurements of the two tracings. I have found, from a number of observations made several years ago, that it is about ninety feet per second. The nature of the movement is really expressed by the word I have applied to it—vibration—*i.e.*, the particles of liquid in the tube are thrown into a state of back-and-forward movement, which movement is propagated centripetally although there is (the tube being closed at both ends) no progression of the liquid itself.

That the bursting open of the aortic valve produces a similar vibratory movement of the blood, that this is transmitted instantaneously (*i.e.*, in about a fiftieth of a second) to the peripheral arteries, and is, under certain circumstances, felt, I think there can be no question. It completely explains the fact that in certain persons there is no sensible postponement of the arterial expansion whatever, the whole interval between the heart-beat and the radial pulse being accounted for by the aortic valve delay already referred to.

Now that we understand the nature and cause of the postponement of the pulse, the explanation of the mode of production of the second expansion is comparatively easy. Let us take the simplest case—that of the radial or other artery not far from the periphery. As regards the arteries of ultimate distribution, there are two facts to be borne in mind—first, that these arteries, as they become smaller, become more distensible; and secondly, that in the capillaries themselves a resistance to the passage of blood is much greater than any which has been encountered in the arteries. Just as the expansion of the aorta determines that of the radial, the radial expansion determines, and is followed by, that of the peripheral arterioles. Hence, at a certain moment, the radial is subsiding while the arterioles are still swelling; so that, when at their acme of distension, the pressure is greater at the periphery than in the radial itself. The other fact is that the resistance to the flow of blood is very much greater at the capillaries than at any part of the arterial circulation. Immediately behind this resistance, pressure increases, and goes on increasing so long as blood enters the arterioles from behind more rapidly than it is discharged in front.

The effect of this state of things is not difficult to understand. The circulation is closed behind by the aortic valve, and virtually closed in front by the capillary resistance. In the largest arteries the expansion is ebbing, in the smallest it is culminating; so that, for an instant, the pressure is greater in the latter than in the former. There is but one effect possible. The restoration of equilibrium must take place by increase of pressure towards the heart and diminution towards the periphery. This restoration of equilibrium constitutes the second beat. It may manifest itself in very different degrees, according to the yieldingness of the arteries. When, as in health, the arteries are tense, it is seen merely in a slight arrest or interruption of the arterial collapse, a break in the descending limb of the tracing. In fever, when the arteries are relatively much more distensible, the second expansion is separated by so distinct an interval of relaxation from the first, that the pulse feels double to the finger. It will probably facilitate the comprehension of the explanation I have given if I sum up the synchronous conditions of central, peripheral, and intermediate arteries thus :—

Fig. 19.

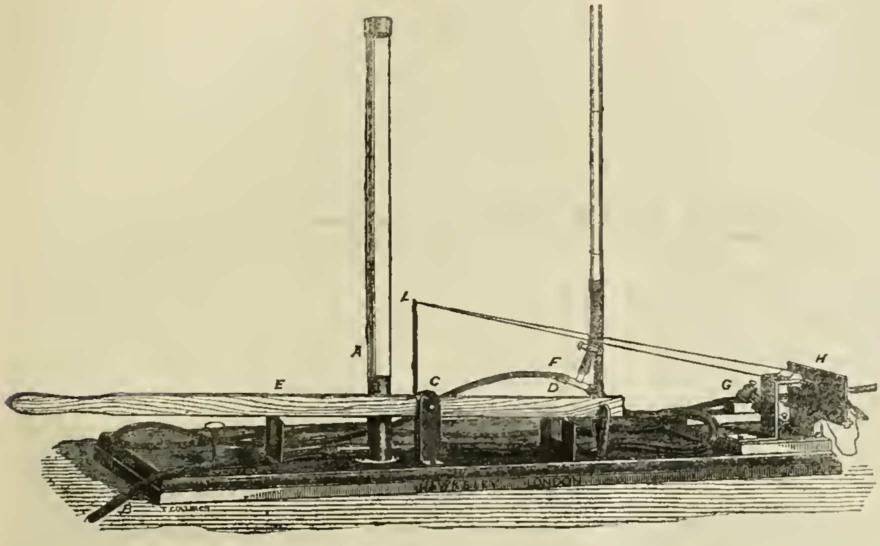


Fig. 19.—Dr. Sanderson's schema for demonstrating the nature of the arterial movements. A, glass tube which represents the heart. B, the tube by which A communicates with a cistern at a height of ten or twelve feet above it. (A much smaller head of water is sufficient.) C, the lever by which the two valves E and D are worked, the same act which shuts the one opening the other. F, commencement of the experimental tube, which is of black vulcanite. At F the tube communicates with a long vertical tube of glass, only part of which is seen; it is closed at the top, and usually shut off from F by a pinchcock. At G the tube passes under the spring of the sphygmograph, the frame of which rests on a block (below G). By error, the tube has been drawn on the wrong side of the block. H, the blackened plate of the sphygmograph. To the left of it is seen the cylinder with its needle for recording the time which intervenes between the opening and closing of the aortic valve, D. L, a rod which is firmly fixed in the lever, and is connected by two cords, one of which is elastic, with the cylinder.

Carotid.	Radial.	Peripheral arterioles.
Fully expanded	Expanding	Collapsed
Contracting	Expanded	Expanding
Again expanding	Contracting	Expanding
Stationary	Again expanding	Slowly contracting
Contracting	Contracting	Contracting

Hence, as sphygmographic tracings show to be the case, the second expansion in the great arteries lasts longer than in the smaller ones; for, although it commences the sooner the nearer the heart, the subsidence is simultaneous throughout the whole arterial system.

Before I finally leave the subject of the pulse, it will be well to place before you some practical rules for your guidance in applying the sphygmograph.

Rules for Sphygmographic Observation.

1. The forearm should be supported on a table or other similar surface, with the back of the wrist reposing on a firm, well-padded cushion, of such a height that the dorsal surface of the hand makes an angle of from 20° to 30° with that of the forearm.

2. The sphygmograph must be placed on the wrist in a direction parallel with that of the radius, in such a position that the block rests upon the trapezium and scaphoid, and the extremity of the spring is opposite the styloid process of the radius.

3. In beginning an observation, adjust the instrument so that the pressure exerted by the spring is sufficient to flatten the artery against the radius; then weaken the spring until the effects of over-compression disappear—*i.e.*, until you find that the lever continues to descend until the end of diastole. Note the pressure at which this result is attained, as well as that which is required to flatten the artery, and take tracings at each of the two pressures.

4. In every observation direct your attention to two questions as involving the whole of the information which the sphygmograph is able to give, viz. :—

a. The absolute arterial resistance—*i.e.*, the quantity of work the heart has to do in each contraction; and

b. The relative arterial resistance—*i.e.*, the relation between the quantity of blood discharged into the aorta in a given time, and the facility with which blood escapes from the arterial system by the capillaries.

The absolute resistance is learnt by following out Rule 3. The relative resistance is judged of by observing the time occupied in the acts of expansion and contraction, as indicated by the obliquity of the ascending and descending limb of the tracing, quick expansion being associated, by the identity of the conditions which produce it, with quick contraction and *vice versâ*. The rate of expansion must be observed (as before explained) independently of the initial jerk of the lever. That of contraction may be estimated from the descent which precedes the second beat, but more especially from that part of the tracing which expresses the final collapse—the period during which the arterial system, no longer affected by the heart, is discharging its contents along the capillaries by virtue of the elastic contraction of its walls.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

TRAUMATIC ANEURISM FROM GUNSHOT WOUND.

By J. FAYRER, M.D., C.S.I., F.R.S.E.,
Professor of Surgery, and Senior Surgeon Medical College Hospital, Calcutta.

On the morning of October 20, 1870, assisted by Professors Partridge and Ewart, I operated on a case of traumatic aneurism in the right leg of Mr. A. C., aged 17 years, who had recently arrived from Australia.

He gives the following account of his case :—On December 25, 1869, he accidentally shot himself in the leg with both barrels of a gun loaded with No. 6 shot. The muzzle of the gun, which fell from his shoulder, was close to the limb when it exploded. He does not give a very clear account of the extent of the injury, but it appears that both charges entered the limb. The tibialis anticus and long extensors were much injured, and in great part shot away. The tibia must have been injured, though probably not fractured across. The fibula was comminuted, and from the amount of new bone thrown out about it, as well as between the bones, both must have been much injured. There is a deep depression in the tibia in front, about the centre, which seems to show that the bone must have exfoliated. There is a large cicatrix occupying the anterior aspect of the leg for an area of about four inches, and an open, circular sore with a clot adhering to it. There are also cicatrices in the back of the leg, and an imperfectly cicatrised wound, which shows that the injury extended deeply, that the shot must have nearly, if not quite, traversed the limb. He says that the leg was bandaged on the 25th. He was taken home, and the bandages removed on the following day. Wet linen was kept constantly applied for ten days. Inflammation then came on, and linseed poultices were applied on the front and back of the leg. Three weeks later "the wound was raised, the skin at the back of the leg broke, and great numbers of shot came out." There was little pain, except occasionally, at that part; no shot came out of the wound in front, which was about the size of the palm of the hand. "A month's poulticing cleaned the wound, and, in two weeks after, the flesh began to grow and fill the space in the wound until level with the surface; but the edges would not heal. A stimulating ointment was tried, but the part seemed dead. At the place where it has now opened, there still remained a small aperture right through the leg, through which a probe could be passed without my feeling it. Gradually this grew smaller, and the back of the leg closed up. The stimulating ointment was pushed into the hole with a bit of lint; then it healed up rapidly until it got level with the other, and then took the same dead appearance. The Doctor then applied bluestone, and in two or three days there was a great difference in the size of the wound. The shape of the wound had been nearly oval, now it had irregular edges. The Doctor continued using the bluestone until it healed, and we then thought all trouble was over. But in a week it began to swell up again, and was very painful. The wound rose to the size of an egg. In four days after the swelling began, it burst. The wound was full of bad blood—black, but free from matter. When that was gone, another came in its place, not so large as the first, but the pulsation quite as high as it is now. Lately it has given me no pain at all. Sometimes the wound was dead-looking again, the same as before. These are all the changes I can remember."

I saw him on October 19, and received from his friends the following account:—He was on the point of leaving Calcutta by rail. He had been on his legs a good deal that day; in the afternoon, he complained of pain and throbbing in the leg, and it suddenly burst out bleeding, and a large quantity of blood appears to have been lost. The hæmorrhage was arrested by pressure, ice, and a bandage, and did not return during the night. He is a tolerably healthy-looking young man of 17, rather pallid from the loss of blood, but otherwise well and in good spirits; no fever, no pain. On removing the bandage I found the appearance I have described, and in the centre of the cicatrix a round aperture, with very thin margins. This was filled by a protruding clot of dark blood. The temperature of the limb was apparently natural, and there was not much swelling except about the wound, where the limb seemed distended. The posterior tibial artery was beating naturally; the anterior tibial could not be felt. I carefully removed the clot, and passed my finger into a deep cavity among the muscles of the leg between the tibia and fibula. There seemed to be a quantity of blood-clot and broken-down tissue, and much bone thrown out between the tibia and fibula. I became conscious of a firm and distinct pulsation all around my finger, and on examining the leg I found that the impulse was general round the wound. On withdrawing my finger, it was followed by a profuse effusion of arterial blood from the cavity. I immediately applied pressure and ice, raised the limb on a pillow, and the bleeding ceased.

In consultation with Dr. Partridge, we determined that it was a diffused or traumatic aneurism of the anterior tibial, and it was decided to attempt to ligature the artery.

On the morning of the 20th he was placed under chloroform by Dr. Ewart, Dr. Partridge commanding the femoral artery. I made a vertical incision, about four and a half inches in length, in the line of the anterior tibial, the wound occupying the centre of the incision. I found the tissues completely altered in character, brawny, and consolidated; the integument and muscles were matted together above and below the wound, which opened into a large cavity as big as a small egg. On deepening the incision below the wound there was a sudden and violent gush of arterial blood, which was immediately arrested by compressing the femoral. Dissecting down, I came on bony matter, and it was evident that the blood came from a recess in the bone, into which, when the finger was placed, the bleeding was commanded; at the same time the point of the finger could be felt pressing through the soft tissues at the back of the leg. The wound was enlarged and a strong light thrown into it; it was carefully sponged and examined, but no trace of an artery could be found. The blood came entirely from below and in a jet, more like that from the subclavian than a small artery. I made many efforts to secure the bleeding part, but it was so completely involved in bone that it was impossible; plugging with lint was therefore resorted to—the lint was forced into the bony cavity and the bleeding thereby completely arrested. After a short interval the lint was carefully removed from the upper and fleshy part of the cavity; the walls were quite dry and there was not a vestige of a bleeding point to be seen, though the upper end of the artery was again carefully sought for. On removing the lint from the deeper and bony part of the cavity, a repetition of the hæmorrhage occurred, and it was again plugged. Notwithstanding the greatest care and the most perfect management of the femoral, the loss of blood was great; upwards of two pounds must have been lost. It was therefore not considered desirable to make further search; the wound being thoroughly plugged and the hæmorrhage arrested, he was put to bed.

As the limb is well supplied by the posterior tibial, and as the bleeding orifices have now been completely exposed and subjected to pressure against bone, it is to be hoped that cicatrisation may close the opening altogether.

It is remarkable that the bleeding should have been so profuse from the lower end, though no doubt the bony cyst is the explanation of it, and that the upper end should have been so entirely obliterated. The tissues were completely altered in character—brawny, consolidated, and fibrous. Not a vestige of the anterior tibial artery or of the nerve could be found. In making the incision, the tissues were very vascular, and one or two considerable arterial branches had to be ligatured. He has lost the power of extension of the foot, the tibialis anticus and common extensor of the toes having been so much injured by the wound. 5 p.m.—Doing well; no bleeding; no fever; temperature of the leg natural, but it is painful from the pressure of the lint in the wound. Ordered chloral hydrate at bedtime. He is to be carefully watched. I have no doubt that the anterior tibial is the artery affected, though the upper part of the vessel seems to have been obliterated. The aneurismal sac in its lower part has become partly surrounded by bone thrown out from the fibula, and thus an opening has been formed, through which the bleeding took place, and it is a marvel that the boy has escaped so long without bleeding to death. Had he started in the train before the hæmorrhage came on the consequence might have been very serious.

October 21.—He is doing well; pain less; no bleeding; temperature of limb natural; no pulsation. Ordered chloral hydrate.

22nd.—Doing well. Ordered salines, as he was slightly feverish. Is slightly nauseated.

23rd.—Doing well. Dressing changed daily; no bleeding; leg below wound rather swollen; no pain.

November 2.—Since the last report he has been doing well; no fever after the first day or two; wound granulating healthily, gradually extruding the lint, and this morning the last piece came out. There is a deep granulating cavity; no hæmorrhage. The wound is dressed with lint, and washed with a solution of carbolic acid and water. He eats and sleeps well, and sits up, the leg resting on a chair.

3rd.—This afternoon he was sitting in an armchair, with the leg raised, when he suddenly felt the limb ache and become heavy; it then began to bleed through the dressing, and in a few minutes he must, from the description, have lost about sixteen ounces of blood. The bleeding had been stopped by pressure when I arrived; he looked pale and frightened. I took off the dressings, plugged the deep part of the wound, and put him to bed; ordered him not to get up again.

4th.—No pain; he slept well.

6th.—The wound was dressed to-day; there has been no return of hæmorrhage.

30th.—He has been doing very well since the last report; the wound is gradually closing and the granulations are closing in. The plugs have all been gradually pushed out, and now he has only simple dressing with lint soaked in carbolic acid lotion applied.

December 12.—The wound has now nearly closed, and contraction is aided by strips of adhesive plaster. His health remains excellent.

20th.—The wound has healed, and he begins to put his foot to the ground.

January 1.—He is now quite well. The wound is reduced to a linear cicatrix. He walks well; but owing to the destruction of the muscles on the anterior surface of the leg, he is unable to extend the foot. The limb is, however, useful, and in time he will probably be able to use it nearly as well as the other.

March 15.—I have heard of him lately; he has gone to another station. Is in good health, and has almost entirely regained the use of the limb, and is able to follow the occupation of an indigo planter.

Calcutta.

PRINCIPLES OF THE ANTISEPTIC TREATMENT OF WOUNDS.

By ARTHUR ERNEST SANSOM, M.D. Lond., M.R.C.P.

It appears to me that much of the scepticism with which many have received the enunciation of the theories upon which the antiseptic system in Surgery is based has arisen from a wrong conception of the relation between suppuration and putrefaction. Many who acknowledge that the results of the treatment have been very satisfactory refuse to believe in the theory of septic germs. The danger of this, however, is that they neglect the minute precautions which a belief in the theory enjoins; and thus both theory and practice become charged with errors not their own. The occurrence of this scepticism is, however, very pardonable; for the relations of atmospheric germs to the evils, proximate and remote, of wounds, have not been always pointed out with lucidity, even by advocates of the theory and the practice. Those who see the antiseptic method in operation as under the careful management of Professor Lister, who witness the undoubted fact that large wounds can heal without the production of a drop of pus, may yet fail to understand by what faculty the antiseptic agent exerts the power of preventing pus-formation. Being told that it is a potent destroyer of germs, they inquire—"How do these germs induce suppuration, and what is their relation to the product, pus? Am I to believe that the rudiments of pus cells are floating in the air, and that these, finding a suitable soil in the living animal body, develope and propagate as pus cells?" This view was held by Lemaire. He compared pus cells to yeast cells, and attributed to them an analogous function and an identical origin.(a) It must be seen that such a view cannot be maintained, for we have abundant facts to show that pus can be formed in situations where atmospheric air cannot penetrate, and observations upon pus corpuscles show that they have no such mode of origin as this which has been claimed for them.

Observers who have studied the development of the pus corpuscle, though they are divergent in their views of its proximate origin, nevertheless all agree that it is derived from the intrinsic structures of the body, and not from material imported from without. At the present time the theories as to the immediate production of pus may be described as three—First, that of Virchow, which considers that pus is formed alone from the cells of connective tissue and epithelium; second, that of Cohnheim, that pus cells are white blood corpuscles, which have emigrated from the blood-stream through the walls of capillaries; third, that of Beale, that pus is a form of germinal matter capable of being evolved from any of the tissues. The theory of Professor Beale seems supported by the greatest amount of evidence. Whenever the germinal matter of the normal tissues and fluids becomes endowed with the power of rapid multiplication, it becomes pus. The initial change inducing pus-formation is one of local nutrition; any tissue which is supplied with pabulum in excess can pass through the various stages of degradation to pus. The great histological characteristic of the pus corpuscle is its motility. The soft material of which it is composed becomes protruded at various points of its circumference in different degrees, causing it to assume ever-varying shapes. The buds and offshoots from its mass become detached, and form individual corpuscles, which rapidly live, grow, and proliferate, like their parent.

The first inducing cause of pus-formation may be preliminarily defined as irritation. Such irritation may be brought about by agents operating primarily either upon the tissues or upon the nervous system. The effect of such irritation depends upon its degree; there may be congestion, exudation, granulation, with, after interruption of the normal functions of the part, an increase of the formative or plastic activities of the protoplasm molecules subject to the condition of irritation; or, the irritation being in excess, congestion and exudation may pass on to rapid cell-proliferation and suppuration, "the pus cell being the extreme of excess of quantity and impairment of quality in the product of abnormally excited nutrition."(b)

The great property, then, which differentiates pus from the cells of the normal fluids and tissues is its property of rapid development and multiplication. No longer are these living molecules subservient to the nutritive needs of the higher organism which contains them; they live a life of their own, antagonistic to its life. In the early stages of inflammation there is a local withdrawal (the result of irritation) of the force which controls the normal circulation—there is stagnation of the blood-stream. By continuance of the retrograde process there is further abstraction of force from the higher organism by transference of vital power to the molecules adjacent to the inflamed part. This may only confer on them a plastic energy; instead of subserving the needs of the whole organism, they repair the injured part. Or else there is still further abstraction of force from the higher organism, and *pari passu* with the vital activity of the rapidly multiplying germinal matter (now pus) is the vital depression of the general body.

Under different circumstances, and in different situations, pus corpuscles possess varying powers of proliferation. Moreover, they have a term of life, for their exterior tends to become denser, the buds are put forth with increasing difficulty, finally the germinal matter of the cell can no longer be extruded, as it is encapsuled with a cell wall.

Pus, then, is the product of the degraded germinal matter of an organism, and its formation is due to any local irritation which reaches a certain intensity. There are many varieties of irritation which can induce suppuration—direct violence will induce it, even when the skin is unbroken and there is no possible influx of germ-laden air. Local disorders of innervation, and physical and chemical stimuli, can induce it. Antiseptics themselves—as carbolic acid—can cause irritation and pus formation. It is clear, therefore, that an antiseptic is not necessarily a preventive of suppuration. Anything, however, which can sufficiently subdue the irritation which induces it can suppress suppuration. Whilst, therefore, the idea of atmospheric germs as inducing suppuration is effectually disposed of, it may yet be that the irritation arising from the putrefaction of wounds is the most potent cause of the suppuration which occurs in them. Thus atmospheric germs, though not the direct, may yet be the chief causes. To investigate this, we will briefly consider the changes which occur in the case of wounds of the surface.

The first occurrences are laceration of the tissues, effusion of blood, exudation from the lacerated surfaces, and admission of air. Provided the lacerated parts be brought together within a short period from the injury, and so that no atmospheric air is inclosed in any pouch of the torn tissues nor any foreign irritant material interposes between the surfaces, healing takes place by first intention. The fluid effused is non-irritant, the blood-products are absorbed, and the molecules of living material which develope are plastic—*i.e.*, they become converted into the natural tissues of the healthy animal.

If the wounded surfaces, however, remain in contact with atmospheric air, other changes ensue. First, a chemical change. The normal alkaline fluid of a torn muscle becomes, as Dr. B. W. Richardson has pointed out, acid(c). This is simply due to the action of the atmospheric oxygen. This acidity may be a source of irritation, but it is clear that it cannot be charged with the evils of suppuration, for a suppurating and unhealthy wound is not acid, but alkaline. Moreover, we know that dressings of an acid reaction (notably sulphurous acid) have tended to a prevention of suppuration and to a rapid cicatrisation.

The occurrence of putrefaction in an open wound is a matter of certain knowledge. It is obvious that the conditions necessary for such a process are present in a high degree. The surface of the wound in contact with the air presents some of the most putrescible substances known—blood and albuminous exudation. Moisture is necessarily present, and the heat of the part is such as to dispose to a rapid series of changes. There is not merely an *à priori* likelihood of putrefaction occurring, but an impossibility that it should fail to occur under these conditions. And the fact is easily demonstrable; in twenty-four hours the exudation is peopled with vibriones and tainted with the odour of decomposition. The question occurs—In how far is this undoubted putrefaction a source of delay and danger in the healing of wounds? It is almost a truism to say that a fetid condition of a wound is an adverse, while a clean and inodorous condition is a favourable, sign. The fetor but indicates putrefaction, and this is commonly seen associated with a state of irritation in the wound. When a wound is kept free from putrefaction there are not these signs, provided there be no other source of irritation. Everyone knows that fractures with the skin unbroken heal without suppuration and the dangers attendant upon those which communicate with the air. When, in the case of fracture, there is only a small wound, which can be closed by a natural scab, the dangers also are absent. The results of subcutaneous Surgery show how extensive wounds will heal without the complications which attend wounds of the surface—witness the excellent results attained by Mr. Wm. Adams in extensive operations by the subcutaneous method. Everyone knows the dangers which attend the admission of air into the great serous cavities of the body, and the contrivances adopted to guard against such contingency.

(a) "Je les ai comparés aux globules de levure de bière, et leur ai attribué un rôle analogue et la même origine."—De l'Acide Phénique, p. 20.

(b) Lister, pamphlet, "On a Case of Compound Dislocation of the Ankle, etc., etc.," p. 21; and "On the Early Stages of Inflammation" (*Philosophical Transactions*, 1858).

(c) See *Med. Times and Gaz.*, April 13 and 20, 1867, pp. 383 and 409.

There is also a mass of evidence showing that those influences which suppress putrefaction check also the phenomena of irritation in wounds. One of the chief necessities for putrefaction is the presence of water. "In the battle-fields of Egypt," says Dr. B. W. Richardson, "operations performed under canvas in perfectly dry heated air, in which all decomposition of albuminous matter is impossible—in which air, in fact, albumen itself dries into a horny covering—the process of rapid healing was a marvel to all who witnessed."(d)

It may therefore be fairly concluded that putrefaction necessarily takes place in wounds which remain in contact with the air, and that this putrefaction is capable of initiating phenomena of irritation which do not exist when it is prevented. The irritation, however, which arises may not necessarily amount to that degree which induces suppuration. To induce suppuration the putrefactive condition must be prolonged for three or four days, just as in the inflammatory process from other stimuli, pus is not produced at once, but after the lapse of time and the occurrence of various cycles of changes. Yet putrefaction is none the less a most potent means of inducing suppuration as of the other phenomena of irritation. Its influence in this direction far exceeds that of such foreign bodies as we have been accustomed to consider much more potent. Has it not been generally understood that a piece of dead and detached bone is an irritant body which must set up suppuration around itself, and eventually construct, by the breaking-down of the neighbouring soft parts, a channel whence it can become discharged from the organism? Professor Lister has, however, shown that where putrefaction and its consequent irritation is prevented, a foreign body, whether a sequestrum or a ligature, is no longer a destructive pus-inducing agent, but a material lying tranquilly in the tissues until gradually removed by the natural processes of absorption.(e)

From all sides, then, I consider that the evidence supports the statement of Professor Lister with regard to wounds, that, "of all external agencies, the most injurious by far is putrefaction." From a long-continued investigation of the subject, the steps of which I hope shortly to bring before the Medical public, I entirely subscribe to the view that putrefaction necessarily depends, not upon the air itself, but upon life-possessing molecules suspended in it.(f) To prevent the evil influences of wounds, therefore, it is not of absolute necessity to exclude atmospheric air, but to exclude or render inert those molecules on which its putrefaction-inducing property depends. A beautiful synthetic illustration of this was adduced by Professor Lister. When air enters from without into the pleural cavity, irritation and pus-formation necessarily ensue—there is empyema. When, however, the air which enters the pleural sac comes intermediately from the lungs, as in the case of puncture of the lung from a fractured rib, pus does not form. Yet the only change upon the air has been filtration through the tissue of the lung—a filtration which has freed it from its putrefaction-inducing molecules. Another synthetical proof of the doctrine is the success which has attended the practice of the principles which Professor Lister has enunciated. In using carbolic acid one employs an agent whose sole remarkable characteristic is its power as a poison upon those low forms of living matter on which putrefaction depends. When by its means putrefaction is arrested, the healing of wounds takes place without symptoms of irritation either in the wound or in the general system.

I trust that I have been able to express the relation which logically subsists between putrefaction and suppuration. Putrefaction is one of the many forms of irritation that can induce the formation of pus. In the case of open wounds it is the chief of such forms of irritation. In open wounds suppuration is often an evil, and never a necessity. Therefore, the prevention of putrefaction in wounds is certainly to be attempted.

The relation between suppuration and atmospheric germs is this:—The germs existing in the atmosphere alone, render it capable of inducing the putrefaction which is the chief source of irritation and suppuration in wounds. Imported by the air, or by any other physical medium (as water, foreign bodies, etc.), to the eminently putrescible material of the surface of wounds, these germs can initiate putrefaction and its attendant phenomena, just as they can, under other circumstances, fermentation and putrefaction. When, however, these germs are robbed of their vital properties by an agent, whether in the air or in the fluids, which is a poison to them, they are incapable of initiating putrefaction, and its attendant dangers—irritation and suppuration. The bases of the antiseptic treatment of wounds may be thus defined:—

A. Suppuration is an unmitigated evil; it is in no sense necessary for the healing of wounds. It is injurious (1) to the individual—directly by withdrawing force which, under normal conditions, is subservient to the nutritive needs of the organism, indirectly by its liability to decompose and give rise to an infectious disease-producing material which may be reabsorbed; (2) to the community, by being capable of conversion into the transmissible poison of spreading disease.

B. Whilst any irritation of sufficient intensity can induce suppuration in the case of external wounds, putrefaction is the chief; and anything which prevents putrefaction in an open wound tends to prevent suppuration.

C. The object of the antiseptic system is to prevent putrefaction, and thus to prevent the evils which flow from it.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

BRITISH HOSPITAL FOR DISEASES OF THE SKIN.

CASE OF ELEPHANTIASIS GRÆCORUM.

(Under the care of Mr. BALMANNO SQUIRE.)

This case, the details of which are given below, is interesting, not only on account of the extremely rare occurrence of elephantiasis græcorum in this country, but also because it illustrates a point of some importance in reference to the mysterious geographical distribution of this disease. From the fact of the disease being met with both in cold climates (*e.g.*, in Norway), and in warm climates (*e.g.*, in the East and West Indies), it would seem as if its caprice in affecting certain districts of the globe and leaving intact others were the result rather of hereditary predisposition in the races of people inhabiting these districts than of the influence of climate, since the disease is capable of flourishing in climates of apparently so opposite a character. But, although it has been well ascertained that hereditary predisposition plays an important part in the causation of elephantiasis græcorum, the influence of climate appears to be the chief agent in its production. What special peculiarities of climate may be essential to the development of so formidable a disorder, no observer has as yet been able to discover.

Emma P., aged 13½ years, admitted April, 1869, is a native of the Isle of Trinidad. Her father has lived there for twenty-three years, and her mother for twenty-eight years. The patient has been in England nearly two years. She has no "black blood" in her. Her father, an Englishman, is a native of Newcastle; her mother, a Canadian, was born in Quebec. Her mother, an intelligent woman, states that she has observed the complaint her daughter is affected with to be common amongst the mulattos on the Island, but not with the negroes. The negroes are more numerous than the mulattos; the white population is very scanty indeed. Passing by the Leper Hospital at various times, she has observed that the inmates are chiefly mulattos. The patient has been affected five years. The disease appeared first on her legs and arms, and about a year afterwards on her face. Her mother has five children in all: a girl aged 18; a girl aged 15; the patient aged 13½; a girl aged 11; and a boy aged 9. None of them, with the exception of the patient, have ever been affected with anything like this disease.

On pricking the patient alternately on the patches of diseased skin and on the sound skin with the point of a needle, she states that the skin is much less sensitive on the diseased than on the sound parts. Her general health has always been very good, both before and since the appearance of her complaint; she is, however, much thinner than she was, and for the last month she has been very low-spirited. She has not grown so much as her elder sisters had at her age, and her younger sister is much taller than she is.

(d) *Medical Times and Gazette*, loc. cit.

(e) See "Remarks on a Case of Compound Dislocation of the Ankle, etc.," p. 22; and "Papers on Antiseptic Ligature of Arteries."

(f) See papers by the author in *Chemical News*, November 18 and 25, 1870.

The patient presents a very aged appearance. Her photograph (a very excellent portrait of her), representing the face only, was surmised by several persons to whom it has been shown to be the photograph of a woman of about sixty years of age. Her catamenia have not yet appeared. The "lumps" on her skin, so her mother states, disappear, as a rule, without "breaking" or leaving any scars. They get softer, and finally subside. Some of those that appeared five years ago are now only beginning to soften. A few have broken, but heal up again in a few days; not one has left any scar.

On the trunk she has several tawny patches, but very slightly elevated; not shiny, but dull and wrinkled. They are not harsh, however, nor do they desquamate; their colour is shaded off (not abruptly limited) at the edge.

Their size varies from that of a sixpenny-piece to that of a crown-piece. The smaller ones are irregularly rounded; the larger ones are irregularly oval. They are arranged in four clusters; one around either acromion, one across the front of the abdomen, and one on the loins. There are two about the left shoulder, and four or five about the right shoulder; half-a-dozen or more on the loins, and four or five on the epigastrium. The sensibility of these stains does not appear to be nearly so much impaired as that of the tubercles on the face. These places on the trunk have never been worse than now; they have never been as the places now on the face; on the other hand, they have not got noticeably worse, at all events of late.

The patches on the face began to get decidedly lumpy for the first time about six months before the patient came to England—that is to say, about two and a half years ago.

On the legs the eruption is as follows:—The front of the lower half of the right leg, including the ankle, and the whole of the front of the left leg (and ankle), is covered with an irregularly shaped tawny-red stain, similar to those on the trunk. Here and there, on either of the patches, are a few purplish, irregularly shaped pea-sized tubercles, which have only recently been noticed. The soles of the feet and the plantar surfaces of the toes are also similarly affected. The nails of the toes are diseased, deformed, and brittle. On the tawny surfaces of the legs the natural furrows of the skin are abnormally conspicuous, although they are by no means considerably deepened. This appearance is the result of a thin foliaceous desquamation of a peculiar kind, which affects the epidermis. The scales correspond in size and shape to the islets marked out by the decussation of the furrows. They are perfectly smooth, and extremely thin. Except at their extreme edges, they adhere intimately to the skin beneath, and so present no notable opacity, and in no way whiten the tawny colour of the structures beneath, the tint of which shines unmodified through them. But at their extreme edges, and only at their edges, they are separated from the structures beneath, and so are opaque and white just at the lines of juncture with adjacent ones, so that the natural furrows of the skin appear white. In front of the ankles, where the islets mapped out by the furrows are small and rectangular, the skin looks as if some lace had been stretched over it. On the soles of the feet the desquamation is more marked, and here and there—for example, at the heels and the great toes—the flakes are large and thick. But the general aspect of the soles differs widely from that presented by plantar psoriasis; the smooth, polished, tawny aspect of the greater part of the feet distinguishing their condition at a glance. There are several patches like those of the trunk, both as regards colour, texture, and average size, over the thighs, nates, and arms and forearms. There are four or five on the thighs, and about half-a-dozen on the upper limbs. On some of those on the forearms, little hard purplish tubercules are beginning to appear of the size of half a pea. There is one large patch over either elbow one inch and a half in diameter, and each of these is altogether tubercular, but its colour is not of the tawny quality of those on the face, but is of a purplish hue. The whole of the skin is inelastic and wrinkled in a most remarkable degree. The palms of the hands are purplish, and there is desquamation at the creases of them.

The Face.—There is one patch over the glabella, which is rounded, and of the size of a threepenny-piece. There is another patch, which is slighter and more irregular, immediately beneath this, but separated from it by a band of sound skin about one-eleventh of an inch in diameter. On the tip of the nose, but slightly on the right side, is a patch of the size of a shilling. It is oval, its long diameter being directed obliquely downwards and forwards. Above the right angle of the mouth is another patch, irregularly oval, and slightly larger than the preceding, its long diameter being directed downwards and outwards. The lower edge of this patch is about one-eighth of an inch above the angle of the mouth. Immediately below the right angle of the mouth is a patch of the size of a pea. On the lower lip, on either side, at the junction of the outer with the middle third, is a patch, that on the right side being the more deeply coloured and the more prominent, but the smaller of the two; it is oval, its long diameter vertical, and its size that of a threepenny-piece. The area of the left patch is rather more extensive than that of a sixpenny-piece, and its shape is oblong, its long diameter being directed from the margin of the lower lip obliquely downwards and outwards. Outside and below the left angle of the mouth is a smaller, slightly raised, faint, diffused stain; its area, that of a fourpenny-piece. The front of the neck is covered by a stain, similar to those on the trunk, measuring three inches across, by two and a half vertically. The upper two-thirds of the edge of the pinna of either ear is considerably thickened, infiltrated, and deformed by tawny nodular swellings. In the centre of the larger patches on the face, the elevation of the morbid surface amounts to at least one-eighth of an inch above the level of the skin, and on pinching up a patch, and then pinching up a similar area of adjacent sound skin, using equal pressure to each, the finger and thumb are seen to be separated by double the distance in the one case that they are in the other. The patches on the face are smooth and shining; they are of a tawny ochreish-yellow colour, and their colour is variegated by bunches of enlarged varicose venous radicles, which invade them from the sides. This is most marked in the patch on the tip of the nose, and next so in the patch on the right cheek, and in that on the right side of the lower lip. The under surface of each ala of the nose, as well as of the septum, is affected—that is to say, it is tawny, swollen, and mottled with venous radicles.

Treatment.—The recent emaciation of the patient, and the marked absence of tonic elasticity in the skin, suggested the internal administration of cod-liver oil and of steel as the most suitable remedies, and the chronically thickened condition of the skin was treated by the local application of the yellow oxide of mercury ointment, and the occasional painting of the patches with the linimentum iodi. Under these measures, which have now been employed for six months, the patient has notably improved, both in general aspect and in the condition of the individual patches, although she is still far from well; but most probably the change of climate has exercised some influence in arresting the progress of the disease.

THE VACCINATION COMMITTEE.—Mr. John Candlish, M.P. for Sunderland, who is also one of the Committee, said:—"I introduced my Bill last session, to limit the penalties for non-vaccination, because of the conflicting state of the law, and because magistrates have fined and imprisoned non-vaccinators repeatedly for the same offence, which I believe to be against the intention of the Committee of 1866, of which I was a member. I have evidence of at least fifty cases of repeated convictions for the same child. The first is that of James A. H. Toulson, of Leeds, who has been summoned twelve times in fourteen months for refusing to vaccinate his child. James Lawton, of North Whittington, near Chesterfield, who is now in Derby Gaol, has been summoned ten times in twelve months for two unvaccinated children. His effects being exhausted by repeated fines and distraints, he has been sent to prison. Mr. Lawton is a man of good repute and fair education. I believe it is almost impossible to produce a stronger case of a man enduring pains and penalties for conscience sake. Mr. C. F. Lane, of Grantham, has been three times fined for the same child; he writes—'I cannot afford to pay £1 14s. every two or three months.' Another case, which has special features, is that of Charles Washington Nye, of Chatham. Mr. Nye has been four times in prison for the same child. He says that two of his children were killed by vaccination." Mr. Candlish adduced other facts to show, as he considered, the oppressive nature of the law, and continued—"If vaccination is no protection at all, it ought to be abolished. Even if it is complete protection, it ought not to be enforced with repeated penalties, because there would be no danger from the unvaccinated."

AN Italian chemical society is established, under the auspices of Dr. Canizzaro.

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Medical Times and Gazette.

SATURDAY, APRIL 29, 1871.

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VACCINATION AND SYPHILIS.

Tuesday evening's meeting of the Royal Medico-Chirurgical Society was in all points most interesting. The room was well filled in anticipation of Mr. Jonathan Hutchinson's promised paper on "The Communication of Syphilis by Vaccination." The facts related by Mr. Hutchinson are briefly these. A highly respectable Surgeon obtained from a public vaccine institution, on February 7, 1871, an apparently healthy child of four months, to serve as vaccinifer. Eleven persons in a house of business, chiefly young adults, were vaccinated by the lymph from four out of five vesicles on the vaccinifer's arm. It was noticed at the time that every vesicle bled. Ten of the eleven persons took the vaccination, which went through its normal course, and the scabs had fallen in three weeks; but after two weeks more, the cicatrices had become enlarged indurated and subsequently ulcerated, the axillary glands were enlarged, and there was some roseolar rash. This state of things led to inquiry, which was conducted by Mr. Hutchinson. He found that the infant vaccinifer was a fine, healthy-looking child; well grown; no unhealthy tint of skin. Cross-examination extorted a doubtful confession that there had been "snuffles" and a peculiar twang in crying in early infancy, and on close scrutiny five very small mucous patches were found near the anus. The mother was apparently healthy; this was her first child after eighteen months' marriage; but there was a suspicion of syphilis about the husband, which he gave no opportunity for having cleared up. It must be added that the child's vaccination went through its stages perfectly, and that there was no trace of disease in its cicatrices. Now, it is worthy of notice that the two individuals who were first done from this vaccinifer had regular vaccinia and no syphilis. But of the remaining nine, all had chancres, though one of them had no vaccinia: eight had vaccinia followed by chancre; that is to say—

Vaccine without syphilis	2
Syphilis without vaccine	1
Vaccine with syphilis	8
	11

Out of the whole number of punctured insertions, one-half became chancres; the remaining punctures became ordinary vaccine scars. The chancres were indurated, round, with thin glutinous discharge, speedily passing into fungous buttons. Some of these patients had headache and pain in the limbs. We must not here go into details better reserved for our regular report, but may indicate the conclusions which Mr. Hutchinson drew, to the effect that a child in apparent health, with latent syphilis, may yield pure vaccine lymph, or may yield syphilitic poison only, or both; and that it is the admixture of blood with lymph which gives the syphilis. The discussion was adjourned till May 9, when we are promised further details of the condition of the patients under the mercurial course, which, by Mr. Hutchinson's advice, was begun on April 5. In the very interesting discussion which followed, Mr. Lee, Mr. De Meric, Mr. Brudenell Carter, and Dr. Drysdale expressed their conviction that Mr. Hutchinson's paper would break through the incredulity which, under official guidance and blue-book instruction, most British Practitioners entertained with regard to the possibility that vaccinia could be a vehicle of syphilis. Of course, this called up Mr. Simon, whose reports as Medical Officer of the Privy Council were thus inculpated. He made a singularly interesting speech, evidently under the conflict of great and contending emotion. He admitted frankly that Mr. Hutchinson had proved his case; but showed, and in some degree satisfactorily, that, on fair grounds of evidence, he had no right to assume it as proved that syphilis could be given by vaccination, for he showed that full and free inquiry amongst English Practitioners was so conclusive as to the negative, that he had no right to put into the scale the effects "of what purported to be vaccination" in other countries. He then spoke of certain precautions which, under penalty of *mala praxis*, must be adopted for the future; such as—Never to vaccinate without the most minute inquiry as to the health of the vaccinifer by visual examination; never to draw blood, and never to vaccinate from vesicles with inflamed areola, because inflammation was virtually a transudation of liquor sanguinis, possibly charged with poisonous leucocytes, equally syphilitic with the blood itself. Moreover, one of the speakers cautioned the Society as to the danger of scraping the surface of a vaccine vesicle, because, as he observed, we might thereby abrade cuticle, cuticle might be living and syphilitic, and convey syphilis mixed with the vaccine lymph. Mr. Henry Lee endorsed this caution by narrating instances of the vitality of transplanted cuticle. Thus, then, the operator must be careful not to abrade the surface of a vaccine vesicle, and equally careful not to tap the liquor sanguinis at its base. We will leave our practical readers to judge how far it will be possible to vaccinate any number, and fill any quantity of tubes from a vesicle, if these precautions are to be rigorously observed. Moreover, one speaker pointed out the risk of conveying blood from the vaccinated to the vacciniferous child during the operation. Many considerations will suggest themselves here to our readers, and the most palpable one is that, to avoid *mala praxis* and the propagation of syphilis, the only feasible plan would, at the first blush, appear to be to vaccinate universally from the heifer. But of this more hereafter.

THE SMALL-POX EPIDEMIC.

A further increase in the small-pox mortality of London was recorded last week, when 276 deaths were registered. There has been a slight increase also in Liverpool. After distributing the deaths occurring in the Hospitals among the several districts of London, it is found that they furnished fatal cases as follows:—The South districts, 99 deaths: the North, 64; the East, 57; the West, 31; and the Central, 25 deaths. The fatal cases show a decline in the North districts, while they were considerably more numerous in the Central and South districts. The fatality from the disease had increased last week in Holborn, Battersea, and Southwark. The Registrar-General adds that it is worthy of remark that five of the fatal cases recorded in the Small-pox Hospital at Islington were of inmates admitted from the suburban districts, Edgware, Stanmore, Willesden, and Hendon. We regret to observe that, judging from the Health Officers' returns of fresh cases, no diminution occurred last week in Hackney, Islington, and St. Pancras, all of which parishes are suffering severely; nor yet in the Southern districts furnishing returns; Newington, St. George-the-Martyr, and Clapham are being heavily visited.

We mentioned, in a former article, one particular focus of small-pox in the parish of Islington, where a very rapid extension of the disease had recently taken place. A few days ago, when the Health Officer was paying an official visit to the district, we took the opportunity of observing for ourselves how it was that the spread took place. The district invaded consisted of small houses, mostly let in single rooms to separate families, and a few shops, of the character usually found in such localities, where all kinds of articles required by the poor for domestic use are sold—groceries, butter, cheese, bacon, herrings, milk, etc. In the back parlour of one of these shops lay a child sick with small-pox; the mother, who nursed her, attended also to the shop. The inspector had directed a cloth sprinkled with carbolic acid to be hung over the communicating doorway, and also over the doorway leading to the passage of the house; but either the direction had been misunderstood, or there had been some interference, for both cloths had been fastened to the doors themselves, one of which was open, and the cloths had long ago become dry. Another house was a public-house. The door was closed, but, after knocking twice, it was unbolted, and we found here two cases; one, a modified case, in the bar-parlour, the other, a bad case of semi-confluent small-pox, in the clubroom upstairs. These were two children of the landlord. He, and a woman who assisted him in nursing the children, were the only other persons in the house. He said, on being questioned, that he did not like the children to go to the Hospital, but, as his house was shunned after it was known there was small-pox there, he found he might just as well close it. In a third house, three persons—the father (a painter) and two children—had had small-pox. The Health Officer had not received any notice of these cases until the day of the visit, and after the father had gone to the Hospital; only one child was found suffering from the modified disease. The father had been the first attacked. "How did he get it?" "Oh, I know how he got it very well," said the wife; "a fellow-workman, who had recovered from small-pox some time ago, gave him a coat. I told him he had better not put it on, but he would do so, and he wore it, and a week or so afterwards he fell ill, and the children caught it from him." The public-house mentioned above was at the corner of a street, and was the first of a row of about eight houses, one of which was empty. In nearly all these houses from one to four cases of small-pox had occurred, or were there lying. Some of the doors were open, so that anyone that had business with the inhabitants might walk into the individual rooms at pleasure. On the opposite side of the road there was or had been small-pox in four or five houses—one the general shop described. On the steps of one of the houses was a group of four women, one of them with a slight, modified eruption upon her face. There was a man ill in bed with small-pox upstairs. The woman did not seem to know it was small-pox, and, if she did, both she and her companions made very light of it. It is not at all an uncommon thing for people thus conditioned to be walking about and communicating with their neighbours. What is to be done with them? Their act is a penal one, yet, with a contagious disease upon them, they can afford to laugh at threats of a summons, and they know very well that the parochial authorities have their hands full. Nothing will check this kind of thing but a power of compulsory and immediate removal of such dangerous people to a Hospital, and such a power is not possessed. In another room, at the upper part of a house, a mother and two children had had small-pox. One of the latter was still ill; the other, the mother said, was better, "and the Doctor said it would do him good to go out, so she had sent him out to play." Close by was a marine-store dealer's; the Health Officer recollected this house as one where the occupier and his wife had severe typhoid last autumn. There was a poor man ill with severe small-pox now in an upper room; his wife nursed him. These were in receipt of parochial relief, which the woman had to go to the station to obtain, mixing there with other persons upon the same errand. Of course she had also to go out to shops and other places for what she needed. On the landing outside the door of the room were hung over the rail the filthy old clothes which the poor man had worn when attacked, while on the floor there was a heap of rags, linen clothes, and other articles stained with discharges. These were soaked on the spot with carbolic acid, and directed to be burned by the inspector that evening. In this parish there is no disinfecting oven. The practice is to burn all infected bedding and such clothing as cannot be boiled with carbolic acid, and to give new articles in place of them. At several of the houses visited, washing or mangling were taken in; but under the directions received, the people had abstained from carrying on their business on the discovery of the cases and on receiving warning from the inspector. In one of these there was a girl ill, who was being nursed by a young woman, a neighbour, who went backwards and forwards to her own home and family. While in the street, we saw this woman standing at the door of other houses gossiping with different groups of females. At one house called at, everyone in the family (unvaccinated) had had small-pox, and one was then lying ill with it. A sister had come in from a distance, and was sitting with an infant in her arms. The infant had been recently vaccinated, but the mother had not been revaccinated, and only laughed when the danger she was running was explained to her. General open house was the rule throughout the street, the inhabitants flocking to the doors and to each other's rooms for gossip, without any regard to the presence of contagious disease. In one room a woman, very ill, lying upon a filthy mass of rags, was being nursed by a boy about 16, who said he got his living, when he could, by hawking things in the streets. She had no one else to care for her.

The majority of the cases we saw were modified; some were very slight, but we met with no family where revaccination had been sought or obtained. Whenever it was mentioned, the answer was, "Oh, I am not afraid." In one instance a public vaccinator had declined to revaccinate the children of an infected family, because they were too young. They took the disease in a modified form. The objections to going to the Hospital were—in some cases the slightness of the attack; in others, the mother did not wish to part with her children; in others, there was no room where the cases ought to have been removed. The difficulty in getting cases to the Hospital appears sometimes to be considerable. First, an application has to be made to the relieving officer, who, it seems, in some cases, declines to give any order for the parish Doctor, if he thinks the family is not destitute, or when the father is in work If he pleases, he gives an order for the district Surgeon to see the case. This order has to be taken to his private residence, and he visits the patient either immediately or on the next day, certifies that it is small-pox, and, if he thinks proper, recommends the case for the Hospital; mild cases are usually treated at home. This certificate has to be taken back to the relieving officer, who then has to ascertain whether there is room at the Hospital, and if there is, the patient must wait until the conveyance is at liberty to convey him. Dr. Stevenson, the Health Officer of St. Pancras, complains of similar delays. To sum up our impressions: A reckless indifference among the poor the natural offspring of a state which is a constant habitual struggle for mere life, leaving no time for consideration; ignorance and wilfulness, springing out of lack of useful education and proper training; imperfect vaccination primarily, and a neglect of the renewal of vaccination (for which, with poor people, there are many excuses to be made) are among the principal causes of the rapid extension of small-pox; while red tape and circumlocution on the part of parish authorities, with the absence of convenient arrangements for immediate and compulsory isolation, act most efficiently as allies.

THE WEEK.

TOPICS OF THE DAY.

The Branch Medical Council for England met on Thursday. The main business before the Branch Council was the consideration of some cases in which certificates of death are said to have been improperly granted.

The General Medical Council will probably not meet before the end of July. It is to be hoped that before the meeting of the Council the examining bodies will have agreed upon a scheme for a Conjoint Examining Board. Any chance of Medical legislation in the presents session has utterly vanished, and there is, considering the state of political parties, not much higher probability of Parliament undertaking the task of Medical reform next year. If the examining bodies can be brought to co-operate in a liberal and unselfish spirit, merging petty differences, and not contending too much about minor details, we think that it will be far better for the liberties and independence of the Profession that new legislation should be avoided. We know that in some influential quarters the recent propositions of the Committee of the Council of the Royal College of Surgeons, especially that one which would appropriate to that College two-thirds of each fee for the conjoint diploma, are regarded with special disfavour. But, on the other hand, it is allowed by all that a sufficient provision must be made for the maintenance of the Hunterian Museum and the College Library. These great Professional institutions cannot be kept up without a large annual expenditure, and the Council of the College of Surgeons are certainly not to be blamed as a public and Professional body with enormous interests at stake for insuring themselves against any falling off of the necessary income. This is self-evident, and, we repeat, must be allowed on all hands. But this being so, it surely cannot be a difficult task so to apportion the receipts of the Conjoint Board that, on the one hand, a proper sum shall be set aside to meet the wants of the Hunterian Museum and Library, and, on the other, a fair remuneration shall be awarded to the contracting parties, who will share with the College of Surgeons the work of the Board. It seems to us that it will be a great disgrace to the examining bodies if a merely pecuniary consideration be allowed to stand in the way of a great and necessary reform. Another resolution of the Council of the College of Surgeons, that it is desirable that the examiners of the different bodies should possess certain degrees, inasmuch as, were it carried into action, it would shut out all general Practitioners in the ordinary sense of the term (*i.e.*, all Licentiates of the Royal College of Physicians, all Members of the Royal College of Surgeons, and Licentiates of the Apothecaries' Society) from the examination of general Practitioners—persons, be it remembered, who are to practise on the public with the very qualifications, the possession of which is held insufficient to fit them for the duties of the examining board—this proposition is, we say, so monstrous, that it cannot be maintained for a single moment. Practically, we have no doubt that the examiners will be chosen from the best men who are eligible, and probably, with no exception, they will possess the higher qualifications of the Profession; but to endeavour to restrict the choice of the examining bodies to the possessors of certain diplomas would be to impose an arbitary course, which the examining bodies will reasonably refuse to follow. The phrase " it is desirable," however, really means very little; and from its use it is pretty clear that the Council of the College would shrink from imposing a law upon other examining bodies which would fix the brand of inferiority upon their own Members, as well as upon the great mass of the Profession.

Mr. Lowe's extraordinary Budget bears most unfairly on Professional men. That Professional income should be as heavily taxed as incomes from capital is a palpable injustice; but Mr. Lowe not only increases the obnoxious income-tax, but he casts a covetous eye upon the little hoard which a Doctor or lawyer can put by for his children, and doubles succession and legacy duties in the direct line. All classes who are able to accumulate anything are affected by this proposal, but not equally so. It would tell most heavily on those who are gentlemen by education and position, and who desire that their children should take the same rank in life with themselves, but who are not landed proprietors, and who have not access to the large fields for acquisition which commerce and manufacture open—in other words, it is on the professional classes that Mr. Lowe's proposals would prove the greatest infliction. The savings of a Professional man's life are probably not greater than the year's income of a third-rate Yorkshire manufacturer, but his children, who have to make their start in the world, and to maintain the position in which they have been educated, are to pay a large percentage of their father's scanty savings to the Government—savings, be it remembered, which have already in their father's life-time been largely taxed. We can only hope that the attitude of the House of Commons and the pressure of public opinion will induce Mr. Lowe to abandon the augmentation of the legacy and succession duties with the same precipitancy with which he abandoned the match-tax.

We are not inclined to agree with Dr. Lyon Playfair that a match-tax would diminish disease of the jaw-bone from phosphorus. The effect of a match-tax would be that the cheapest kind of matches would be manufactured, as is, we believe now the case in America. These matches are made from ordinary phosphorus, and it is working with this substance which induces the disease in question. The better kinds of safety-matches are made, we believe, with amorphous phosphorus, and amorphous phosphorus does not produce the same deleterious effect. We think, therefore, as the sale of the higher-priced would be lessened by a tax, and the manufacture of the worst description of matches would be encouraged, there would in consequence be a deterioration rather than an improvement in the health of the workmen.

We notice that the Lords of the Admiralty have placed at the disposal of the Metropolitan District Asylums Board a second man-of-war, stationed in the Thames, for the reception of the convalescent from small-pox. We also observe that the inhabitants of Upper Clapton are protesting vehemently against Mrs. Gladstone's Small-pox Hospital in that district, where it is said that small-pox is being spread by the agency of the convalescent patients. The hulk in the Thames is a step in the right direction; but as the summer comes on and the epidemic increases, which it very probably will do, could not Government follow the advice of Surgeon-Major Atchison, and make encampments for the sick and convalescent on the open spaces round London?

The Association for the better Endowment of the University of Edinburgh continue to appeal to their graduates and the general public for money. The Medical portion of the graduates would, we believe, more readily respond to the appeal if a larger share of the money already subscribed had been laid out in endowing Medical scholarships in the University. Out of £1500 per annum appropriated to scholarships, only one foundation in Medicine of £40 per annum has been instituted. We cannot say whether this is in accordance with the wishes of the donors; but it is at least remarkable, considering that a great part of the success of the University has been dependent upon its renown as a Medical school.

The papers have lately contained a notice of hydrophobia having been developed in a considerable number of sheep belonging to Mr. Taylor, of Wadworth Hall, Yorkshire. The sheep were bitten by a mad dog, and the symptoms of foaming at the mouth, inability to swallow, and snapping at everything that came in their way followed. Several have been destroyed. Hydrophobia seems capable of reproduction in all warm-blooded animals. It has been observed in the horse, elephant, jackal, fox, ox, sheep, and even in the common fowl.

METROPOLITAN BRANCH OF BRITISH MEDICAL ASSOCIATION.

The paper by Dr. Seaton, read on the 21st inst., was just such as might have been expected from him when he announced as his subject "Some of the Lessons to be derived from the present Epidemic of Small-pox." It bore exclusively upon the relation of vaccination to small-pox in general, and to the existent epidemic in particular. There was little or nothing in it which was absolutely new, or with which all his hearers were not quite familiar; but what he did say was well said, his paper was well put together, and the facts and arguments put forward come from Dr. Seaton with the full weight of authority. The first question he applied himself to was the extensive and fatal prevalence of the epidemic, notwithstanding all that has been done by the State to encourage vaccination during the, last thirty years. He maintained that, like all other epidemics, small-pox when it comes varies in severity and diffusiveness, and that, admitting this to be an epidemic of fatal character and ready diffusibility, the true question at issue was the relative position held towards it by the vaccinated and the unvaccinated. He admitted that the vaccinated have died in larger proportion than has been customary, but so, too, have the unvaccinated. This has been due to the greater intensity of the variolous influence, an opinion confirmed by the Hospital experience of London, which shows a lessening of fatality as the epidemic has proceeded. Still, both in London and Liverpool, the relative position of the two classes of persons has remained the same. Vaccination, too, is protective in proportion to the completeness of the result. Taking this view of the value of vaccination, the present epidemic must be taken as evidence, either that vaccination has been much neglected, or that the Professional work of vaccination has been very imperfectly done. But he asked what is meant by "neglect"?—such neglect as would afford scope for an epidemic extension like the present. Assume 5 per cent. of the population in London to be unvaccinated, we should have 160,000 persons ready to receive and propagate the disease. Of course, do what we will short of vaccinating an infant as soon as it is born, there must be some unvaccinated infants; but this would be a trifling source of danger. All delay beyond what is reasonable is, however, to be held as neglect, and procrastination has more to do with this than any absolute objection on the part of parents to the operation itself. The longer the delay from apathy the greater the danger. Dr. Seaton pointed to Holland as an example of the danger of delay when carried to an extreme. In that country the let-alone system is in vogue, children under school-age being generally unvaccinated. In Rotterdam, the Hague, Utrecht, and Amsterdam, the mortality from small-pox since the beginning of the year has been such that our mortality in London will bear no comparison with it whatever. Passing on to the remedies applicable to neglect from procrastination, Dr. Seaton considered that what was needed was—1. A compulsory registration of births, so that every infant born might be held in view. 2. A systematic looking after all infants until the vaccination was certified. 3. The compulsory appointment by local authorities of an officer to look after them; and, 4, a monthly return of defaulters, and not a six-monthly one as at present made in England. Something, too, should be done to remove objections on the part of people who, in ignorance of the facts of the case, raise them honestly and from conviction. The two chief grounds of objection are—1st. That vaccination really does not protect from small-pox, because so many vaccinated persons suffer out of proportion to the unvaccinated. The answer to this is that now the vaccinated form really the great bulk of the community. When the vaccinated, as in the early days of vaccination, constituted a small part of the community, and people saw the comparative security of this class, it was the wonderful protectiveness of vaccination which would strike their minds; but now the memory of small-pox having almost died away, it is the exceptions which strike. Much good, also, is done by recalling the memory of what small-pox used to be. It should also be explained to some who adduce instances of small-pox following shortly upon vaccination, that small-pox takes ten days at least to develope itself after the contagion is admitted into the system. It is more difficult to handle the objection that vaccination produces ill-health, and may implant other diseases—such as syphilis—in the constitution. But the first of these may be met by explaining the operation of febrile disturbance in bringing latent diseases into activity, by showing how erysipelas may be traceable to causes independent of the vaccination itself, and the extreme rarity of the occurrence of syphilitic inoculation—such rarity, that vaccinators on the largest scale have passed through long lives without meeting with an instance of such an accident. But, apart from patient explanation of this kind, parents should be able to *see* that Medical men are careful in the selection of their vaccinifers, and do for their children exactly what they would do for their own. Dr. Seaton further advocates instruction in the advantages of vaccination as a part of the elementary teachings on health which ought to be given in every school. Finally, in view of the state in which we are now as regards vaccination, he insists that revaccination should not be left to periods of panic, but should be performed as systematically at 16 years of age as primary vaccination is at six weeks or two months.

DR. MOUAT'S LECTURE ON THE AMBULANCES AND BATTLE-FIELDS IN THE NORTH OF FRANCE.

There was a large attendance at the Royal United Service Institution, on Friday, the 21st inst., to hear Dr. Mouat's lecture, giving an account of his visit to the ambulances and battle-fields in the north of France, towards the termination of the Franco-Prussian war. Sir W. Codrington occupied the chair; Sir Vincent and Lady Eyre, M. Vaillant, Sir T. Galbraith Logan, many military and Medical officers, and several ladies were present. Dr. Mouat's address was throughout most eloquent, and illustrated by historic reminiscences and personal anecdotes, full of humour and pathos, which entirely succeeded in maintaining the interest of the audience, by whom he was frequently and most enthusiastically applauded.

In the latter end of February, Sir Vincent Eyre and M. Vaillant, being about to proceed to the north of France, for the purpose of distributing the Seed Fund among the distressed French farmers, invited Dr. Mouat to accompany them, which he gladly did. The portion of France visited by the party included Boulogne, Amiens, St. Quentin, and Peronne. Immense numbers of wounded had passed through Amiens, and several ambulances had been opened for their accommodation. The English Aid Society had there one of its depôts, under the superintendence of Colonel and Mrs. Cox, whose unceasing zeal and exertions received the highest tribute from Dr. Mouat. The largest ambulance in the town was the Prussian, in the Musée Napoleon, under the superintendence of a Prussian lady, the Fraulein Clara Heinrichs, who, from Dr. Mouat's account, appears, while having in her charge a large amount of stores of all kinds, to have at the same time fully appreciated the opportunity of getting, or, at least, asking, for contributions from the English stores and all visitors. The Hospital arrangements of the ambulance were of the rough-and-ready kind. The patients were in coarsely-constructed cribs, at such a height from the ground as must have been to them most incovenient, but which of course saved the backs of their Doctors when going their rounds. The ventilation was defective, and the dieting of the patients was not of that nutritive and stimulant character which is considered by British Surgeons best suited for wounded men. Mrs. Cox rendered invaluable service in this ambulance, overcoming by her tact and perseverance all the obstacles which routine and prejudice placed in her way. Lady Pigott's ambulance at St. Quentin, under English Surgeons, was a complete contrast in ventilation, general arrangements, and system of diet to that at Amiens. As to the Geneva Convention, Dr. Mouat maintained that, considering all the circumstances, it had fulfilled its design. He admitted its liability to abuse, and the necessity of all its provisions being thoroughly discussed by the aid of the light thrown upon them by the recent war. Dr. Mouat traced the German triumphs to their perfect administration and attention to the most minute details. "Beer, beef, boots, and baccy" he characterised as the great elements of their success. The French failures he attributed entirely to indiscipline and the Intendance.

DR. TRENCH'S REPORT ON THE HEALTH OF LIVERPOOL, 1870.

Dr. Trench begins his most complete and elaborate report with a fact which is gratifying—viz., a decrease of 1 per 1000 in the mortality during 1870 on the average of the last ten years;—even now it is 31·1. Out of the total 16,099 deaths, 2437 occurred in Hospitals and workhouses. When we come to details, we find that the density of population in Liverpool is equal to 99·3 persons per acre, whereas Birmingham has 47, London 41, and Sheffield 10.

> "The deaths of infants below the fifth year of their age amounted to 8148, and thus comprised 50·6 per cent. of the whole deaths. There were at the last census 60,760 children under five years of age within the borough of Liverpool, and the number may now be estimated at 70,837; therefore, their mortality in 1870 was equal to 11·5 per cent.; 4952 infants, or 25·8 per cent. of all the children born within the borough of Liverpool, died before attaining the age of twelve months. . . . . Zymotic diseases occasioned 4731 deaths during the year 1870, and thus accounted for 29·3 per cent. of the total mortality within the borough of Liverpool during the same period. This was nearly 1 per cent. more than the proportional rate of zymotic deaths to deaths from all causes during the preceding decennial period. . . . . Scarlatina accounted during the year for 1278 deaths, or for 542 in the parish, and 736 in the out-townships. The rate of its mortality was equal to 2 per 1000 per annum of the estimated population. . . . . Diarrhœa accounted for 1151 deaths, or for 628 in the parish, and 523 in the out-townships. Of these, 1041 were of children under 5."

Small-pox began only in September; in that quarter the deaths were ten; in the December quarter, 164.

The inspection of common lodging-houses, and of houses sub-let in separate rooms, is evidently carried on with vigour:—

> "The number of sub-let houses on the Registry at the termination of 1869 was 7539; the number registered during 1870 was 1264, making the total on the register on December 31, 8803. The number of visits paid during the night was 11,270, and during the day 57,342, with the result of finding 1458 rooms overcrowded. In addition to overcrowding, the offence (though not punishable in sub-let houses) of permitting adult males and females not married to occupy the same room, comes under the notice of, and is entered in the books of, the inspectors. There were 615 rooms thus indecently occupied by 923 males and 1032 females, besides having also in these rooms 545 children between the ages of 5 and 13 years. . . . . The number of articles sent to the disinfecting apparatus during the year amounted to 66,865."

Of unwholesome meat, there were condemned—beef, 113,296 lbs.; veal, 29,936 lbs.; mutton, 12,471 lbs.; lamb, 571 lbs.; pork, 8622 lbs.; poultry, 516 head; rabbits, 1098 head; fish, 323,355 lbs.; shell-fish, 253 bags; oysters (number), 13,696. The quantity of meat killed in the borough was—beasts, 52,229; sheep, 251,333; lambs, 19,227; calves, 14,291; pigs, 30,923. Of infectious disease in houses, 3748 street houses examined contained 6315 cases; 3375 court houses, 5962 cases; 456 cellars, 665 cases. The total number of cellars inspected was 41,330; found empty, 18,309; occupied with beds, 1847; occupied without beds, 16,789.

Such are a few of the *items* of this magazine of statistical lore. The chief thing that strikes us is the frightful infant mortality.

SMALL-POX AND FEVER IN GLASGOW.

From Dr. Gairdner's daily return we learn that on April 24 there were 459 known cases of fever and 107 of small-pox in the city of Glasgow. The deaths from fever during the week ending April 22 were 14, and from small-pox 9. The former is a decrease of 1, and the latter an increase of 4 upon the previous week. The deaths from all causes were 353, and the births were 377. In his fortnightly report, presented to the Glasgow Police Board on April 24, he states that—

> "The cases of fever made known at the Sanitary Office during the past fortnight were 291, against 352 in the preceding fortnight, being a decrease of 61 cases. It is gratifying to observe that the decline of epidemic fever for the past two months has been continuous, and the diminished relative mortality of the central district is no doubt due to the diminished prevalence of relapsing fever, which, though not directly fatal, in a large proportion of cases was no doubt the cause of a large indirect mortality by the misery, poverty, and disease that frequently followed in its train. Small-pox, although still prevalent to an extent very unusual for some years past, has received a decided check since the beginning of March, when 120 were reported as having occurred in the fortnight ending March 4. During the past fortnight 66 cases were made known at the Sanitary Office, and by far the greater number of these were accommodated at the Hospital in Parliamentary-road. To-day there are 107 cases of small-pox in town, and 99 of these are in Hospital. It may fairly be presumed that the constant care taken to remove to Hospital all the cases in poor localities known to us, and the house-to-house visitation of the localities with a view to recommend and practise vaccination, have been largely effective in restraining the epidemic hitherto, and preventing it from assuming the proportions of the London and Liverpool epidemics. A very striking fact which should be known to the authorities is that, since March 8, 120 separate localities have been visited in consequence of small-pox cases having been reported. These have all been subjected to house-to-house visitation with the above objects, and in only one instance, as far is known to us, has the disease reappeared in the tenement in which a case has been so reported."

With respect to a death of a girl aged 11 years in an industrial school, Dr. Gairdner justly observes that no such school can be held to be properly managed unless accidents of this kind are secured against by the systematic vaccination or revaccination of all the children on admission. In the Catholic Reformatory, where fourteen cases had occurred, the disease was immediately checked by general vaccination of the inmates. Dr. Gairdner presses upon the managers of private as well as of public schools the importance of giving attention to this matter, and of protecting the children by complete vaccination.

MR. CARDWELL'S RECRUITS.

A letter on this subject, under the signature "Deputy Inspector-General," occupied a prominent position in Monday's *Times*, and has since attracted a considerable share of public attention. A Deputy Inspector-General of Army Hospitals is naturally supposed to have an intimate knowledge of the present system of examination of recruits, and of the style of men now coming into the army. When an officer of this rank, therefore, asserts that we are getting a sham army of weedy recruits, hundreds of whom have passed through his hands, the statement is calculated to excite public anxiety, and to cause a demand for investigation as to its accuracy. It should at once be either corroborated or disproved. The number of recruits offering for service in the army may not be sufficient to supply the necessary number of eligible men, but it is a serious charge against the recruiting Medical officers to say that they are passing into the service a large proportion of men quite unfit for it. On one point alluded to by "Deputy Inspector-

General" there can be no difference of opinion, and that is, the unsuitability of young lads for military service in India or other tropical climates. The proposal, for this reason, of raising local armies for India and our tropical possessions is met by so many objections that it is hardly likely to be entertained.

PROPOSED AMALGAMATION OF THE POOR-LAW BOARD, OF THE MEDICAL DEPARTMENT OF THE PRIVY COUNCIL, AND OF THE SANITARY DEPARTMENT OF THE HOME OFFICE, INTO A LOCAL GOVERNMENT BOARD.

According to Mr. Goschen's proposed "Rating and Local Government Act, 1871"—

"A board is to be established to be called the Local Government Board, and is to consist of a president and of the following *ex-officio* members—viz., her Majesty's Principal Secretaries of State for the time being, the Lord Privy Seal, and the Chancellor of the Exchequer.

"The president is to be appointed by her Majesty, and hold office during her pleasure.

"The Local Government Board may appoint two secretaries, and such number of clerks and other officers as the Board may, with the sanction of the Treasury, determine.

"The president and one of the secretaries of the Local Government Board shall at the same time be capable of being elected to, and of voting in, the Commons House of Parliament.

"No payment is to be made to the *ex-officio* members of the Local Government Board.

"From and after the establishment of the Local Government Board there shall be transferred to it—

"1. All powers and duties vested in or exercisable by the Poor-law Board.

"2. All such powers, duties, and authorities in relation to public health, local government, drainage, sanitary matters, baths and washhouses, public improvements, markets and fairs, smoke, and highways, as are exercisable by one of her Majesty's Principal Secretaries of State.

"3. All powers and duties in relation to public health, prevention of disease, and vaccination, exercisable by her Majesty's Privy Council."

SPURIOUS VACCINE LYMPH.

A rather warm passage-at-arms took place on Tuesday evening at the Medico-Chirurgical meeting between Mr. Brudenell Carter and Mr. Simon. The former stated, in the course of some remarks, that the lymph supplied in tubes from the Public Vaccine Establishment was often inert, and sometimes mixed with spittle. Mr. Simon seemed to think that this was a reflection on the public department over which he presides, and repudiated it in terms which somewhat exceeded Parliamentary customs of speech. Mr. Carter replied that on a particular occasion, struck by the inertness and peculiar character of some lymph in tubes, he had examined it microscopically, and found what appeared to be buccal epithelium and starch granules. (It is said, by-the-bye, that some vendors of vaccine lymph fabricate the article out of saliva and tartar emetic or croton oil.) But whilst Mr. Carter evidently substantiated his statement as to the lymph, no one could accept this as an imputation on Mr. Simon or the Government office. No officers can be responsible at all times for the discretion of their subordinates, and we may be sure that, had the full facts been laid before the Privy Council at the time, the source of the mischief would have been promptly and clearly traced. Mr. Carter should have complained specifically at the time.

THE FUTURE OF VACCINATION.

Little else is talked of in Medical circles but the future of vaccination, and the probable effect on the public mind and on the Legislature of the now public recognition of the possibility of conveying syphilis with vaccine lymph. For our own parts, we think it a very good thing that the avowal is now openly and honestly made. There is no greater curiosity in Medical experience than the perverse ingenuity which has been exercised in explaining away, not merely the mass of foreign testimony, but that afforded by the few and isolated cases on English soil, especially that lately brought before the Clinical Society. So long as the possibility was denied, so long there was weakness and division among the propagators of vaccination; but now the whole Profession must feel relieved from an incubus. The worst is confessed, and we are in a position to estimate fairly what that amounts to. And it is this: That, in the successful effort to mitigate the small-pox, which is the direst pestilence the human race is subject to, there have occurred here and there a few instances of injury, from imperfection or carelessness, or peradventure from unforeseen contamination of the means resorted to. No person in his senses can venture to say that the propagation of syphilis, say in one case in 100,000 (which would be a proportion above the truth), is an evil to be compared with that of a pestilence which spares neither age nor sex, and disfigures or mutilates those whose lives are spared. Whilst public officials denied the possibility of such an occurrence, they could not have taken precautions against it; but this will be easy for the future. In the army revaccination, where great care is taken in selecting the vaccinifer, no such accident has been known; moreover, there is the calf-vaccination to fall back upon.

THE POETRY OF VACCINATION.

Lambeth enjoys the advantage of a vaccination officer who gives his reports in terms which it must be a privilege for the guardians to listen to. Here is a specimen:—

> "The dark, murky, variolous cloud still hovers o'er our great city, and in our favoured parish. The envenomed breeze has been fatal. One sickens at the thought of our doors being emblazoned with the red cross; at the watchers keeping us prisoners; at the desperation and despair, and the death-bell. 'Tis true there are antagonistic powers in nature, but there is one Supreme Power above all, and that power instructs a Jenner to mitigate and ameliorate the sufferings of His creatures. Truly, the cloud still hangs heavily over us, but it has a silver lining, and even now the benign rays of the rising sun are tinging its edges with resplendent beauty. May the glorious rays of that sun soon shine into the hearts and homes of our native land, and fill us all with hope and happiness, and joy and gladness."

THE NEW ST. THOMAS'S HOSPITAL.

The expected vacancies on the St. Thomas's Hospital staff are announced in our advertising columns. The governors will very soon elect a Physician, an Assistant-Physician, a Surgeon, and two Assistant-Surgeons. As we intimated last week, we have every reason to believe that this announcement is not a matter of form. The governors have, in the election of Mr. Liebreich, shown their determination to choose the best men, whencesoever they may come. They are not likely to overlook the long and able services of Mr. Croft, their senior Assistant-Surgeon. No new man could bring a higher claim to the Surgeoncy. Every other appointment is perfectly open to competition. The responsibility of recommending the candidates being thrown upon the Grand Committee, no man, however high his reputation and position may be, need be deterred by the uncertainties and annoyances of a canvas.

UNIVERSITY COLLEGE HOSPITAL DINNER.

The annual dinner in aid of the funds of this charity was held at Willis's-rooms, on Wednesday, the 26th, Professor Parkes in the chair. About seventy sat down, including most of the Professors of the College, Sir F. Goldsmid, Sir Rutherford Alcock, Sir William Jenner, and others. After the usual loyal toasts, the able chairman made a warm appeal in behalf of the funds of the institution, which was responded to favourably. Upwards of £1000 was subscribed.

OUT-PATIENT REFORM.

Our readers will perceive, by a report published elsewhere, and by a letter from Dr. Meadows, that the meeting of Thursday, the 20th inst., was hardly as successful as its promoters could have wished. Above 700 invitations had been issued, and about fifty members of the Profession responded to the call; of many it must be said that they were conspicuous by their absence. Altogether, failure must be written after it. The Committee had not been able to make up their own minds, and could hardly expect to find the meeting do it for them. Then they were appointed to consider the out-patient departments of Hospitals; they left these as they found them, or nearly so, and took to dispensaries instead. These they would improve off the face of the earth, and in their place leave Poor-law authorities and provident dispensaries only. The latter, as we have repeatedly pointed out, are supposed by some to be panaceas, but from the fact that two of the prime opponents of the report and resolutions belonged to provident dispensaries, it would not seem that they were likely to thrive, even supposing all free dispensaries were swept away. The Committee are only at the beginning of their labours. They have failed to persuade the Profession; will they be more successful with the public?

PATHOLOGICAL SOCIETY OF DUBLIN.

The closing meeting of the thirty-third annual session of this Society took place in the Anatomical Theatre of the School of Physic, Trinity College, on Saturday, April 22; Dr. James Stannus Hughes, president, in the chair. This meeting is always one of great interest, from the fact that at it the name of the successful candidate for the Society's gold medal is announced. On Saturday last two medals were awarded—the gold to Mr. William Josias Smyly, son of the late eminent Surgeon, and brother of Dr. Philip C. Smyly, for his essay on the "Diagnosis and Pathology of Injuries of the Vertebral Column and Spinal Cord;" and a silver one to Mr. William Freke Hingston, B.A., for his essay on the same subject. The President congratulated these gentlemen on their success, and encouraged them to persevere in the course which had already procured them such signal distinction.

REWARD OF SURGICAL SERVICES AT DARMSTADT.

The Darmstadt *Gazette* of Saturday, April 22, contains the following announcement:—

> "H.R.H. the Grand Duke, by order dated the 8th of this month, has conferred the decoration of a Knight of the First Class of the Order of Philip the Generous on Dr. Mayo, Staff Surgeon-Major and Director of the Alice Hospital, Darmstadt."

THE DENTAL HOSPITAL.

The festival of this institution was held on Tuesday evening, the 25th inst.; W. H. Smith, Esq., M.P., in the chair. The meeting was largely and influentially attended, and due recognition was given to the institution, the only real school of dentistry in the kingdom. Its connexion with the introduction of nitrous oxide as an anæsthetic should not be forgotten. Upwards of £500 was subscribed.

FROM ABROAD.—M. DESOR ON THE EFFECTS OF THE CLIMATE OF THE UNITED STATES—M. AUBERT ON THE INSTRUCTION OF PATIENTS IN HOSPITALS—HOMŒOPATHIC INSURANCE OFFICES.

M. Desor recently read, at the Helvetic Natural History Society, an interesting paper on the "Climate of the United States, and its Effects on Habits of Life and Moral Qualities," a translation of which appears in the *Boston Journal* for March 16. He observes that a German or Swiss emigrant, although not perceiving at first that the climate is very different from that of his own country, finds, after a while, that he is obliged to modify some of his habits, and, in the end, to adopt those of the Americans, however much he may at first have criticised these. Europeans are not a little surprised at this, seeing that the Northern States are within about the same parallels as Central Europe, that the isothermal lines correspond in a still more striking manner, and that the winter near New York or Boston is nearly as cold as that of Frankfort, Basle, or Zurich, and the summer at least as warm. The phenomena observed relate to common life and to the exercise of certain occupations. Among the former are the rapidity with which linen that has been washed dries, and the less pleasant circumstance of the rapid drying up of the bread, rendering it impossible to bake large supplies at a time, as is done in Germany. On the other hand, mouldiness is of much less frequent occurrence, and food, fruits, and vegetables can be kept well in cellars. A minor circumstance that excites surprise is the absence of frosting of the windows in the coldest weather. Among the circumstances bearing on hygiene is the great dryness of the hair, rendering a greater need of oil or pomatum. Among the observations made in different occupations are, the rapidity with which houses may be built, without any fear of dampness on at once inhabiting them, and the quick succession in which the painter may apply his coats. Cabinet-makers and musical instrument makers, on the other hand, are obliged to take great care in the wood they select. French or Austrian pianos, however excellent they may be, very soon deteriorate in America. Carpenters are obliged to employ much stronger glue than in Europe; and tanners are surprised how rapidly their skins dry, especially in winter. The naturalist has no occasion to place lime or other absorbent in his galleries, even when birds or mammals are deposited in apartments the plaster of which is scarcely dry.

All these phenomena arise from the greater dryness of the air in the Northern States, and yet the rainfall equals or surpasses that of Europe; in fact, the rainy days are more numerous than in Eastern Europe. Of course, the contradiction here is only apparent, the dryness really resulting from the air during clear weather being less charged with humidity. The atmosphere does not, as in England and Western Europe, remain nearly saturated, but no sooner does fine weather follow the rain than the hygrometer immediately falls, and the dew-point keeps sensibly below the temperature of the surrounding air. In this respect there is a similarity between the climates of the United States and that of the Alps; and to the dry state of the air in the latter is attributable the fact that less fatigue is felt in traversing mountains than in plains. The cause of the greater dryness is easily explained, as the predominant west winds only reach the Atlantic coast after they have swept over an entire continent. They are seldom accompanied by rain, and act the same part as the east winds do with us.

As to the effect of this climate on our race, M. Desor observes:—

> "At the present day, after but little more than two centuries, the inhabitant of the United States is no longer simply an Englishman; he has traits which are peculiar to himself, and which cannot be mistaken any more than the English physiognomy can be confounded with the German. He is, in fact, developed as a Yankee or American type. But as this type cannot be the result of a crossing of races, since it is most marked in the Eastern States, precisely where the race is less mixed, it must be the consequence of external influences, among which we must place in the first rank those of climate. One of the physiological characteristics of the American is the absence of *embonpoint*. Pass through the streets, and you will hardly meet one out of a hundred individuals who elbow you who is corpulent, and that one will most generally be found to be a foreigner or of foreign descent. What particularly strikes us in the Americans is the length of the neck; not that they have the neck absolutely longer than ours, but that, being more slender, it appears longer. The difference which I have just pointed out is not alone the result of a less development of the muscular system; it depends as much, if not more, on the reduction of the glandular system, and in this respect it merits serious attention on the part of the physiologist, as involving directly the future of the American race. It is this

that the most intelligent have foreseen, and have felt that there must be a limit to this excessive delicacy of form; and it is for this reason that, notwithstanding their instinctive aversion to the Irish, they are far from being opposed to the immigration of that race, who, by the plenitude of their forms and the richness of their glandular system, appear made to resist with better effect the influences of the American climate. The remark has, in fact, often been made that the handsomest women are those born of European parents."

This influence of climate is further indicated by the fact that few Europeans grow fat in the States, while Americans, after only a short residence in Europe, acquire a remarkable appearance of health and well-being. Among the moral differences traceable to the same cause is the feverish activity and impatience everywhere prevailing in the States, and that at most unseasonable times—*e.g.*, during meal-times. This great nervous irritability may, with extreme probability, be attributed to the dryness of the climate, resembling the effects produced less abidingly by the north-easterly winds in Europe. This effect is so well known to the inhabitants of the Jura, as to have become proverbial. In the United States a dry wind is not an occasional occurrence, as with us, but is the dominant wind along the Atlantic coast. Stimulants are less needed, and fermented liquors are much more pernicious than elsewhere. The English, who can drink wine and spirits with impunity at home, are obliged to renounce or restrict them in the States. Notwithstanding their apparent coldness, also, the Americans are much more irritable and susceptible than Europeans. Such excessive nervous irritability would be far more open in its manifestations but for the great control which early instruction has supplied.

M. Aubert, writing in the *Lyon Médical* (a journal which has continued to appear regularly during these troublous times), makes a very good suggestion with regard to employing some of the time which hangs so drearily on the hands of patients in Hospitals by giving instruction to such of them as are ignorant. "It is," he observes, "when illness has separated the patient from his family, his work, and his habits of life, that he can best appreciate the value of instruction. If he knows how to read, he finds the means of abridging his long days, while, when he can write, some of the evils of separation from his family meet with some alleviation. Almost everyone who, on being questioned whether he possessed these accomplishments, and had to reply in the negative, added that it was a great misfortune for him, and seized with avidity the offer of an opportunity of leaving the Hospital less ignorant than he entered it."

In France, ignorance is still very great; for, as late as 1865, 25 per cent. of the conscripts could not read or write, while the proportion found in the Hospitals is far more considerable; in fact, the conscripts consist of young persons, and are made up both of rich and the poor, while the population of the Hospitals consists almost exclusively of indigent persons, many of them much older than the conscripts. Of 495 male patients interrogated at the Hôtel-Dieu, Lyons, 166, or 33 per cent., could neither read or write; 63, or 12 per cent., could read only, or read and write very imperfectly; and 266, or 55 per cent., could read and write in different degrees. The case of the female patients was still worse. Of 241 of those interrogated, 86, or 36 per cent., could neither read or write; 82, or 34 per cent., did this very imperfectly, or could only read; and 73, or 30 per cent. only, could read and write in a tolerable manner. Comparing this with what M. Francillon, an *interne* of the Cantonal Hospital at Geneva, reports, the difference is great indeed. He says, in the Canton de Vaud, with which he is well acquainted, almost the only patients who cannot read and write are foreigners, and that the sick children are regularly taught, even when confined to their beds, the others being formed into classes under an instructor. Regular libraries are kept up in the Hospitals at the expense of the administration. Applying himself to the case of general Hospitals (in special and childrens' Hospitals the matter may be still easier dealt with), M. Aubert finds that of the 600 male patients of the Hôtel-Dieu of Lyons, there are about 140 from the ages of 15 to 50 who stand in need of elementary instruction. But of these he calculates that three-fourths must be eliminated as not being able to pursue a system of regular instruction, on account of the nature of their disease, the duration of their residence, or their unwillingness to be taught. There remain, then, only thirty-five individuals to whom regular and sufficiently prolonged instruction might be given, and although this is a very limited number, it is sufficiently large to give employment to a teacher, especially as some of those returned as able to read and write are very susceptible of improvement in these accomplishments. Of the 500 female patients in the Hôtel-Dieu, the numbers between the ages of 15 and 50 who cannot read and write are greater, amounting to sixty-three, after a similar elimination to the above has been operated. Thus, there are sixty-three women and thirty-five men who are in a condition for receiving daily instruction; and as the population of the Hospital is constantly being renewed, the annual number may be reckoned at between 300 and 400 persons to whom reading, writing, and the rudiments of arithmetic might be taught with some good results. Whether immediately realisable or not, M. Aubert deems this proposition worthy of the attention of Hospital administrations.

We do not think that our British homœopaths have advanced so far as to set up insurance offices promising more favourable terms for those who eschew the worn-out orthodox system. In the United States, however, greater enterprise prevails; but still, according to a correspondent of the *Boston Journal*, even there outsiders are dealt with in a liberal fashion. Mr. Williams put the two following questions to the Secretary of the "Homœopathic Mutual Life Insurance Company, Broadway, New York":—1. If a person had hitherto always been under other than homœopathic treatment when sick, would your Company charge a larger premium than if he had always been a homœopath? 2. Having been insured as a homœopath, if circumstances should render it necessary for him to come under other treatment—while travelling, for instance—would that, if discovered by the Company, vitiate the policy? The reply was consolatory enough to satisfy any insurer—

> "We make no heavier charges upon those who have not used homœopathic remedies, but have agreed to do so for the future, than for those who have always been homœopaths. When a party insures with us as a homœopath, we of course expect him to live up to his agreement, but we never look for or expect impossibilities. When a party is travelling, and cannot get a Physician of our school, we expect he will do the next best that he can under the circumstances—viz., employ an old-school Physician."

Referring to the rules, that relating to this last point reads as follows:—

> "*Change of Practice.*—We annex no penalty to the change from homœopathy to any other system of practice, except that, where such change is permanent, we reserve the right to charge, thereafter, non-homœopathic rates of premium. On this subject we say to our homœopathic customers, If you are taken sick, when you cannot call in your own Physician or another homœopathic Physician worthy of your confidence, do, in such an emergency, what your own sense of fitness dictates, and we shall be satisfied. We believe that you can be safely trusted to preserve your own life by the best means within your reach."

Like in most homœopathic transactions, we have here a convenient, comprehensive elasticity. No *non possumus* nonsense.

PARLIAMENTARY.—THE BUDGET—TAX ON MATCHES—METROPOLIS WATER BILL—ANATOMY ACT—SMALL-POX AT CHICHESTER—CAPITAL PUNISHMENT—ABANDONMENT OF THE MATCH-TAX.

On Thursday, the 21st inst., in the House of Commons,

Mr. Lowe introduced his very unpopular budget. Its main points were that he required for the increased expenditure on the national defences an additional sum of £2,800,000. This he proposed to obtain by putting a tax on matches, which he calculated would yield £550,000; by raising the Income-tax from £1 13s. 4d. to £2 4s. per £100, by which he would get £1,950,000; and the remainder he expected to accrue from alterations in the Legacy Succession and Probate Duties. The legacy and succession duty payable in the direct line is to be raised from 1 to 2 per cent., that in a brother's line from 3 to 3½ per cent. Seldom has a budget been received with greater disfavour. A storm of hostile criticisms met it on all sides.

Dr. Playfair, however, supported the tax on matches partly on the ground that it would prevent a considerable proportion of fires, but also "because it would tend largely to remove that horrid disease which was the worst that Medical men had to deal with—namely, disease of the jaw-bone."

The Metropolis Water Bill was read a second time.

The Anatomy Act (1832) Amendment Bill passed through committee.

On Friday,

An hon. member, in the absence of Major Walker, asked the Secretary for War whether it was the case that small-pox is now prevalent in the town of Chichester; whether the Royal Sussex Militia was about to assemble there for training; whether, owing to the insufficiency of the barrack accommodation, a considerable portion of the men must be billeted in the town; and, whether it would not be better under the circumstances to move the regiment to Aldershot Camp.

Mr. Cardwell replied that there had been some cases of small-pox at Chichester, and the question of the best mode of dealing with the matter was now the subject of correspondence and consideration.

Mr. A. Johnston called attention to the expense imposed on the public by the expenses of the Charity Commission; and, after relating some instances of flagrant abuses of charities, moved a resolution in favour of imposing an income-tax on charity funds to defray these expenses.

After some remarks from Sir F. Goldsmid,

The Chancellor of the Exchequer cordially agreed in the propriety of taxing charities, and consented to the motion with the omission of the words specifying the income-tax as the particular mode of putting them under contribution.

After considerable discussion, the preliminary resolution on the match-tax was carried by a majority of 113 to 51.

The Public Health (Scotland) Act (1867) Amendment Bill was read a second time.

On Monday,

Mr. Gilpin gave notice that on Friday, May 12, he would, on the motion for going into Committee of supply, call attention to the report of the Royal Commission of Capital Punishment, and move that, until the decision of the House had been taken on the report, the Home Secretary should be guided by the recommendations in which the Commissioners were unanimous in exercising the Royal prerogative of mercy.

On the motion for going into Committee of ways and means, Mr. White submitted the following resolution:—"That, in the opinion of this House, the additional taxation proposed by her Majesty's Government will entail burdens upon the people which are not justified by existing circumstances."

After a brilliant debate this was negatived by the narrow majority of twenty-seven in a house of about 500 members.

On Tuesday, on Mr. Disraeli giving notice that on Thursday he should move "That the financial propositions of the Government are not satisfactory, and it is expedient that her Majesty's Government should reconsider them,"

The Chancellor of the Exchequer announced his intention of abandoning the match-tax, but stated his intention of persisting in asking the House to go into committee for the purpose of considering the resolutions before it on the income-tax and the legacy and probate duties.

A Good Example.—The London Society of Compositors has recently subscribed £94 10s. to twenty-five metropolitan Hospitals and dispensaries. Three hundred and twenty-one persons, either members or their wives and children, have received benefits during the past year—viz., 11 in-patients, and 310 out-patients.

A Public-house without the Drink.—The following is from a signboard of one of several houses established with some success in Liverpool:—

"A public-house without the drink,
Where men may read, and smoke, and think,
Then sober home return.
A stepping-stone this house you 'll find;
Come, leave your rum and beer behind,
And truer pleasures find."

HOSPITAL REFORM.

At a meeting held in the rooms of the Royal Medical and Chirurgical Society, on April 20—Sir Wm. Fergusson, Bart., in the chair—a report was presented by the Committee appointed (some time ago now) to consider the above subject.

The Chairman said that this meeting was of interest both to the Profession and to the public. At a former meeting the subject of Hospital reform had been first publicly mooted. A committee was then appointed, which had been at work ever since, and now presented their report. From it they could see the amount of work done. It was important that some scheme should be laid before the world, and this was now done. It would be impossible for Medical men to do the work they now did without the aid of the charitable public, but it was impossible to imbue them with the same views as those entertained by the Profession. It would, therefore, be necessary to proceed cautiously if we desired to dispense their charity better. Certainly, if this could be done, it would be for the good of all. The Profession had now to step out of their own circle, in which was a certain degree of unanimity, to address the outer world, in which they might find there was nothing of the kind.

Dr. Heywood Smith having read the report of the Committee, it was moved by Dr. Meadows, and seconded by Dr. Hawkesley—"That it be received and adopted."—This was carried.

Dr. Hawkesley then proceeded to move the first resolution —"That an improved administration of Poor-law Medical relief, in accordance with the Metropolitan Poor Act of 1867, is essential to the reform of the out-patient administration of the metropolis." He thought it well that the Profession should come forward at the present moment, when pauperism was exciting so much attention. Human nature had, he thought, a tendency to progress backwards, not upwards. Charity, as ordinarily dispensed, helped this, and that they must try to mend. Our Medical institutions fail on account of the numbers seeking relief, and in them the wrong class were best attended to. He instanced certain cases in point, and showed how the particulars of Mr. Gathorne Hardy's Bill had not been fully carried out.

Dr. Rogers, in seconding the motion, said he had collected statistics, which he gave in detail, of the number receiving gratuitous Medical relief. In London alone upwards of a million were so. By this system upwards of £51,000 was yearly lost to the Medical Profession in London. He thought the real way to reform was through elevating the status of the Poor-law Medical officers.—Carried *nem. con.*

Mr. E. Hart, in moving the second resolution—"That, in furtherance of the above resolution, and in order to limit the pauperising tendency of the present system of gratuitous relief at Hospitals and dispensaries, all free dispensaries should be under the control of the Poor-law authorities, so that a proper system of inquiry may be instituted previous to the administration of gratuitous Medical relief"—said State aid should not be interfered with by charity which asks no questions. When Mr. Hardy's measure was passed, Government was inclined to take a liberal view of what ought to be done in the way of relief. Then were sown the seeds of future good. Bodies called into power then had erected those asylums which had enabled us to face the present epidemic and that of relapsing fever. The question was how best to relieve the public funds of the crowd of out-patients now to be seen at our Hospitals. To this end, he thought all free dispensaries should be abolished.

Mr. Curgenven seconded. He thought the present Government did not seem inclined to move in the matter; it should, therefore, be urged upon them.

Mr. Lord thought all free dispensaries should be done away with. It was the aiming at distinction on the part of Medical men themselves which was at the root of the evil. The Profession injured itself.

Mr. Jabez Hogg said they were asking a body in which, on their own showing, they had little confidence—viz., the Poor-law Board—to co-operate with them. Would that be a good thing? He was quite sure governors would not give up existing privileges.

Dr. Ross agreed with the sentiment that all free dispensaries should be abolished, but disagreed with the mode in which the motion was framed. He objected to the extension of the power of the Poor-law Board. It would be far better to try to get a Government Board of Medical Relief at once.

Mr. Holmes said they must either accept the motion as it stood or reject it. If the Poor-law Board was not trustworthy, they must try to make it better.

Dr. Percy Leslie also objected to the combination of the poor-law and voluntary systems. They could not give complete power to the former.

Ultimately the motion was carried.

Dr. Ford Anderson moved the third resolution—"That, in order to encourage a feeling of self-respect among the working-classes, and that they may secure for themselves during health the necessary Medical attendance in sickness, it is desirable that the system of provident dispensaries should be largely extended, both by conversion of the present free dispensaries, and by the foundation of others." He said that, in London, there were only ten provident, as compared with sixty free, dispensaries. Meantime, the free monopolised both patients and subscriptions. The provident system encouraged forethought and independence; it tended to raise wages, and the machinery employed was suited to prevent imposition. Further, the Practitioners in the neighbourhood did not suffer, and there was no delay in obtaining relief. The Medical men were also paid for their work.

Mr. Spencer Wells seconded. If the Profession generally supported the measure it would do much to overcome the evils complained of. He could hardly believe that there were people who could not pay a penny a week, they not being paupers. Giving a penny when they were ill was quite another thing to giving it when they were well.

Mr. Macilwain's own experience confirmed what had been said. All natural difficulties might be got over by mutual sacrifices of opinion.

Dr. Nelson Hardy said they must consider the whole matter, and not parts of it merely. They proposed to continue the greatest abuses of all the out-patient departments of Hospitals which they had been appointed to consider. Instead of reforming them, they attacked dispensaries. Were these allowed to remain provident dispensaries would be at a disadvantage, for no subscriptions would come to them. The Marylebone and the Leicester experience both confirmed this. The expenses would be increasing with gradually decreasing subscriptions. The Hospitals were the chief sinners.

In reply to Dr. Morell Mackenzie, Dr. Anderson said that they permitted attendance in the event of illness, if a certain sum was paid down at once.

The resolution was carried.

Mr. Holmes, in moving the fourth resolution—"That, for the reasons given in the preceding resolution, and in order to improve the clinical teaching of the out-patient department of the general and special Hospitals, it is very desirable that the present unrestricted system of gratuitous relief at those institutions be curtailed, partly by the selection of cases possessing special clinical interest, and partly by the exclusion of those who, on social grounds, are not entitled to gratuitous Medical advice"—said out-patient departments were to be reformed chiefly by carefully attending to those seen. He had often found patients ignorant of the name of the Medical man who was supposed to see them. Nevertheless, it was not an institution to be swept away: it was too valuable for teaching.

Dr. Anstie seconded. He said most of the cases seen were useless for every purpose. Most patients he saw had simple catarrh. There was no time for careful diagnosis; and yet, notwithstanding, it was fearfully exhausting work. First teaching to students should be exceedingly careful.

The resolution was carried.

Dr. Stallard moved the fifth resolution—"That the practice of receiving payments for medicine or Medical advice from the out-patients of Hospitals is undesirable." He was much opposed to small payments at Hospitals; it was cheating the general Practitioner.

The motion having been seconded, Dr. Leslie moved, as an amendment, "That out-patient departments ought to be placed on the same footing as provident dispensaries."

Dr. Nelson Hardy seconded this, but it was ultimately withdrawn.

Dr. Morell Mackenzie said this amendment would certainly tend to diminish numbers. They ought to have the whole scheme under consideration, not bits of it.

Dr. Ross said that by payment and reduction of the number of cases seen they would certainly increase the number of those attending Hospitals who could afford to pay a general Practitioner.

The motion was carried.

Dr. Pollock, in moving the sixth resolution—"That the governors of Hospitals ought in all cases to provide some honorarium for the staff of the out-patient department"—said every man was worthy of his hire. Paid labour was always better than unpaid, and the time at which patients were seen necessitated the giving up of paying work. He did not propose that an equivalent should be given—that would be hardly possible—merely an honorarium.

Mr. Teevan seconded. He said this was no experiment, it was regularly done on the Continent. It would be beneficial to the Hospital, as it would keep many good men about it; besides, it would compel men to be more punctual.

The motion was carried.

Dr. Buzzard proposed the seventh and last resolution—"That a committee be appointed to memoralise the President of the Poor-law Board, the governors of the various metropolitan Medical charities, and the Society for Organising Charitable Relief, to assist in carrying the foregoing resolutions into effect, and to take such other steps as they may think requisite." And this having been seconded, the following were nominated:—The Chairman, Dr. Burrows, Mr. Bowman, Dr. Guy, Dr. Anderson, Dr. Stallard, Dr. Meadows, Dr. Rogers, Mr. Hutchinson, Dr. Pollock, Dr. Clapton, Mr. Curgenven, Mr. Holmes, Dr. Heywood Smith, Dr. Stewart, Mr. Hart, Dr. Hawkesley, Mr. Gascoyen, Mr. Spencer Wells, Dr. Buzzard, and Mr. Fairlie Clark.

After a vote of thanks to the chairman the meeting adjourned at a late hour.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	Mar. 18.	Mar. 25.	April 1.	April 8.	April 15.	April 22.	April 22. Sent to Hospital.
West—							
Chelsea	6	5	6	4	9	?	—
St. George, Hanover-square	19	10	11	12	16	19	12
St. James, Westminster	8	4	4	8	8	6	6
Paddington	?	?	?	?	?	24	8
North—							
St. Pancras	63	65	44	122	102	121	?
Islington	34	49	26	45	58	57	26
Hackney	31	24*	29	31	?	46	24
Central—							
City of London	13	13	13	7	16	14	7
St. Giles-in-the-Fields	?	5	8	?	11	2	2
Holborn	3	2	3	4	8	8	8
St. Luke's	18	12	25	20	20	—	—
East—							
Whitechapel	15	33	15	19	14	17	?
Poplar	?	?	11	?	?	?	—
South—							
St. Mary, Newington	?	28	23	27	34	37	23
St. Olave, Southwark	1	11	5	3	3	3	1
St. George-the-Martyr, Southwark	5	?	9	19	30	31	12
Lambeth	33	33	17	32	24	?	—
Clapham	29	22	13	40	28	23	8
Wandsworth	3	5	10	13	6	6	1
Putney	?	?	?	?	1	?	—
Streatham	2	3	3	4	7	2	?
Camberwell	13	4	4	?	?	?	—
Greenwich	?	—	—	—	?	?	—
Lewisham	2	?	2	4	?	?	—
Plumstead	4	6	4	19	5	3	2

* Return imperfect.

The annual meeting on behalf of the Birmingham Dental Hospital was held last week. The Honorary Secretary read the thirteenth annual report, in which the Committee stated that the institution was fast gaining ground in reputation and usefulness, and ranked as one of the first of the minor Medical charities of the town. An annual subscription-list of some £250 per annum would enable the Medical staff, through the Committee, to carry out and develope plans long contemplated for the more efficient working of the institution.

REVIEWS.

On the Genesis of Species. By St. George Mivart, F.R.S. 1871. London: Macmillan and Co.

On the Origin of Genera. By Edward D. Cope, A.M., Secretary of the Academy of Natural Sciences of Philadelphia. 1869. Philadelphia. London: Trübner and Co.

Essays on Darwinism. By Thomas R. R. Stebbing, M.A., late Fellow and Rector of Worcester College, Oxford. 1871. London: Longmans, Green, and Co.

The works whose titles stand at the head of this article are written by highly educated, thoughtful men, all of whom take up the subject of Darwinism, which we shall use as synonymous with "The Theory of Natural Selection," from a different point of view. Mr. Mivart, who is well known as one of our most eminent philosophical zoologists, admits that "for the approximation we have lately made towards the solution of the problem—By what combination of natural laws does a new 'common nature' appear upon the scene of realised existence? *i.e.*, How is an individual embodying such new characters produced?—we are mainly indebted to the invaluable labours and active brains of Charles Darwin and Alfred Wallace;" and allows that the conceptions of most of their opponents are "more or less crude"; but, at the same time, he feels that "the special Darwinian hypothesis is beset with certain scientific difficulties which must not be ignored," and some of which he thinks are insuperable. He freely admits that the theory (should he not say, hypothesis?) is, perhaps, the most interesting that has been promulgated during the present century; that it groups together a vast and varied series of biological facts, and even paradoxes, and more or less clearly explains them; that it throws light on the more singular facts relating to the geographical distribution of plants and animals; that it serves to explain the circumstance that often in adjacent islands we find animals closely resembling each other, while, if these islands show signs of very ancient separation, the animals inhabiting them exhibit a corresponding divergency; that rudimentary structures and the singular facts of "homology" are capable of explanation by means of this theory; that it elucidates the process of development, during the early stages of which animals closely resemble other animals; and that thus, and thus alone, can we explain the extraordinary phenomenon of *mimicry*, in which one animal bears a special resemblance to some other (and usually stronger) animal, or to a plant, as in the case of the leaf insect, the walking-stick insect, etc.

But while making these important admissions, he maintains—and it is the object of his book to prove—

"That 'natural selection' is incompetent to account for the incipient stages of useful structures.

"That it does not harmonise with the coexistence of closely similar structures of diverse origin.

"That there are grounds for thinking that specific differences may be developed suddenly, instead of gradually.

"That the opinion that species have definite, though very different, limits to their variability is still tenable.

"That certain fossil transitional forms are absent which might have been expected to be present.

"That some facts of geographical distribution supplement other difficulties.

"That the objection drawn from the physiological difference between 'species' and 'races' still exists unrefuted.

"And that there are many remarkable phenomena in organic forms upon which 'natural selection' throws no light whatever, but the explanations of which, if they could be attained, might throw light upon specific origination."—P. 21.

Professor Cope's "fragmentary essay," as he modestly calls it, is written in too strictly a scientific style for any but professed zoologists. His pamphlet—for it is nothing more, consisting of only eighty pages—contains five chapters, with the following headings:—

1. Relations of Allied Genera.
2. On Retardation and Acceleration in Generic Characters.
3. Relations of Higher Groups.
4. Of Natural Selection.
5. Of Epochal Relations.

He adopts the Darwinian hypothesis, and combines it with certain views of his own, which are laid down in his second chapter.

Mr. Stebbing is an out-and-out Darwinian, and belongs to the third and very small class of clergymen who, according to Huxley,(a) study scientific matters thoroughly and in an honest spirit, and are not afraid of expressing or even preaching their opinions. All honour to such men! If they were more commonly found in our pulpits, intellectual laymen would soon become better Churchmen than they now are.

His "Essays on Darwinism" consist of a series of memoirs, of which the most important—namely, "Darwinism," "The Noachian Flood," "The Lapse of Time," "Imperfection of the Geological Record," and "Instinct and Reason"—were read before the Torquay Natural History Society and the Devonshire Association. As Mr. Stebbing very truly remarks, the opinions passed upon "The Origin of Species," and the allusions made to it in common conversation and in popular lectures, often testify to nothing except supreme ignorance of its general merits. While some content themselves with ridiculing views which they are incapable of grasping, others stir up the *odium theologicum*, and declare that Darwinism and Christianity are antagonistic. It is with the view of counteracting these false views, and of enabling the public to judge for themselves what is true and what is false, that Mr. Stebbing originally delivered these lectures, and has subsequently published them. As he makes no claim to originality, and confines himself, for the most part, to the clearest and simplest arguments, we shall content ourselves for the present with expressing a wish that his unassuming little volume may be very widely diffused through "the dark places of the earth," and that it may effect the object which led to its publication.

We now return to Mr. Mivart's book, which will form the *pièce de résistance* of this article, and shall commence with a sketch of his second chapter, in which he puts out all his strength. He attempts to show that the slight variations by which, according to Mr. Darwin, natural selection acts, ought to be useful *at once;* but that this is not the case. What, for example, he asks, could have been the use of the very minute extra length of the neck of the first giraffe, that by straining itself had succeeded in obtaining an infinitesimal addition of stature? And why should not the struggle to reach the leaves of high trees similarly affect many other vegetable-feeding ungulates? He then refers to the flat-fishes, which, as everyone knows, have in their adult form both eyes on one side of the head, while in the young they are situated, as usual, one on each side. "If the transit were gradual, then how such transit of one eye a minute fraction of the journey towards the other side of the head could benefit the individual is, indeed, far from clear." Moreover, these flat-fishes are, geologically speaking, apparently of recent origin, and hence have not had sufficient time to effect so important a change. Another difficulty suggested by Mr. Mivart "seems to be the first formation of the limbs in the higher animals. The lower vertebrata are perfectly limbless; and if, as most Darwinians would assume, the primeval vertebrate creature was also apodal, how are the preservation and development of the first rudiments of limbs to be accounted for, such rudiments being infinitesimal and functionless?" The development of whalebone (baleen) in the mouth of the whale is another of his difficulties. "It is obvious that if this baleen had once attained such a size and development as to be at all useful, then its preservation and augmentation within serviceable limits would be promoted by natural selection alone. But how to obtain the beginning of such useful development?" Everyone not utterly ignorant of comparative anatomy is aware of the special provision that exists in the young kangaroo by which it may receive the milk injected into its mouth by the mother without being choked by the passage of the fluid into the larynx—the larynx being so elongated that it rises up into the posterior end of the nasal passage. How did this elongated larynx arise? If by very slow gradation, how did the young kangaroo, during the period of this elongating, escape suffocation?

In these days of *aquaria*, most of our readers probably have seen the curious structures called "Pedicellaria," which are attached to, and seem to grow from, the bodies of the *Echinidæ* or sea-urchins. Each of these structures consists of a long slender stalk, which sways about in various directions, and terminates in three jaws, which are constantly opening and shutting with a snapping action. If, as has been assumed, in the absence of a better hypothesis, the use of these organisms is to remove from the body of the sea-urchin any foreign substance that might be hurtful to it, "what would be the utility of the *first rudimentary beginnings* of such structures, and how could such incipient buddings have ever preserved the life of a single echinus?"

(a) "The clergy are at present divisible into three sections: an immense body, who are ignorant and speak out; a small proportion, who know and are silent; and a minute minority, who know and speak according to their knowledge."—"Lay Sermons," etc., p. 67.

Passing over the difficulties presented, according to the author, by the development of colour in certain apes, by the hood of the cobra, and the rattle of the rattlesnake, we come to his argument, as based on the formation of the eye and the ear in the higher animals; and, as we think that there is more weight in this than in any of his other objections, we shall quote his own words:—

"The eye," he observes, "is formed by a simultaneous and corresponding ingrowth of one part, and outgrowth of another. The skin in front of the future eye becomes depressed; this depression increases, and assumes the form of a sac, which changes into the aqueous humour and lens. An outgrowth of brain-substance, on the other hand, forms the retina; while a third process is a lateral ingrowth of connective tissue, which afterwards changes into the vitreous humour of the eye.

"The internal ear is formed by an evolution of the integument, and not by an outgrowth from the brain; but tissue in connexion with it becomes in part changed, thus forming the auditory nerve, which places the tegumentary sac in direct communication with the brain itself.

"Now, these complex and simultaneous co-ordinations could never have been produced by infinitesimal beginnings, since, until so far developed as to effect the requisite functions, they are useless."—(Pp. 51 and 52.)

He adds, with regard to the ear, that "in its interior there is an immense series of minute rod-like bodies, termed the *fibres of Corti*, having the appearance of a key-board, and each fibre being connected with a filament of the auditory nerve; these nerves being like strings to be struck by the keys—*i.e.*, by the fibres of Corti. Moreover, this apparatus is supposed to be a key-board in function as well as in appearance, the vibrations of each one fibre giving rise to the sensation of one particular tone, and combinations of such vibrations producing chords.

"Now, it can hardly be contended that the preservation of any race of men in the struggle for life ever depended on such an extreme delicacy and refinement of the internal ear. How, then, could either the minute incipient stages, or the final perfecting touches of this admirable structure, have been brought about by vague, aimless, and indefinite variations in all conceivable directions of an organ, suitable to enable the rudest savage to minister to his necessities, but no more?"—(Pp. 53 and 54.)

These are some of the most important facts which Mr. Mivart has brought forward, as inconsistent with the origination of species by "natural selection" wholly or mainly.

Mr. Stebbing, in an article entitled "The Genesis of Species," which is in reality a review of Mr. Mivart's volume (obviously written in great haste, while his essays were going through the press), endeavours to refute the above-mentioned arguments, by maintaining that the author has not given sufficient prominence to Mr. Darwin's views regarding the importance of "variation," and that he attributes the origin of species to "natural selection" alone. We cannot think that Mr. Mivart has laid himself open to this charge, and freely admit that he has brought forward difficulties which, in the present state of our knowledge, we cannot explain.

In his third chapter the author endeavours to show that natural selection does not harmonise with the coexistence of closely similar structures of diverse origin. For example, he shows, with regard to the sustentation of the body in the air, that it is accomplished by very different structures of the limbs in the bat, the bird, and the flying dragon, while in insects the wings are not even modified limbs at all. Again, how different is the arrangement of the poison apparatus in serpents, the aculeate hymenoptera, scorpions, spiders, and myriopods.

In the next chapter Mr. Mivart endeavours to show that specific differences may be developed suddenly instead of gradually. In this opinion he is supported by Professor Huxley, who observes that "we greatly suspect that Nature does make considerable jumps in the way of variation now and then, and that these saltations give rise to some of the gaps which appear to exist in the series of known forms." Mr. Darwin himself allows that sudden modifications may occur in domestic animals, and quotes several cases. Why, then, is it "a false belief" (as he asserts) that natural species have often originated in the same abrupt manner? Mr. Mivart refers to the wonderfully folded teeth of the labyrinthodonts, the aborted finger of the potto, the wings of birds, the tendrils of certain climbing plants, etc., as cases that could not have been produced by minute modifications. He likewise shows that certain forms which were once supposed to be especially transitional and intermediate—as, for example, the Madagascar aye-aye (a lemur formerly supposed to be allied to the squirrels)—are really by no means so, while the general rule that the progress of form has been from the more general to the more special is shown to present remarkable exceptions in the recently extinct macrauchenia, which unites "in one organic form both artiodactyle (even-toed) and perissodactyle (odd-toed) characters, and that in a manner not similarly found in any other known creature, living or fossil." Again, no armadillo *now living* presents nearly so remarkable a speciality of structure as that possessed by the *extinct* glyptodon, in which the joints of the spinal column were so fused together as to convert it into a rigid cylindrical rod. "In a similar way the *extinct* machairodons, or sabre-toothed tiger, is characterised by a more highly differentiated and specially carnivorous dentition than is shown by any predaceous beast of the present day." For the singular details of this remarkably carnivorous dentition we must refer to page 111 of Mr. Mivart's volume.

We must pass without comment over the chapters devoted to the other objections to the theory of natural selection, as they are of much less weight than those we have already noticed, some of them being, as our author admits, "not insurmountable."

Mr. Mivart tells us that he was not originally disposed to reject Mr. Darwin's fascinating theory, but that the cumulative argument—as laid down in this volume—that arose against the prevalent action of "natural selection," was, to his mind, conclusive. At the same time he fully admits that "natural selection" acts, and must act, and that it plays in the organic world a certain, though a secondary and subordinate part.

We cannot conclude our notice of this extremely interesting volume without a reference to the number and beauty of the illustrations. We may add that the work is intended for general readers as well as professional naturalists; and that consequently all scientific terms are popularly described, and no topics are introduced to which in this over-fastidious age the most sensitive person could object. It may safely lie on any drawing-room table.

A Treatise on Localised Electrisation, and its Applications to Pathology and Therapeutics. By Dr. G. B. Duchenne (de Boulogne). Translated from the Third Edition of the Original by Herbert Tibbits, M.D., Medical Superintendent of the National Hospital for the Paralysed and Epileptic. Part I. London: Hardwicke. Pp. 322.

The present valuable translation of Duchenne's great work has really appeared before the original, owing to the interruption due to the siege of Paris. That such a translation should have been so long delayed, and should at last have appeared by private enterprise, if creditable to that enterprise, is not quite so much so to our great society instituted for such purposes—the New Sydenham Society. This portion of the work consists, in considerable measure, of descriptions of different forms of electric and galvanic apparatus; but it also contains some exceedingly interesting facts relating to physiology and therapeutics.

One important subject which engages attention here is Medical batteries. Of course the great thing for such purposes is to secure a battery which will work as long as possible, with the steadiest possible current. Several batteries are described by Duchenne; but those most commonly used in this country are Stöhrer's for the interrupted current, and, perhaps, Muirhead's for the constant, but only if required to be stationary. It is made by Elliott Brothers, West Strand. Fovaux's battery, made by Weiss and Co., now that it has been modified, is the best constant-current we know for portable purposes. Stöhrer's constant-current battery is in use in some of our Hospitals. The electro-magnetic boxes can at all times be given to patients to play with.

Duchenne, contrary to the German opinion, upholds the virtues of induced as opposed to constant currents. "Faradic (*i.e.*, induced) electricity," says he, "which in no way alters the tissues, is essentially Medical electricity."

For the application of electricity, Duchenne uses two kinds of rheophores or conductors; one set like those in common use—viz., hollow metallic tubes fitted to receive a wetted sponge—or a corresponding broad flat metallic surface covered with moist leather. These, distributing the galvanic force over rather a wide area, are used for *indirect muscular faradisation*. The others are also metallic, but olivary or conical, and are used for the direct stimulation of the smaller muscles or of individual nerves.

Although the induced current does not give rise to the painful chemical effects of the continuous current, still, without certain precautions, a good deal of discomfort is caused to the patient. Wetting is the first and most important precaution; the next is to break the current, which with most instruments is easily done, until the rheophores are *in situ*. In dealing with paralysed limbs, an important question arises—How best to excite a certain muscle? That can be done in two ways—either by directing the current immediately into its substance, or by stimulating the nerve by which it is supplied. If only a portion of a muscle is to be excited, the former is the better plan; if the whole of it (especially if large), it is better to act through the nerves. But this last implies a nicety of anatomical knowledge not possessed by all, especially with regard to the emergence and immersion of nerves. For this purpose the plates of the nervous system by Hirschfeld are invaluable. Duchenne's directions for the faradisation of individual organs are too extended and minute to be recapitulated here with benefit; but the whole book is stuffed so full of facts, many of them new to our readers, that we shall again refer to it in fuller detail.

GENERAL CORRESPONDENCE.

OUT-PATIENT HOSPITAL REFORM.

Letter from Dr. Alfred Meadows.

[To the Editor of the Medical Times and Gazette.]

Sir,—You have kindly allowed me on several occasions to appeal to the Profession for funds to carry out the work of the committee appointed to inquire into the subject of out-patient Hospital administration. The response I have met with has hitherto been very unsatisfactory, yet most persons see that no question can possibly affect the interests of the Medical Profession more directly than this, and especially those members of the Profession who are engaged in general practice. It is their interest, far more than that of the staffs of Hospitals and dispensaries, which is at stake, and if they do not come forward to help the work of the committee they will have no *locus standi* for complaint in future.

At the meeting which was held on the 20th inst., the late committee, having finished its work and presented its report, was dissolved, and a smaller committee appointed to carry out the resolutions which were adopted by the meeting. The former committee has, however, some liabilities for which I suppose I am responsible; and if my payment of the debts could secure effective reform in our out-patient departments, I would gladly bear the expense, for I believe they are at present a gross injury to the Profession, and a scandal to the public. But there is much *work* to be done, and work, too, which will involve expense. The experience of the late committee in this respect will undoubtedly act as a warning to the present, and it cannot be expected that they will both work and pay. I do not speak now by the authority of the committee; but for myself I can only say that, unless some better response is made to this appeal than has been accorded to my former letters, I should strongly advise the committee to drop the whole question. I am, &c., Alfred Meadows.

27, George-street, Hanover-square.

P.S.—The chairman of the late meeting, Sir W. Fergusson, made an appeal for funds, the result of which was donations to the amount of *ten shillings!* Copies of the report of the committee may be had by applying to me and sending a few postage stamps.

WOMEN.

Letter from Dr. Francis R. Hogg.

[To the Editor of the Medical Times and Gazette.]

Sir,—Recently, at a tedious midwifery case, after thinking over what women have to undergo at various times—the disorders of menstruation, the discomfort of pregnancy, the risk to life and pain at delivery, the broken rest, the worry and bother of lactation, and the diseases that occur at the change of life—I took up Darwin's book and read that the chief distinction in the intellectual power of the two sexes is shown by man rising to a higher eminence in whatever he takes up than woman can attain, whether in poetry, painting, sculpture, music, science or philosophy, but that the greater tenderness and less selfishness of the weaker sex stand out in prominent contrast. Turning (in that restless, feverish state of mind a Medical man is in, after being out all day, with the prospect of being up all night) to other topics, the announcement that there were 150 candidates for six vacancies in the Governesses' Benevolent Institution arrested my attention. The fortunate six will receive 20*l.* a-year; but as for the others—daughters of officers in the army and navy, of clergymen, barristers, artists, merchants, bankers, and too frequently of Medical men, several over 70, blind, deaf, and paralysed—what is to become of these maiden ladies in their "age, ache, and penury"?

Next, one of those hard, unkind, and cruel articles of the *Saturday Review* on women coming under notice, set me wondering if the crabbed, ungenerous writer ever had a mother, a sister, or a daughter, or was that *lusus naturæ* "nobody's child." I am, &c., Francis R. Hogg, M.D.,
Royal Horse Artillery.

Royal Artillery Barracks, Woolwich, April 21.

THE SANITARY CONDITION OF EMS.

Letter from Dr. N. Geisse.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have lately received letters from Medical men as well as from old patients who want to take another course of waters at Ems, asking whether Ems was considered safe, because, according to English papers, infectious diseases had spread over the place from the Hospitals. Would you think it too great a liberty of an old reader of your journal if he asks you the favour of being allowed to say a few words on this subject?

The Hospitals at Ems, erected for war-time, were all closed at the end of March. They have taken in only wounded soldiers, and no sick ones. I have acted as Medical inspector over the Hospitals at Ems and neighbourhood (from which I intend to communicate some interesting cases to you soon) during the winter, and consider myself, therefore, a person fit to contradict the above-mentioned false rumour. The well-known healthiness of Ems has not suffered in any way, neither by war, Hospitals, nor prisoners. I am, &c.,
N. Geisse, M.D., Physician at Ems.

Bad, Ems, Germany, April 22.

SCOTCH MORALITY.

Letter from Dr. Wm. Whitelaw.

[To the Editor of the Medical Times and Gazette.]

Sir,—If English readers of the *Medical Times and Gazette* infer from the article on "Scotch Morality," in the number for April 15, that young people in Scotland who have "loved not wisely but too well" generally marry after the birth of a child, the inference, in my opinion, will be wrong. It would be a more correct representation of the fact to say that, after a *liaison* of a few months, when the woman finds herself pregnant, *then* usually a legal marriage is precipitately set about, in order to make matters as decent as possible. Twice I have been consulted as to questionable cases of pregnancy, the arrangement for an immediate marriage depending on an affirmative reply. This is the kind of "fornication" (intercourse before marriage) that frequently comes before Kirk Sessions, prior to couples being allowed church privileges, such as sitting down at the Holy Communion, and also securing the baptism of the child when it arrives. There is a clerical joke about a Scotch "character" in a fault of this kind attempting a defence, and telling his clergyman that he and the wife "were just rather late in getting married." So far as my observation in this parish extends, the girls who do not get married before the birth of a child have a dismal prospect of being married afterwards. I recollect at least thirteen instances of this kind of disappointment, the nationality of four of the women being Irish. Four of these women (one Irish) ultimately married different men from their first loves, two of the wives keeping their first children in their present households, the other two leaving their bastard offspring with the maternal relatives.

That a few men may marry to save themselves from the compulsory support of the child may be true; that others abscond to a distance to escape the burden is unfortunately notorious. A farm servant binds himself to his master for half a year only, and at the end of that time he may betake himself to fresh fields and pastures new. It is possible that poor country lads are thus more tempted to run away after a *lâchesse* than well-paid city artisans, who by marrying their partners save the reputation of them both.(a) One of the continuing causes of illegitimacy everywhere is the lightness of censure with which the male defaulter is treated. This I have publicly declared on former occasions. A girl, seduced perhaps by the promise of marriage, is in one sense ruined for life, while the seducer is "sowing his wild oats" only, and may repeat his offence elsewhere. Seduction should be rendered a crime in law, and the man punished even with stripes. There is probably more connexion between the paltry 2s. 6d. a week commonly decreed by the Scotch sheriffs for the support of a bastard baby and the emaciated condition of the weakling on whom it is intended to be spent than has yet come before the public.

(a) "The town districts furnished only 9·1 per cent. of the births as illegitimate, while 10·1 per cent. of the births were illegitimate in the rural districts."—Scotch Registrar-General's Summary for 1870.

I suggest that Scotch whisky rather than so-called Calvinistic gloom is one of the causes of northern immorality. Englishmen may be assured, Sydney Smith and his trephining operation notwithstanding, that Scotchmen are candid and love a joke, especially when the laugh is not at themselves.

I am, &c., **Wm. Whitelaw**, M.D., L.F.P. & S.G.

Kirkintilloch, N.B.

REPORTS OF SOCIETIES.

◆

CLINICAL SOCIETY OF LONDON.

Friday, April 14.

Dr. Burdon-Sanderson, President, in the Chair.

Dr. Broadbent read a paper "On Phosphorus as a Remedy in Skin Diseases," in continuation of a series of cases published in vol. ii. of the Society's *Transactions*, in which manganese and nickel were given as remedies for anæmia. If the action of remedies and poisons on the human organism is due to their chemical properties, substances allied chemically ought to have an analogous physiological and therapeutical influence, or the diversity in their action ought to be explicable on chemical grounds. In other words, chemical groups should form therapeutical groups. The investigation suggested by these considerations is as follows:—Given a distinct and well-ascertained physiological or therapeutical effect, can results in any way similar be obtained from the chemical allies of the body producing it? The group of which phosphorus is the head chemically, and of which arsenic is the chief representative in therapeutics, affords an opportunity for the application of this test. Its four members, phosphorus, arsenic, antimony, and bismuth, stand in the order named in regard to equivalent numbers, physical properties, and chemical energy; and their compounds with other elementary bodies form analogous series. Excluding bismuth, which, from its feeble affinities and tendency to form insoluble compounds, may be considered inert, there is in the mode of action of phosphorus, arsenic, and antimony, as poisons, and in the tissue-changes they induce, a parallelism as remarkable as that of the chemical properties of these bodies, both in the energy and in the character of the physiological effects. The opportunity for bringing out further therapeutical parallelism is furnished by the well-known curative action of arsenic in certain forms of skin diseases, such as some forms of eczema and psoriasis. Cases of this kind were taken, and, instead of arsenic, phosphorus was given. Two grains of this substance were dissolved in oil, and from three to seven drops of the solution were given, usually in mucilage, three times a day after meals. Six cases of eczema were related, in all but one of which the phosphorus was decidedly beneficial. The most striking case was that of a girl, aged 12 years, who had had eczema of the scalp, extending down upon the forehead and face, for three months. She took first four, and afterwards five minims of the phosphorated oil for three months without any external application, when it was discontinued on account of sickness, the eruption having almost disappeared. Three weeks later it was resumed, and after a fortnight all that remained was slight redness and scurfiness of the scalp. With the aid of creasote and red oxide of mercury ointment, the skin ultimately became healthy. The cases of psoriasis were also six in number, two out of which proved rebellious, not only to phosphorus, however, but to arsenic, and all treatment, general and local. In one case, that of a man aged 22, psoriasis had been present more or less from the age of 4 or 5; the patches were large and numerous, and had an inveterate look. He took the solution of phosphorus in doses of from five to eight drops. On two occasions the psoriasis completely disappeared without the use of any local application, and a third time with the aid of creasote and ammonio-chloride of mercury ointment; but his attendance was irregular, and during the twenty-one months that he was more or less under observation, he contracted first gonorrhœa and then syphilis (aphrodisia from phosphorus?), and he ceased to attend at the Hospital while the evolution of cutaneous syphilis in a "dartrous" subject was being watched. The object of the communication was not to bring forward a new remedy for skin diseases, but to exhibit one more analogy between phosphorus and arsenic. If phosphorus, however, were as manageable and as little disagreeable as arsenic, it would probably, according to Dr. Broadbent's experience, be found superior in efficacy.

Dr. Althaus said phosphorus as a remedy had been much neglected, partly because no preparation was found in the English Pharmacopœia. In the Prussian there was an oleum phosphoratum. Its disagreeable taste might be amended by giving it in a pill. A stronger solution than that used by Dr. Broadbent might be given. He generally began with one-fortieth of a grain, and went up to half a grain. He remembered a difficult case of psoriasis cured by it.

Dr. Langdon Down would have liked to hear more of the parallelism of arsenic and antimony. Antimony was not the real agent in the stablemen's hands, but rather the arsenic contained in the impure antimonial preparation. He thought it would have been better to have given the parallel oxides.

Dr. Wiltshire asked if amorphous phosphorus had been used.

Dr. Simms had seen certain cases rapidly and perfectly cured by phosphate of iron—better, indeed, than by arsenic.

In reply, **Dr. Broadbent** said he merely wished to establish the parallelism of phosphorus and arsenic. He had noted in one case that the health improved rapidly under the former. He gave phosphorus itself because its compounds with oxygen do not partake of the nature of the metalloid itself. Amorphous phosphorus is inert.

Dr. Frederick Simms read notes of a case of Left Hemiplegia with total loss of the right eye. Mary S., 31 years of age, was admitted into the West London Hospital on September 12, 1870. No history of syphilis or of any acute illness. Has had several healthy children. On February 19, 1870, after a short railway journey, labour came on at full time, with severe flooding, and ended in four hours by the delivery of a still-born child. An hour after the patient was unconscious, having previously had severe pain in the right side of her head. Recovery ensued after some hours, and was followed by acute aching pains in the left arm and leg, both of which she was able to move for at least an hour after the return to consciousness, when they became perfectly paralysed. Gradual and permanent rigidity supervened, with startings and involuntary movements of flexion and extension, so that the hand became bent upon the limb, and could not be kept extended. Memory was much impaired. Three days after delivery active inflammation of the eye set in, resulting in total blindness. The speech was never much impaired. She now has the ordinary symptoms of hemiplegia, is able to walk with some little help, uses the muscles of the thigh to lift and advance the leg, the ankle-joint being fixed and immovable. There is headache on vertex and right side. Sensation of palsied limbs normal. No pain in the diseased eye. General health good. No albumen in the urine. Heart sound. Mr. Fairlie Clarke reports that the diseased eye is quite lost, the globe being shrunken and very soft, the lens opaque, and the pupil drawn downwards as if involved in an ulcer of the cornea. No active inflammation is going on at present. Improvement was confined to increased power over lower limb, disappearance of headache, and to a gain in general health and condition. The patient was able to walk without help, and the ankle-joint relaxed to some extent, but the foot was drawn up by the tendo Achillis. The treatment consisted of iron, iodide of potassium, and good diet. The head symptoms disappeared under the use of bromide of potassium and iron in combination. Faradisation of the affected limbs was tried repeatedly, and as often discontinued, as the head symptoms increased when the feeblest current was used. The illness was attributed to embolon, a clot having formed in the left heart directly after the termination of labour, and travelled upwards as far in the internal carotid artery as the origin of its ophthalmic branch. The loss of consciousness was the immediate cause of this obstruction, and the subsequent symptoms were due to red softening of brain substance and to cicatrisation.

Dr. Buzzard asked if the sensibility of the face was affected, as lesion of the trigeminus might produce destruction of the eye. He thought the cause was embolism.

Dr. Broadbent said it was not common to have embolism with loss of consciousness and paralysis coming on after. Loss of the eye might be due to inflammation of the cornea. The rigidity of the paralysed parts was peculiar, especially the affirmed relaxation in the morning.

Dr. **Brudenell Carter** said lesions of the eye only followed certain lesions of the trigeminus at a point where there might be no sensory fibres. Sloughing from bodily weakness was ordinarily symmetrical. He thought the softening of the eyeball pointed to some deep-seated mischief.

Dr. **Buzzard** read a paper, for Dr. Royston Fairbank, of Lynton, "On the Use of Digitalis as a Topical Remedy." The mode of application of digitalis adopted was to make a decoction of the dried leaves in the proportion of a small teaspoonful to half a pint of boiling water, or a drachm of the tincture might be used in the place of the leaves. Flannels wrung out in the decoction were applied around the inflamed parts in the usual way. Another mode of applying the drug was to foment the part affected with hot water, and afterwards to gently rub in a little of the tincture. Dr. Fairbank had used with great success these local applications of digitalis to cases of acute inflammation of the elbow- and knee-joints, and also to a patient suffering from severe inflammation of the breast.

Dr. **Buzzard** also read a paper, by Mr. Lawson Tait, "On a case of Encephaloid Cancer of the Femur treated by Electrolysis." The patient was a female, age 30, who suffered from encephaloid disease of the right femur. Subcutaneous injections of morphia, in quantities of twenty and twenty-four grains, were necessary to relieve her of her terrible agonies. Hydrate of chloral was also given in doses of from sixty to one hundred grains, but it was found that, unless combined with morphia, or with the administration of chloroform, it failed to induce freedom from pain. In this patient a much smaller dose of chloral was required if morphia had been previously given, and a smaller dose of chloroform was needed to produce anæsthesia if the patient were already under the influence of chloral. Ultimately he tried the effect of electrolysis on the tumour; he inserted (under chloroform) six needles into the tumour, and applied the current for ten minutes, and three days afterwards he repeated the operation for fifteen minutes. The result of these operations was to give the patient great immunity from suffering. Mr. Lawson Tait remarked that had the electrolytic treatment been applied earlier, he was certain it would have saved her much pain.

Mr. **T. Smith** asked Dr. Althaus if he had ever seen a malignant tumour destroyed by electrolysis. In reply, it was stated that Dr. Althaus had treated about fourteen such cases in this manner. Two had got better; the others were negative, but the pain had gone. When early resorted to, it might do better. The two which did well were mammary tumours.

OBITUARY.

THOMAS WALKER GRANT, M.R.C.S.

This gentleman, who died at his residence in the Edgware-road, on April 8, 1871, was one of a class of Practitioners intensely appreciated by their own somewhat limited circle, but devoid of the ambition to make themselves known out of it. An intimate friend tells us that he "was a man, the loss of whom to the Profession may not be much noticed or felt, yet was an eminent example to the public of all those qualifications which a general Practitioner should possess. The incessant routine of daily practice, and a somewhat over-strained modesty, added to long-continued feeble health, prevented him from advancing those claims to influence Medical society publicly, which by culture and natural intellect he was fully qualified to sustain. He was an intense and diligent student all through life; nothing new escaped him, and everything which came under his observation he mastered and made his own. There was nothing meretricious or deceptive in his general conduct; plain, practical, and honest in the purest sense, he never stooped to unworthy means to gain an object. Those who knew him never could trace falsehood to him, nor did his hands ever grasp contaminated gain. The best testimony to his worth is the idolising esteem of his patients; and well he earned it, for no man ever sacrificed his ease, time, health, and life for their welfare more than he did. They regarded him as a personal friend, consulted him on family, business, and other matters foreign to his Profession; and his shrewdness, tact, and kindness seldom, if ever, led them to wrong conclusions. He was neither requested, nor did he often call in Consulting Physicians, as he had that strong self-reliance which is founded on knowledge; and when the opinion of the latter was sought after, it generally did but confirm his own. To the poor he was as attentive as to the rich, and hundreds of ill-spared fees were foregone every year. For several years past he suffered in winter from chronic bronchitis, and last January he was prostrated by the attack which proved fatal. After some weeks of intense suffering, he rallied a little, and hopes were entertained of his recovery, but, unable to take nourishment, he sank from exhaustion. Let it be added that his hopes for future happiness rested simply on the merits of Christ as his Saviour."

NEW INVENTIONS.

HUMBY'S SKIN-CLEANER (REGISTERED).

This useful little contrivance, invented by Mr. Humby, is intended to facilitate the labours of that increasing class of the community who begin their day with a good *tub* and *rub*. It is especially adapted for tourists, travellers, and others to whom space is an object. It consists of a firm pad, and a band, so arranged as to be adapted for scrubbing the front of the body or the back. The band may be folded over the pad, and serve as a handle for scrubbing the front; and when unfolded it may be used to draw the pad up and down the back, so as to give a thorough polish to the loins and between the shoulders. It is a small matter in itself, but anything that helps to keep us sweet deserves notice.

MEDICAL NEWS.

University of Aberdeen.—At the late Medical Graduation term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

The Degree of M.D.

Dutt, Russick Laul, M.R.C.S.E., L.S.A., Calcutta.
Ghose, Kristo Dhan, M.R.C.S.E., L.M.S.C., Calcutta.

At the same time, the following gentlemen received promotion to the degree of M.D.:—

Arbuckle, Hugh Wight, M.B., Thorne, Doncaster.
Coutts, James Allen, M.B., C.M., Banchory-Ternan.
Crowther, Edward Lodewyk, M.B., C.M., Alford, Lincolnshire.
Cullen, James, M.B., C.M., Chumparun, Bengal.
Dyer, Thomas Birch, M.B., C.M., Bethlem Royal Hospital, London.
Wood, Alexander, M.B., C.M., Edwardesabad, Bengal.
Woodford, Edward Russell, M.B., C.M., Ventuor, Isle of Wight.

The Degree of M.B.

Benham, William Thomas, Bristol
Brotchie, Theodore Rainy, Aberdeen
Carmichael, Archibald, M.A., Maryculter
Cobban, Alexander Richard, Whitfield, Berkeley
Creighton, Charles, M.A., Peterhead
Crombie, Charles Mann, Aberdeen
Davidson, Charles, Aberdeen
Davidson, George Farquhar, Aberdeen
Edwards, William Hy., M.R.C.S.E., (St. Bart.'s), Antigua
Fasken, William Andrew Durnford, M.R.C.S., England, London
Goodhart, James Frederic, L.R.C.P. Lond., M.R.C.S. (Guy's), Brighton
Gordon, John, Gray's Hospital, Elgin
Jotham, Geo. Wm., Kidderminster
Knaggs, Samuel Thos., L.K. and Q.C.P.I., L.R.C.S.I., Newcastle, New South Wales
Lawrence, Nathaniel, Longside
Lowson, David, Aberdeen
Maclean, John Cassilis Birkmyre, M.A., Kiltearn, Ross-shire
M'Calman, Hugh, Caithness
Marshall, Lewis Walter, M.R.C.S. Eng., Bristol
Milne, Thomas, M.A., Ellon
Raitt, Thomas, Aberdeen
Shepherd, James, M.A., Aberdeen
Simpson, James, Aberdeen
Waldo, Henry, Clifton
Walsham, William Johnson, L.S.A. Lond., (St. Bart.'s), London
Williams, Alfred Henry, London
Wilson, Alexander, M.A., Rayne

The Degree of C.M.

Benham, William Thomas
Brotchie, Theodore Rainy
Carmichael, Archibald
Cobban, Alexander Richard
Creighton, Charles
Crombie, Charles Mann
Davidson, Charles
Davidson, George Farquhar
Edwards, William Henry
Fraser, George Innes
Goodhart, James Frederic
Gordon, John
Jotham, George William
Knaggs, Samuel Thomas
Lawrence, Nathaniel
Lowson, David
Maclean, John Cassilis Birkmyre
M'Calman, Hugh
Marshall, Lewis Walter
Milne, Thomas
Raitt, Thomas
Shepherd, James
Simpson, James
Waldo, Henry
Walsham, William Johnson
Williams, Alfred Henry
Wilson, Alexander

Of the above-mentioned candidates, Archibald Carmichael, James Frederic Goodhart, David Lowson, William Johnson Walsham, and Alexander Wilson received their degrees in Medicine and Surgery, with highest academical honours; Russick Laul Dutt, Kristo Dhan Ghose, and Samuel Thomas Knaggs, their degrees in Medicine, with academical honours; and John Cassilis Birkmyre Maclean, Lewis Walter Marshall, and Thomas Milne, their degrees in Surgery, with academical honours. The theses of James Frederic Goodhart on "Artificial Tubercial Tuberculosis and its relation to Cellular Pathology, and the Growth of Tumours"; of Samuel Thomas Knaggs on "The Sagacity of Nature's Plan as exhibited in the Arrangement of the Tendons of the Digits of Vertebrate Animals"; and of William Johnson Walsham on "The Thermometer as an Aid to the Diagnosis and Prognosis of Disease," were considered deserving of high commendation.

At the same time Louis Richard Connor was certified as having passed all the examinations, and is entitled to receive degrees on his attaining the necessary age; and the following were declared to have passed part of their examinations :—

Arthur, John F.
Burness, Alexander G.
Carless, Edward N.
Carless, William
Chiappini, Peter Alexander
Cushny, William Alexander
Edwardes, Lewis
Fowler, George William
Fraser, Alexander
Geddie, William
Gibbons, John Stephen
Hall, John George
Hallett, Henry Arthur
Hay, Frederick
King, Walter Gawen
Lyon, John
Mackenzie, Duncan John
Mearns, William
Mickle, George
Ogston, Francis
Parris, Richard
Patterson, David Aikman
Philpotts, John Richard
Pringle, John
Reid, James Alexander
Reid, Robert William
Rennie, Thomas
Robbins, Henry John
Russell, James
Skinner, Charles Gordon L.
Stephen, James
Tytler, Peter
Urquhart, Alexander Reid
Walker, James
Welford, George E.
Wyness, James Davidson
Yule, Robert Mortimer

The next Professional examination for degrees in Medicine commences on Saturday, July 22, 1871.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen having passed the required examination, obtained the Degree of Doctor of Medicine on April 22 last :—

Brown, George, F.R.C.S., M.R.C.S., L.S.A., Kensal-green, London.
Carlaw, John, L.R.C.S. Edin., Assistant-Surgeon Army, Glasgow.
Crawford, Cooper Hayes, M.R.C.S., L.S.A., L.M., Stafford.
Harris, Henry, F.R.C.S., M.R.C.S., L.S.A., Redruth, Cornwall.
Harvey, John, M.R.C.S. Eng., L.S.A. Lond., Birmingham.
Muscroft, Henry, L.R.C.P. Lond., M.R.C.S. Eng., Pontefract.
Underhill, Thomas, L.R.C.P. Edin., M.R.C.S. Lond., L.S.A., Tipton.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Court of Examiners, on the 25th inst., and, when eligible, will be admitted to the pass examination :—

Barnes, Arthur Richard, of St. Bartholomew's Hospital.
Blyth, Charles, of the Glasgow School.
Bradshaw, Frederick Frank, of Guy's Hospital.
Brigham, Henry George, of St. George's Hospital.
Cave, Alfred Ernest, of the London Hospital.
Dalton, Charles Bernard, of Guy's Hospital.
Foreman, Joseph, of Guy's Hospital.
Greet, William Ambrose, of University College.
Hawton, James William Henry, of Guy's Hospital.
Jackson, Francis Edward, of St. Bartholomew's Hospital.
Johnson, John James, of the Westminster Hospital.
Kennedy, William Adam, of the Newcastle School.
Kilner, Walter John, of St. Thomas's Hospital.
King, Aloysius Joseph, of the Bristol School.
Ledyard, William Edward, of St. Thomas's Hospital.
Lovell, Walter Frederick, of St. George's Hospital.
MacLean, Aaron, of St. Thomas's Hospital.
Moxon, Henry Maxsted, of St. Thomas's Hospital.
Penny, William Lawry, of the Middlesex Hospital.
Powell, Joshua, of University College.
Shaw, Walter, of University College.
Skerritt, Edward Markham, of University College.
Smith, Henry Burton Liddell, of St. George's Hospital.
Smith George Cockburn, of the Glasgow School.
Stirling, Edward Charles, of St. George's Hospital.
Strather, William, of the Glasgow School.
Willey, John Mason, of St. Bartholomew's Hospital.
Williams, Trevor Wynn, of St. Bartholomew's Hospital.
Wood, William John Haran, of the Glasgow School.

Seven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months.

The following passed on the 26th inst., viz. :—

Allen, John Edward, of the Manchester School.
Baily, Frederick William, of King's College.
Buckle, Thomas, of the Birmingham School.
Callcott, James Thomas, of the Newcastle School.
Daniel, James, of the Manchester School.
Davison, Rashell Thomas, of St. Bartholomew's Hospital.
Harman, James Raffles, of the Birmingham School.
Hutchinson, Walter, of King's College.
Lawrence, Henry, of the Bristol School.
Lush, William Henry, of St. Thomas's Hospital.
Mason, Henry William, of St. Bartholomew's Hospital.
Odling, Tom Francis, of St. Bartholomew's Hospital.
Sherwood, Arthur Paul, of St. George's Hospital.
Shuter, James, of St. Bartholomew's Hospital.
Sutcliffe, Eli Crossley Titterington, of University College.
Turner, Frank Edward, of St. Bartholomew's Hospital.
Venn, Albert John, of St. Bartholomew's Hospital.
Watson, Percival Humble, of University College.
Waylen, George Swithin Adee, of St. Bartholomew's Hospital.
Whitfield, William John Clarke, of the Bristol School.
Whitmore, William Tickle, of St. Bartholomew's Hospital.
Wilding, William Arthur, of St. Bartholomew's Hospital.
Wilkins, Ernest William Sancroft, of University College.
Williams, Howell, of University College.

Thirteen candidates were referred to their anatomical and physiological studies for three months.

The following passed on Thursday, the 27th inst. :—

Anderson, William Henry, of St. Mary's Hospital.
Barrow, Albert Boyce, of King's College.
Belfield, Charles Wooliscroft, of the Bristol School.
De Lantour, Harry Archibald, of King's College.
Fay, Francis Marcus, of King's College.
Fay, Varley George, of King's College.
Grant, James, of the Edinburgh School.
Jennings, William Oscar, of Guy's Hospital.
Kellie, Robert Howden, of King's College.
Lyons, Alfred De Courcy, of St. George's Hospital.
Maddison, William Parker, of the Newcastle School.
Massingham, John Payne, of the Birmingham School.
Milner, Edward, of St. Bartholomew's Hospital.
Parker, Alfred Edwards, of St. George's Hospital.
Philps, Vincent, of King's College.
Roots, William Henry, of Guy's Hospital.
Smith, Gilbart, of St. Bartholomew's Hospital.
Walmsley, Francis Henry, of the Manchester School.
Warne, William Colston, of the Edinburgh School.

Twelve candidates failed to acquit themselves to the satisfaction of the Court of Examiners, and were referred to their Anatomical and Physiological studies for three months.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 20, 1871 :—

Boreham, William Todman, Cantley, Norfolk.
Llewellin, George Joseph, Haverfordwest.
Matcham, Alfred, Lowestoft.
Parry, Thomas William, Carnarvon.
Ravenhill, Edward Burtin, Arlingham, Gloucestershire.
Reston, Henry, Stretford, Manchester.
Wacher, Frank, Underdown, Herne, Kent.

The following gentlemen also on the same day passed their First Professional Examination :—

Deacon, Henry Pelham, St. Bartholomew's Hospital.
Henson, Walter Knowsley, Hull Medical School.
Scale, George John, Middlesex Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CLAREMONT, CLAUDE CLARKE, M.R.C.S.E., L.S.A.—Public Vaccinator to the parish of St. Pancras.

COLE, THOMAS, M.D. Lond., L.R.C.P. Lond., M.R.C.S.E.—Honorary Physician to the Royal United Hospital, Bath.

DUNCAN, J. M., M.D.—Consulting-Physician to the Royal Hospital for Sick Children, Edinburgh.

EAGER, R., M.R.C.S.E.—Consulting-Surgeon to the Royal Surrey County Hospital, Guildford.

FOOT, A. W., M.D., F.K.Q.C.P.I.—Physician to the Meath Hospital, Dublin.

TURNER, HORACE, M.R.C.S.E.—Resident Physician's Assistant at Middlesex Hospital.

MILITARY APPOINTMENTS.

9TH LANCERS.—Staff Assistant-Surgeon John Vicary Thatcher Malcolm, M.D., to be Assistant-Surgeon, *vice* Maximilian Grant, M.D., promoted on the Staff.

ROYAL ARTILLERY.—Staff Surgeon Tertius Ball, M.D., to be Surgeon, *vice* Surgeon-Major Thomas Park, placed upon half-pay.

6TH FOOT.—Staff Assistant-Surgeon Henry Skey Muir, M.D., to be Assistant-Surgeon, *vice* Benjamin Cowan Kerr, M.D., promoted.

MEDICAL DEPARTMENT.—Assistant-Surgeon Benjamin Cowan Kerr, M.D., from the 6th Foot, to be Staff Surgeon, *vice* Tertius Ball, M.D., appointed to Royal Artillery; Assistant-Surgeon Maximilian Grant, M.D., from the 9th Lancers, to be Staff Surgeon, *vice* Staff Surgeon-Major Francis Cogan, deceased; Staff Assistant-Surgeon Vivian Wearne, from half-pay, to be Staff Assistant-Surgeon, *vice* Frederick Henry Waylen, deceased.

BIRTHS.

CAMPBELL.—On April 12, at 40, Wellington-square, Hastings, the wife of W. Campbell, Esq., Surgeon, of a daughter.

COWAY.—On April 17, at South Brent, Devon, the wife of Thomas Cowry, Assistant-Surgeon R.N., of a son, still-born.

HEWLETT.—On April 16, at Palazzo, Volpicelli, Naples, the wife of R. Whitfield Hewlett, M.D., of a daughter.

JAMES.—On April 23, at Perry-vale, Forest-hill, the wife of A. James, M.D., of a daughter.

MADGE.—On April 20, at 32, Fitzroy-square, the wife of Henry M. Madge, M.D., of a daughter.

NEWCOMBE.—On April 19, the wife Dr. Newcombe, Gateshead, of a son.

Starke.—On February 22, at Creswick, Victoria, Australia, the wife of A. G. Hayden Starke, M.D., of a son.

Wolfe.—On April 23, at Brandon-place, Glasgow, the wife of Dr. Wolfe, of a son.

MARRIAGES.

Bennett—Newton.—On April 18, at the church of St. Matthew, Naburn, T. Marshall Bennett, M.B., of Barton-upon-Humber, son of J. Bennett, Esq., of Mille-crux House, near York, to Lucy Anne, third daughter of Henry Newton, Esq., of Grove Lodge, York.

Burr—Herbert.—On April 25, at St. Bartholomew's, Islington, Herbert Greenwood, eldest son of T. W. Burr, Esq., F.R.A.S., of 15, Tibberton-square, Islington, and 12, Paternoster-row, City, solicitor, to Ellen Anne, third daughter of the late C. J. Herbert, Esq., Surgeon, of Bedworth, Leicestershire.

Coldstream—Henderson.—On April 25, at Highbury, Bristol, John Phillips Coldstream, Esq., W.S., Edinburgh, to Emily, widow of James Henderson, M.D., Shanghai, and second daughter of George Rawson, Esq., of Lanesfield, Durdham Down.

Harris—Adams.—On April 18, at St. George's, Walthamstow, Henry Barham Harris, M.D., to Catherine, third daughter of Frank Adams, Esq., of Hoe-street, Walthamstow.

Johnston—Hellyer.—On April 20, at Holy Trinity Church, Ryde, Robert Bainbridge Longmire, youngest son of James T. O. Johnston, M.D., Deputy Inspector-General of Hospitals, to Harriet, only daughter of Thomas Hellyer, Esq., of Bonverie House, Ryde.

Knight—Ward.—On April 25, at the parish church, Clapham, Alexander A. H. Knight, M.D., L.R.C.S.E., Keswick, to Sidney Eliza, eldest daughter of James Ward, Esq., Clapham-common.

Mahon—Sandys.—On April 20, at Eversholt, Great Annesley, D. Mahon, M.R.C.S.E., of High-street, Swindon, to Agnes Amelia, second daughter of Samuel Sandys, M.R.C.S.E., etc., of Eversholt House, near Woburn, Beds.

Payler—Holmes.—On April 25, at St. George's, Bloomsbury, the Rev. Frederick Payler Morgan Payler, M.A., to Julia, second daughter of the late Trafford Holmes, M.D., of Southedge House, Hipperholme, Yorkshire.

Searle—Bagott.—On April 19, at the parish church of St. Thomas, Dudley, George Clement Searle, M.R.C.S.E., of Tewkesbury, to Annie, eldest daughter of George Bagott, Esq., J.P., of The Laurels, Dudley.

Southwell—Andrew.—On April 19, at St. Paul's Episcopal Church, York-place, Edinburgh, the Rev. G. Bull Southwell, to Annie, third daughter of the late James Andrew, M.D.

Tebbitt—Atkins.—On April 18, at St. Michael's and All Angels', Bristol, Robert Tebbitt, M.D., London, to Louisa Augusta, second daughter of the late Mr. J. E. Atkins, Knowle House, Knowle.

DEATHS.

Bacot, Elizabeth Laura, second daughter of J. T. W. Bacot, Deputy Inspector-General of Hospitals, at 38, Harmer-street, Gravesend, on April 19, aged 10.

Cumming, Sara Olivia, the beloved wife of Henry Cumming, Esq., of 27, Westbourne-park-villas, daughter of the late Dr. Spurgin, of Great Cumberland-street, at midnight on April 17, after a short but severe illness, aged 32.

Garrett, Richard, Surgeon, formerly of Eydon, Northamptonshire, at Hemingborough, Howden, Yorks, on April 23, aged 75.

Goate, Edward Verling, M.D., eldest son of Col. E. Goate, Bagot, Jersey, at his residence in Hales-street, Coventry, on April 15, aged 48.

Hackett, Saizie Gertrude, wife of Dr. James Hackett, of Berbice, British Guiana, at Newton Abbott, Devon, on April 20, aged 41.

Haran, Bedelia Mary Josephine, the beloved wife of Surgeon T. J. Haran, R.M., H.M.S., at 11, Victoria-terrace, Sheerness, on April 18.

Hutson, Anne, relict of the late John Richard Farre Hutson, M.D., of George Town, Demerara, British Guiana, and daughter of the late John Waddell, of the same colony, at 4, Western-terrace, Brighton, on April 20.

Johnston, Catherine, widow of George Johnston, M.D., LL.D., and daughter of Claudius Charles, Esq., at Berwick-upon-Tweed, on April 22, aged 77.

Ridout, Margaret, the beloved wife of C. V. Ridout, Surgeon, at Egham, Surrey, on April 19.

Simpson, Alison Veitch, the beloved wife of Dr. Simpson, at 759, Old Kent-road, on April 22, aged 30.

Strong, Maria Mary, the beloved wife of Henry John Strong, M.D., of 64, North-end, Croydon, Surrey, on April 22, after a long illness.

Thomas, Florence Ralphine, second and beloved daughter of Dr. Thomas, at 39, Nottingham-place, on April 19, aged 6½ years.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bristol Lunatic Asylum, Stapleton, near Bristol.—Medical Superintendent; must have both Medical and Surgical qualifications. A gentleman who has had practical experience in the management of a Lunatic Asylum will be preferred. Applications and testimonials to the Chairman of the Committee of Visitors, on or before May 1.

Cheltenham General Hospital and Dispensary.—Resident Surgeon to the Branch Dispensary. Candidates must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Mr. D. Hartley, on or before May 20.

City of London Lying-in Hospital, City-road.—Surgeon Accoucheur. Applications and testimonials to Mr. J. Owthwaite, on or before May 2.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

Littlemore Pauper Lunatic Asylum.—Resident Assistant Medical Officer; must be duly qualified and registered. Applications and testimonials to J. M. Davenport, Esq., County Hall, Oxford, on or before May 13.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, on or before May 9. Election on the 12th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Northleach Union.—Medical Officer for the district comprising the parishes of Aldsworth, Bibury, and Coln St. Aldwyns. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. H. Stiles, Clerk to the Guardians, on or before May 24. The duties will commence on June 24.

Royal Kent Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and *copies* of testimonials to W. Bristow, Esq., 78, London-street, Greenwich, on or before May 20. Election on June 2.

Royal Portsmouth, Portsea, and Gosport Hospital.—House-Surgeon; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Secretary, on or before May 3.

St. Mary's Hospital, Paddington, W.—Physician Accoucheur; must be a Fellow or Member of one of the Colleges of Physicians of the United Kingdom. Applications and testimonials to Mr. G. Wilkinson, Secretary, on or before May 13.

St. Thomas's Hospital.—The staff of the Hospital is to be increased by the appointment of a Physician, two Assistant-Physicians, a Surgeon, and two Assistant-Surgeons. Full particulars may be obtained upon application to Francis Hicks, Esq., the Treasurer.

Seamen's Hospital (late "Dreadnought"), Greenwich.—House-Surgeon; must possess at least one qualification. Applications and testimonials to Mr. Kemball Cook.

South Staffordshire General Hospital, Wolverhampton.—Dispenser; must be a Member of the Pharmaceutical Society. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29.

South Staffordshire General Hospital, Wolverhampton.—House-Surgeon; must be a Fellow or Member of the Royal College of Surgeons of London, Edinburgh, or Dublin, and a Licentiate of the College of Physicians, London, or be L.S.A. Applications and testimonials to the "Chairman of the Medical Committee," on or before April 29. Election on May 9.

South Staffordshire General Hospital, Wolverhampton.—Physician; must be M.D. or M.B. of the University of Oxford, Cambridge, London, Edinburgh, or Dublin, or F. or M.R.C.P. London, Edinburgh, or Dublin, not practising midwifery or pharmacy. Applications and testimonials to the Secretary, on or before May 13.

Unst, Shetland.—Medical Officer. For particulars, apply to Mr. T. Edmondston, 9, Albany-street, Edinburgh.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Narberth Union.—The Third District is vacant; population, 4470; salary, £35 per annum.

Southwell Union.—The Southwell District is vacant; area, 11,706; population, 4914; salary, £65 per annum; and the Workhouse, salary, £35 per annum.

West Derby Union.—The Childwall District is vacant; area, 880; population, 174; salary, £3 3s. per annum.

APPOINTMENTS.

Erpingham Union.—George R. Lake, M.R.C.S. Eng., L.S.A., to the North Walsham District.

Falmouth Union.—Edward H. Eykyn, M.R.C.S. Eng., L.S.A., to the Constantine District.

Guiltcross Union.—Anthony C. Farrington, M.R.C.S. Eng., L.R.C.P. Edin., to the Fifth District.

Halifax Union.—Ernest Hamerton, M.R.C.S., L.S.A., to the Elland District.

Lincoln Union.—D. J. Garnham, M.R.C.S. Eng., L.S.A., to the Second and Eleventh Districts.

Romsey Union.—Frank A. Taylor, M.R.C.S. Eng., to the Second and Fifth Districts.

Woburn Union.—William T. G. Hicks, M.R.C.S., L.R.C.P., to the Toddington District.

Royal Institution of Great Britain.—The following is the programme for the Friday evening meetings after Easter, 1871: — Friday, April 28, Professor Odling, F.R.S., "On the revived Theory of Phlogiston." Friday, May 5, W. R. S. Ralston, M.A., Trinity College, Cambridge, "On Russian Folk-Lore." Friday, May 12, Colonel Jervois, R.E., C.B., Secretary of the Defence Committee, and Deputy-Director of Fortifications, "On the Defence of the United Kingdom." Friday, May 19, Professor Huxley, F.R.S., "On Bishop Berkeley and the Metaphysics of Sensation." Friday, May 26, Professor Rankine, F.R.S., "On Sea Waves." Friday, June 2, Professor Thomas Andrews, F.R.S., Principal of Queen's College, Belfast, "On the Gaseous and Liquid States of Matter." Friday, June 9, Professor Tyndall, LL.D., F.R.S., M.R.I.

The scheme for establishing a college of physical science at Newcastle, in connexion with the Durham University, is progressing satisfactorily.

Owen's College, Manchester.—Miss Brackenberry has announced her intention to give £5000 for the erection of suitable buildings for a Medical school in connexion with Owen's College, and a further sum of £5000 as an endowment for the maintenance of the department.

Dinner at the King and Queen's College of Physicians, Ireland.—On Wednesday, April 19, the President, Dr. Banks, entertained the Fellows of the College and a numerous party of visitors at dinner in the College Hall, Kildare-street. Among those present were Professor Acland, F.R.S., of Oxford; Dr. Laycock, Professor of Medicine in the University of Edinburgh; Dr. Heaton, of Leeds; and the Right Rev. Dr. Graves, Lord Bishop of Limerick.

A special general meeting of the Royal Medical and Chirurgical Society will be held on Monday, May 8, at 5 p.m. precisely, to consider the recommendations of the Council for providing further accommodation for the Society's library, by building an additional reading-room at the back of the present meeting-room. An abstract of the reports of the committee appointed to consider the subject, with their recommendations, and plans of the proposed alterations, will be laid on the library table, a week before the meeting, for the inspection of the Fellows.

Collegiate Proceedings.—From a report of the unconfirmed minutes of the proceedings of the last meeting of the Council of the Royal College of Surgeons, it appears that the recommendation of the Museum Committee for the construction of cases on one of the floors of the house adjoining the eastern museum, for the display of Surgical instruments and apparatus, was adopted by the Council, as was also the appointment of Mr. J. B. Perrin as temporary assistant in the museum, in the vacancy occasioned by the resignation of Mr. Mosely. A handsome gratuity was unanimously awarded to Mr. James Flower, articulator to the College, "as a mark of the appreciation of the Council of the value of the numerous improvements introduced by him in the method of preparing and mounting skeletons, whereby the facilities for the study of osteology have been greatly increased." On the recommendation of the Jacksonian Committee, the following were adopted as the subjects of the next Collegial-triennial Prize and Jacksonian Prize for 1872, viz.:—For the former, "The Structure and Functions of the Medulla Oblongata, including the Connexions of the Central Nerve-roots;" for the latter—"The Diseases of the Nose, including the Sinuses connected with it, and their Treatment." The respective dissertations might be illustrated by preparations and drawings. Mr. S. J. A. Salter was elected an Examiner in Dental Surgery, in succession to Mr. Harrison.

Worcester General Infirmary.—The monthly meeting of the Executive Committee was held last week, Earl Beauchamp presiding. Mr. Mence, pursuant to notice, moved —"That the Committee take steps to increase the annual income of the institution." In 1869 the expenditure was £3864, and the income from subscriptions only £1694. They had since then increased the expenses by an improvement of diet, and the income had been diminished by their having had to sell £1300 worth of stock to meet that year's deficiency. A further diminution would take place to pay for the alteration in the buildings now going forward, which was estimated at £5000. Exclusive of the towns, there were 148 parishes in the county, and he thought if they were appealed to, the number of subscribers would be largely augmented. They had invested since 1854 £13,956, and sold out in the same period £4097. Their funded property had increased in seventeen years by very nearly £5000. Mr. Mence further remarked that the average of legacies during the last sixteen years had been £935, and the average for the last ten was £690.

Small-pox continues to spread in Malta.

Small-pox in Brussels.—This continues to commit ravages in the present crowded state of Brussels. The cases are not very numerous, but their severity shows that the epidemic is as yet far from being at an end. It is said that not a single case has been met with among persons successfully revaccinated. Last week there were forty-one deaths from small-pox in a total mortality of 174.—*Presse Belge*, April 16.

Small-pox is rapidly spreading in Longton, Staffordshire. Nine persons have died, and ninety-three are under treatment. There are numerous cases in the populous outskirts of the town. The disease has also appeared in the neighbouring towns of Fenton and Barslem, and it continues to spread in the neighbourhood of Northwich, Cheshire; but, happily, the disease takes a mild form, and in one case only has death resulted from it. There are now in this neighbourhood no fewer than five public-houses closed, owing to the inmates suffering from small-pox.

Prevalence of Small-pox at Salford.—Dr. Syson, Medical Officer of Health, reported to the Board of Guardians, at their meeting last week, that he had every reason to fear that small-pox was on the increase in the borough. He had examined a great number of children—taken haphazard—and a large percentage of them appeared to be unvaccinated. He would suggest that house-to-house vaccination should be permitted again, for he was convinced, from his own experience while a public vaccinator, that only by such a system would vaccination be effectually carried out. The general opinion of the Board was that the measures already adopted by them in respect to vaccination were sufficient. The suggestion of the Medical officer was, therefore, not acted upon.

The death is announced of Professor Oppolzer, the celebrated Viennese Physician.

Contagious Diseases Acts.—The contagious diseases inquiry is now rapidly drawing to a close. All the witnesses have been examined on both sides, and the draft report of the chairman is likely to be submitted to the Commissioners next week.

Dr. Struthers, Professor of Anatomy in the University of Aberdeen, has been appointed Chairman of the Scottish Section of the Court of Examiners of the Royal College of Veterinary Surgeons.

Her Majesty's ship *Fisgard*, stationed off Woolwich, will be a companion Hospital-ship to the *Dreadnought*, at Greenwich, and be used as a convalescent Hospital for small-pox patients.

The Bishops of London, St. David's, Ely, Hereford, and St. Asaph have become patrons of the National Union for the Suppression of Intemperance, and the Dean of Manchester a vice-president.

The health of London during the year 1870 was unusually good, and the mortality exceptionally low. That—notwithstanding a succession of formidable epidemics—is the great fact of the Registrar-General's Summary.

An East Kent Militia recruit billeted at Canterbury, on Monday week cut off his right forefinger at the joint, in order to incapacitate himself for further service. He was taken to the Hospital, and will be prosecuted for wilfully maiming himself.

At the meeting, on Wednesday, of the Wakefield Board of Guardians, Dr. Wade tendered his resignation of the office of Medical officer for the townships of Sandal Magna, Cheevet, etc., and of vaccinator for No. 4 district, which was accepted.

At Newcastle, last week, a butcher named Whinney was summoned for selling diseased meat, and set up as a defence that the magistrates had power, under the Act, to appoint only two inspectors of provisions, whereas they had appointed four—three police inspectors, and the market-keeper. The magistrates held the objection to be valid, and dismissed the summons.

The oldest inhabitant of the parish of Hawarden, Sarah Clarke, died at Pentresbin, near Hawarden, on Tuesday last, having attained the extraordinary age of 109 years.—*Chester Chronicle.*

A Bill has been printed, bearing the names of Mr. Forster and the Solicitor-General, which proposes to amend the law respecting the granting of charters to new colleges and universities, by providing that copies of such charters shall be laid before Parliament for a period of not less than thirty days before they are presented to her Majesty for signature.

In the baby-farming case in Somersetshire an inquest has been held, but adjourned for further evidence. Mr. Major, the unregistered Medical Practitioner who took the child to the nurse, refused to give any evidence as to its name or parentage, and was committed to Shepton Mallet Gaol for contempt of court. He has since been liberated, the mother having come forward and confessed that deceased was her child.

M. Bouley reports to the Paris Academy of Sciences that the cattle disease is endemic in all that part of Europe comprised between the Ural and the Carpathian mountains—that it is permanent and constantly perpetuated by contagion. He declares the flesh of animals attacked by the disease is perfectly innocuous, and that there was not the slightest inconvenience in the use of such meat as food. M. Bouley is treating the disease with phenic acid, and M. Dumas, the Perpetual Secretary of the Academy, is using the same agent, with much apparent success.

By the latest accounts, cholera still continues at Bushire. Deaths had reached forty-five a day.

Redhill Sewage Works.—The Corporation of Reigate are spending a large sum of money in erecting works on a sewage farm at Earlswood-common. The farm is supplied with the sewage in the usual way, and when it arrives at the filter-house it undergoes a process in a machine called an extractor, by which the matter becomes a solid mass. There is no smell or nuisance created at the works, for the solid matters are extracted continuously, and before putrefaction commences.

Mr. Ingham, on Tuesday, committed William Cooper, an attendant at the Surrey County Lunatic Asylum, at Wandsworth, for trial, for manslaughter, for causing the death of Robert A. Mulley, aged 65 years, a patient, by scalding him in a bath. Mr. Ward, the Junior Medical Officer of the establishment, said he was called to the deceased, and found him suffering from extensive scalds on the back, left arm, and ankles. He attributed death to bronchitis consequent upon the scalds. Dr. Biggs, the Resident Medical Officer and Superintendent, said he asked the prisoner how he could be guilty of such culpable negligence as turning almost boiling water upon the deceased, and the prisoner replied that he did so thoughtlessly and accidentally.

At an inquest held by Dr. Lankester on Saturday last, at Paddington, on the body of an unvaccinated child, 4 years old, who had died of small-pox, Dr. W. Hardwicke, the Medical Officer of Health for Paddington, stated that there was no house-to-house visitation in the parish; had there been this case would probably have been taken up. The Poor-law Board, Dr. Hardwicke said, did not want Medical men to be small-pox inspectors, but preferred clerks who were perfectly ignorant of the disease. Dr. Arthur Prince said that when he was sent for to see the deceased child, it had been ill for a week. The jury found that "the deceased, being unvaccinated, died from the effects of small-pox."

Preying on the Vitals of one's Country.—In a letter to the *Times* of February 15, signed A. Anson, it is proved that a cornet of cavalry preys upon the vitals of his country to the tune of some £18 a year—the said cornet being probably, let us say, from 18 to 20 or 22 years of age. His pay is 8s. a day. Now, an Assistant-Surgeon of cavalry under five years' service receives 10s. a day, or £36 10s. a year more than the cornet, and is probably from 24 to 29 years of age, having brought his goods in the shape of his Profession ready-made to the Government market, and, receiving £36 10s. a year more than the cornet, actually preys on the vitals of his country to the extravagant tune of about £54 a year. If graciously allowed to keep only one horse and one servant, instead of two of each, his regimental expenses would be about £21 less; so he might even, under favourable circumstances, be able to prey upon the vitals of his country to the extent of about £75 a year. Assistant-Surgeons of cavalry ought to blush to think of this. The exact sum of pay the cornet was found to get was £18 5s. 5d., to supply himself with food, etc.—horses, uniform, servants, etc., reducing his yearly pay to that amount.

Inverurie.—Water-supply and New Slaughter-houses.—At a meeting of the Commissioners of Police last week, Mr. Campbell's (Inspecting Officer) report, with reference to the carrying out of the Public Health Act in that burgh, stated:—"Inverurie is a pretty, well-built, and rising little town, and its general aspect led me to anticipate a satisfactory sanitary condition. That is, however, far from being the case. The water-supply is from wells. The soil is sandy, and cesspools are frequent. The slaughtering trade of Inverurie is very important. During the season, about 250 cattle, besides sheep and pigs, are killed weekly. The trade is conducted in private slaughter-houses. A public slaughter-house ought to be provided outside the town, and all these private establishments closed. The drainage of the town is very imperfect. A proper system of sewerage is contemplated by the Police Commissioners, plans for which have already been prepared. A committee was appointed to examine as to whether a supply of water could be got, and further, to inquire whether a proper site could be got for a public slaughter-house."

Australian Medical Matters.—*Phthisis and Deaths in the Melbourne Hospital.* — During the four weeks ending January 2 last, thirty-seven deaths occurred in the Melbourne Hospital, nine of which were caused by phthisis. Of those who died of consumption, one had arrived here during 1870, the others had resided two, one, ten, nine, one, two, twelve, and five years respectively in Victoria, their average length of residence in this colony being nearly five years each. During the four weeks ending January 29 last, twenty-five deaths occurred in the Melbourne Hospital, seven (or 28 per cent.) of which were occasioned by phthisis. Six of the persons who died of consumption had resided in Victoria seventeen, sixteen, one, five, eighteen, and eleven years respectively, or an average of upwards of eleven years each. The length of residence in the colony of one is not stated.——*The Clubs and the Profession.*—That benefit clubs are always exacting, and often unjust, towards their unfortunate Medical officers, is nothing new. From the report of the case of Hamilton *v.* Kurnick and others, heard in the Ballarat County Court on February 8, it would appear that something very like repudiation, if not dishonesty, must be now laid to the charge of these societies. The *Ballarat Courier* states, in its report of this case, that the suit was for the recovery of a sum due, for Medical attendance, by the "Duke of Edinburgh" Lodge, A.O.F. The plaintiff was Medical officer of the lodge, but not an initiated member. The judge held that, although the rules contained a clause preventing the Medical man from suing, that formed no bar to his common-law right. Neglect of duty was also pleaded for the defence, but the lodge had not discharged their Medical officer, and his Honour ruled this omission nullified the value of the plea.——*Death from Snake-bite. — Failure of Ammoniacal Injection.* — Another well authenticated case (says the *Australian Medical Gazette* of February last), showing the unreliability of the treatment of snake-bite by the injection of liquor ammoniæ into the veins, has just occurred. We are indebted for the particulars of this case to the *Maryborough Advertiser* of January 15. From the evidence given at the inquest held at the Amherst Hospital on the 14th, it appears that a man named James Marshall was bitten on the middle finger about 9 a.m. on Saturday, the 11th. A ligature was placed on the finger and some ammonia applied to the bitten part. The deceased was taken to the Amherst Hospital, a distance of twelve miles. The injection of liquor ammoniæ into the veins was performed four times. Marshall died at 3 a.m. on the 13th, about thirty-eight hours after the first time of injecting liquor ammoniæ into the veins. The ammoniacal solution was that recommended by Professor Halford. No less than three cases of snake-bite are reported in a late number of the *Mortlake Dispatch*, all of which were followed by alarming symptoms. The sufferers, who were in each case treated by the administration of brandy and ammonia, did well.

An outbreak of cattle disease is reported from Golaghat, Assam. On December 26 last, a herd of buffaloes was brought up from Bengal, and passed through the Namlighur Tea Factory. About two days afterwards, a disease broke out among the pigs belonging to the coolies, every one of which—some forty in number—died. It next spread among the factory cattle, and continued to rage up to January 28, by which date 137 head of cattle had died. Since then, no deaths have occurred.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Canadian Diploma.—The question shall be answered next week.

Dr. Cooper (Shoay-gyen, British Burmah).—Your letter, with enclosure, has come safely to hand.

Servants of All-work.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have just cut out the enclosed advertisement from the *Telegraph* of this day (April 20). What can it mean?

I am, &c., G. V.

WANTED, a Youth, as DISPENSER, in a private surgery, and who can also attend a simple case of midwifery. Apply at 69, Lambeth-walk, before twelve or after six.

⁂ It means what it says—more's the pity. There is no law against it. Next year (if things go on at their present rate) the advertisement will be headed—"Wanted, a handy girl, who can cook, wait at table, clean the house, and attend a simple case," etc.

"Misery makes Men Acquainted with Strange Bedfellows."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As you thought proper to make the recent correspondence between us and the Editor of the *British Medical Journal* the text for some partisan remarks instead of inserting it in your journal, will you permit us to inform your readers that a copy of it was published in the *Lancet* of Saturday last. They will, doubtless, draw their own conclusions from a perusal of it.

We are, &c.,
James Hardie, } Hon. Secs.
C. H. Braddon, }

Manchester Medico-Ethical Association, April 24.

A. R.—The case referred to will be found in Liston's "Operative Surgery."

T. S. is thanked for his communication respecting the late Mr. H. L. Thomas. The information shall be used in a future article.

Lector.—We were aware that the late Dr. Merriman was the author of an interesting paper in the *Gentleman's Magazine* on "Medical Publishers and Booksellers." It will be referred to hereafter.

A Daily Governess has a simple malady which any well-informed Medical man could cure. Gentle aperients and local astringents may relieve in the meantime. The bowels should never be allowed to become constipated, and should be kept regular by a little rhubarb; and a lotion of forty grains of sulphate of zinc to a pint of water be used after defæcation. For washing, use Calvert's Medical Carbolic Soap in small quantity.

A Corrigendum.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—At page 8 (four lines from the bottom) of "A New Method of treating Wounds," instead of the words "of revaccination," there should be "*after* revaccination." As it is too late to paste in another "erratum," I hope you will make this public, and greatly oblige,

45, Pall-mall, April 24. Yours, &c., C. MacDowall.

Local Use of Pepsine.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I would feel much obliged to any of your readers by being informed the best way of making a clear solution of pepsine for hypodermic use. My friend Dr. H. S. Purdon, at his Hospital for Skin Diseases in this town, is using a solution of pepsine with hydrochloric acid, for injecting into strumous glands, tumours, etc., so as to "digest" them artificially; but his solution seems too thick, and contains a large proportion of pepsine. If the action of this substance is merely catalytic (as stated by Kirke), probably a smaller quantity would be sufficient. Hoping that some of the readers of your valuable journal will advise me on this subject,

I am, &c.,

21, Donegall-place, Belfast. Thomas Ball, L.R.C.P. Ed.

Veterinary Learning in America.—The following extract from an American contemporary will, if it do not instruct, at least amuse our readers:—

"To the Editor of the *Medical Gazette*,—The following incident happened in the Court-room here the other day, and may be of some interest to such of your readers as are students of comparative anatomy:—The case in point was this: Mr. A—— sold a colt, as a gelding, to Mr. B——, which colt had had but one testicle removed, the other remaining within the cavity of the abdomen. The veterinary surgeon who had castrated the animal was sworn, and, on his cross-examination, stated the following interesting features in the anatomy of the horse:—Attorney: What are, and where are varicose veins found? Witness: I don't know, but I can tell where the bellicose veins are. Atty.: Where are they? Witness: Close to the belly. Atty.: What is the scrotum? Witness: I am not quite certain, but I think that it is the film that covers the teeth during infancy. Atty.: Have you ever made any examinations in the abdominal regions? Witness: No; all of my examinations have been made in BroomeCounty. Atty.: That is sufficient.—Yours, &c., Dan. S. Burr. Binghamton, March 15, 1871." —*New York Medical Gazette.*

A Reader.—Pope dedicates the prologue to his "Satires" to Dr. Arbuthnot, with whom he was on terms of intimate friendship. He expresses his gratitude to that distinguished Physician in the following couplet:—

> "Friend to my life, which didst not thou prolong,
> The world had wanted many an idle song."

Pope had a great reverence for members of our Profession, and in one of his moral essays he says:—

> "I'll do what Mead and Cheselden advise,
> To keep these limbs and to preserve these eyes."

Medical Etiquette.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your strictures upon the following Medico-ethical question will much oblige:—

A is in attendance upon a patient until B is called in; after two consultations A continues in daily attendance alone. After a while B is again called in, but *not in consultation*, an arrangement having been made between him and the patient that he should take the entire management of the case, and this without either having first communicated with A. A is dismissed.—What is the line of duty for A to observe towards B in future? Dr. Stokes says—"Have no Professional quarrel, no matter what the offence may be." "If a brother injures you, meet him as if nothing had happened." What is your opinion upon this point—Whether the unprofessional conduct of B can be tolerated without compromising the honour and dignity of the Profession?

⁂ There are some cases in which no law is violated, but in which an action certainly lawful, possibly just and reasonable, may be done in a way to offend the feelings of one's neighbour, and impair the good understanding and confidence that ought to prevail amongst brother Practitioners. In this case no law was broken. The patient has a natural right to consult whomsoever he pleases, and every Surgeon has a right to attend any patient who may come to him. But were these undoubted rights exercised in the way they should be by a man who does to others as he would be done by? This is less certain. A man who has been called into consultation is, as it were, for the time, in a position of superiority, and of friendship to the other Practitioner; and certainly the common courtesies of life seem to demand that the consultant should not supersede the ordinary Practitioner without full explanation given in the most open way possible. But we advise A to show no annoyance. It would be useless and undignified. He might ask B for an explanation, but that were better avoided.

The Control Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—With reference to your article on "Volunteer and Army Medical Services," I would bring to your notice Paragraph 294 of the Royal Warrant, 1870. There, under the head "Control Department, Administrative Officers," you will read—"Retirement shall be compulsory at the age of 60." Contrast this with paragraph 347 of the same warrant—"Medical Officers of the rank of Surgeon-Major, Surgeon, or Assistant-Surgeon shall be placed on the retired list at the age of 55, and all Inspectors-General and Deputy-Inspectors-General at the age of 65."

From this you can gather how little real interest is taken in the acceleration of promotion or maintenance of thorough efficiency in the latter department.

Any military man can tell you in which branch of the service the wear and tear of mind and body is greater, and in which an officer aged 60 is more likely to be mentally and physically efficient.

I am, &c., Military Surgeon.

P.S.—In your issue of the 15th I saw with pleasure the term "Brigade Surgeon" applied to Dr. Burrows. When will the misnomer "Surgeon-Major" be changed for this or some similar title?

A Young Obstetrician.—If a registered Medical Practitioner is engaged to attend a woman in confinement, and she subsequently engages another to attend her, and he does so, the contract in the first instance is not vitiated, and the fee agreed upon can be recovered in the county court. We, however, never advise that such a proceeding should be taken. The Practitioner who sues in such a case is almost certain to be injured, and the dignity of the Profession lowered. It was a saying of one of the most remarkable men belonging to us that "a Physician or Surgeon should be the first to think of the fee, but the last to speak of it." In fact, in all cases possible, fees should be regarded as *honoraria.*

Public Baths and Washhouses.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to suggest that it would be advantageous to the country generally if the Medical Profession urged on the people the desirability of establishing free baths and washhouses for the working-classes' use, and also a better description of such accommodation for other classes of the public who would pay therefor. I beg to suggest that every city, town, and large village should thus be accommodated, and that the larger cities and towns should have an efficient number of the establishments in suitable localities of their jurisdiction. The necessary funds should, I think, be raised by the parochial or corporate governments, who could borrow money to find the capital for erecting such establishments, and probably the funds derived from the classes who pay for the accommodation would pay the necessary expenses of working and interest on the debt, but if requisite by shortcomings of such receipts, the necessary working expenses could be obtained from the public rates, because the accommodation is of public utility for health and comfort. Hereby much freedom from epidemic diseases, which are usual where cleanliness is not customary, would be obtained. Your favourable notice will oblige. I am, &c. 667.

The Worcester Board of Guardians and Dr. Woodward.—At the meeting of the Board on the 14th inst., the case was again brought forward in which it was alleged Dr. Woodward had neglected to attend a pauper patient named Hall. This was investigated by the Board on the 16th ult., when a resolution was carried—"That the whole of the facts of the case should be sent to the Poor-law Board, for the purpose of obtaining their opinion thereon." Dr. Woodward at that time defended himself against the charge, on the ground that the Medical order was informal, it not being made out by either of the relieving officers, and his instructions from the Poor-law Board were that he was not expected to attend to orders that were not formal. Mr. Birbeck now moved that the resolution carried on March 16 should be rescinded. He said, as it appeared that the Medical order was a little informal, the Board above would, if the case were sent up to them, decline to take any notice of it, on account of the little informality; and probably the Guardians would get a snubbing for having unconsciously permitted a pauper to sign the Medical order. Some discussion followed, but the motion was lost.

The Abuse of Vaccination.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am of opinion, from recent observations, that the prejudices against vaccination and revaccination might be materially overcome if greater care were taken to vaccinate with pure and recent lymph. At the present time, when there is so much demand for lymph, it not unfrequently happens that one poor child is made to yield sufficient lymph for vaccinating a large number of persons, or for charging a great many points, and the result is obvious: the vesicles are compressed by the lancet (in arm-to-arm vaccination) on the ivory points, in order to yield as much lymph as possible. But is it pure and healthy lymph which exudes by such pressure? Certainly not; it is a fluid of an ichorous character unfit for vaccination, and when persons are vaccinated from such fluid we may expect to find inflammation extending down the arm, followed by abscesses, etc. On the other hand, when there is not so much demand for vaccination, the lymph preserved on points for weeks is liable to become oxidised by exposure to the air and light. In towns where public vaccinators exist every facility should be afforded by them for furnishing the Profession with a ready supply of good lymph, or the opportunity of collecting it from infants who have been vaccinated the previous week. During the present epidemic the institutions for vaccination should be open daily in every large town, instead of twice a week. The system of such slow vaccination and revaccination tends only to increase the local rates without arresting the spread of small-pox. But who, I would ask, is responsible?

In order to stamp out small-pox when the disease is rapidly increasing, it becomes absolutely necessary to adopt house-to-house visitations in order to attack the disease in the early stage, and, at the same time, to carry out house-to-house revaccination as far as possible, especially in those houses where cases of small-pox occur.

In conclusion, I need scarcely add that isolation and disinfection are indispensable, and every large town should erect an Hospital for the reception of infectious and epidemic diseases. I am, &c.,

Southampton, April 17. Henry Osborn, M.R.C.P. Lond.

N.B.—The lymph which is taken up on the point of a lancet or on an ivory point should not be allowed to touch the vesicle if it can be avoided.

COMMUNICATIONS have been received from—

Mr. Morgan; Dr. Newcombe; G. V.; Mr. J. Garrett; Dr. Fayrer; Dr. Robert Stewart; Mr. T. Mason; Mr. J. G. Jackson; Mr. H. Raynes; Professor Brazier; Dr. F. R. Hogg; Military Surgeon; Dr. Harris; Dr. Geisse; Mr. G. Gaskoin; Dr. Strono; Mr. H. C. Lawrence; Dr. Thorowoood; Mr. T. R. Bell; Dr. Meadows; Dr. Duckworth; Mr. Davio Hartley; Mr. W. W. Reeves; Mr. C. H. Braddon; Dr. J. Hardie; Mr. R. Walker; Dr. Wolfe; Dr. A. E. Sansom; Mr. Jabez Hogg; Dr. Phillips; Mr. J. Chatto; Dr. J. Huohlings-Jackson; Dr. Burdon-Sanderson; Dr. Bell; Mr. Campbell; Dr. W. H. Holmes; X. X.

BOOKS RECEIVED—

Crookes's Select Methods in Analysis—On the Influence of the Differential Duties upon the progress of Modern Improvements in Sugar Manufactory. By F. Kohn, C.F.—The Registrar-General of Melbourne's Return of the Deaths from Phthisis in the Colony of Victoria—Report of the Leamington Provident Dispensary—Sir William Fergusson's Hunterian Oration for 1871—Digest of the Return of Deaths from Phthisis in Melbourne and Suburbs—Dr. W. A. Hammond on the Physics and Physiology of Spiritualism—Dr. Neftel on Galvano-Therapeutics—Billroth's General Surgical Pathology and Therapeutics, translated by Dr. C. E. Hackley—Report of the United Lunatic Asylum for the County and Borough of Nottingham.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Food Journal, April—Nature—Australian Medical Gazette, January and February—Pharmaceutical Journal—Worcestershire Advertiser—The Kansas City Medical Journal, No. 1—Medical Press and Circular—Philadelphia Medical Times—The Cork Daily Herald—The Cork Examiner.

APPOINTMENTS FOR THE WEEK.

April 29. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

May 1. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Medical Society of London (Hanover-square Rooms), 8 p.m. Dr. William Cholmeley, M.D., F.R.C.P., will deliver the Annual Oration; after which a *Conversazione* will be held.

Royal Institution, 2 p.m. Annual Meeting.

2. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. The following Specimens will be exhibited:—Dr. Murchison and Dr. Cayley, "Post-mortem Appearances in a Case of Paralysis Agitans." Dr. Dickinson, "On the Composition of the Renal Calculi in the Museums of London." Mr. Gay, "Subclavian Aneurism; Myxoma." Dr. J. R. Bennett, "Cancerous Disease of the Lung." Dr. Douglas Powell, "Cases of Fatal Hæmoptysis." Mr. H. Arnott, "Malignant Osteoid Tumour of the Fibula."

Royal Institution, 3 p.m. William Pengelly, F.R.S., F.G.S., "On the Geology of Devonshire, especially of the New Red Sandstone System."

3. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Obstetrical Society, 8 p.m. Dr. Wiltshire, "On Tetanus after Abortion." Dr. Meadows, "On Hæmatocele." Dr. Playfair, "On a Case of Sudden Death after Delivery."

Royal Microscopical Society, 8 p.m. Dr. Maddox, "On the Structure of Lepidopterous Scales as bearing on the Structure of *Lepidocyrtus curvicollis*." B. T. Lowne, M.R.C.S., etc., "On the Foot of *Dityscus marginalis*."

Society of Arts, 8 p.m. Meeting.

4. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society (Special Council Meeting, 7½ p.m.), 8 p.m. Mr. Berkeley Hill, "On the Treatment of Surgical Inflammation by Counter-irritation."

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

5. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Medical Society of London, 8 p.m. Meeting of Council.

Royal Institution, 9 p.m. W. R. S. Ralston, M.A. Trin. Coll., Camb., On Russian Folk-Lore."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 22, 1870.

BIRTHS.

Births of Boys, 1065; Girls, 1014; Total, 2079.
Average of 10 corresponding weeks, 1860-69, 2134·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	790	788	1578
Average of the ten years 1860-69 . . .	721·0	679·1	1400·1
Average corrected to increased population .	...	...	1540
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	20	2	3	2	10	...	2	1	5
North ...	618210	112	...	4	1	14	6	3	...	5
Central ...	383321	12	2	2	1	1	...	3	...	...
East	571158	36	5	2	...	7	2	4	2	4
South	773175	96	4	16	...	12	3	3	4	1
Total	2803989	276	13	27	4	44	11	15	7	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·333 in.
Mean temperature	50·0°
Highest point of thermometer	62·8°
Lowest point of thermometer	41·3°
Mean dew-point temperature	46·8°
General direction of wind	S.W.
Whole amount of rain in the week	1·75 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 22, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending April 22.	Deaths Registered during the week ending April 22.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2079	1578	62·8	41·3	50·0	10·00	1·75	4·44
Portsmouth ...	125464	13·2	73	44	62·0	42·0	50·3	10·17	2·06	5·23
Norwich	81787	10·9	57	34	59·5	41·0	46·9	8·28	1·47	3·73
Bristol	173364	37·0	121	61	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	45	25	62·5	41·7	48·3	9·05	0·76	1·93
Birmingham ...	378574	48·3	‡238	‡145	60·3	40·8	48·5	9·16	2·26	5·74
Leicester	101367	31·7	58	29	65·2	39·7	49·0	9·44	1·54	3·91
Nottingham ...	90480	45·3	41	40	63·0	39·3	49·2	9·55	1·61	4·09
Liverpool	526225	103·0	353	356	60·2	41·2	48·5	9·16	0·89	2·26
Manchester ...	379140	84·5	247	185	61·0	41·0	48·8	9·33	1·48	3·76
Salford	123851	23·9	116	69	59·4	39·0	47·5	8·61	1·63	4·14
Bradford	148030	22·5	81	76	59·8	38·6	46·6	8·11	1·48	3·76
Leeds	266108	12·3	137	137	59·0	39·0	45·7	7·61	1·79	4·55
Sheffield	255247	11·2	154	115	62·0	39·0	47·1	8·39	1·74	4·42
Hull	135195	38·0	72	47	62·0	36·0	44·4	6·89	1·55	3·94
Sunderland ...	103037	31·2	57	39	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	54	83	49·0	38·0	41·0	5·00	0·87	2·21
Edinburgh	179944	40·6	141	96	51·0	31·0	40·4	4·66	1·80	4·57
Glasgow	477627	94·3	367	350	58·6	34·8	43·7	6·50	1·36	3·45
Dublin (City, etc.†)	322321	33·1	144	185	62·4	39·5	50·6	10·33	1·89	4·80
Total of 20 Towns in United Kingd'm	7336961	34·4	4635	3694	65·2	31·0	47·0	8·33	1·55	3·94

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·33 in. The highest was 29·64 in. on Saturday morning, and the lowest was 29·01 in. on Wednesday afternoon.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on the 3rd inst., will probably be available before the middle of the year, and will then be substituted for these estimates.

† Inclusive of some suburbs.

‡ These totals include an average for one sub-district, the return not having come to hand.

ORIGINAL LECTURES.

LECTURES DELIVERED IN THE PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

LECTURE VI. (*Continued*).—ON THE CAPILLARY CIRCULATION.

To complete our description of the systemic circulation we must proceed to give an account of the phenomena which present themselves in the capillaries and commencing veins. For this purpose I shall, during the remainder of this lecture, draw your attention to various appliances used for demonstrating the capillary circulation under the microscope, it being from this source that all our direct knowledge of the subject is obtained. The circulation has been studied in fish, batrachian reptiles, and mammalia.

OBSERVATION XXII.—CAPILLARY CIRCULATION IN FISH AND REPTILES.

In fish, the investigation has been much facilitated by the ingenuity of Dr. Caton, of Liverpool, who was good enough to give me the admirable contrivance I now show you. It consists of an oblong box of guttapercha open at one end, closed at the other, and just large enough to hold about two-thirds of the body of a stickleback or minnow very loosely. You observe that this box forms part of a plate of guttapercha, which is fixed into the stage of the microscope in such a position that the tail of the fish contained in it covers a perforation in the plate prepared for its reception. The tail is held securely in its position by a ligature, and the caudal fin, which rests on a square of glass, is further secured by a couple of fine springs. The box itself, which incloses the head and gills of the fish, contains water, which is constantly renewed by means of the two tubes, of which the upper, guarded by a screw-tap, communicates with a vessel at a higher level; the lower conveys the water away as fast as it is supplied. The excellency of this method lies in the fact that the animal can be kept under observation, without the use of any narcotising drug, for a long time in a perfectly natural condition.

FIG. 30.

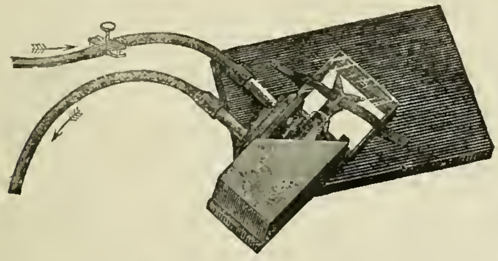
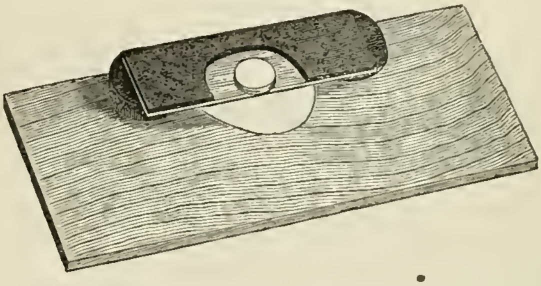


FIG. 30.—Dr. Caton's fish-trough. It is shown as looked at from the same level. It must be used with the microscope-stage inclined at an angle of about 40°.

The tadpole is of value both to the physiologist and pathologist as a subject of research. The readiest method is to place the animal in a moderately strong solution of curare, taking care to remove it before it is completely paralysed—the moment, in short, that its motions become sluggish. It is also possible to secure it, without the aid of curare, in a holder of construction similar to that of the instrument I have just described—a method which has this great advantage, that the animal is in a more normal condition; for even when curare is given with the greatest care the action of the heart is weakened by it. At the present season tadpoles are not to be had, and, moreover, the adult frog affords much greater advantages, especially when it is desired to observe not merely the circulation as it is, but to witness the modifications which the phenomena undergo under the influence of conditions acting on the bloodvessels through the nervous system.

There are three transparent parts of the frog—the mesentery, the web, and the tongue—each of which has its special advantages for the purposes of study. For a first view of the relation between arteries, capillaries, veins, and lymphatics, the mesentery is superior to either of the other two. The frog must be placed under the influence of curare, the dose of which, for the ordinary specimens of *rana temporaria*, is about $\frac{1}{2000}$th of a grain. The solution of curare is prepared by weighing out five milligrammes of the substance, and rubbing it up in a glass mortar with a little glycerine. The proper quantity of water—that is, ten cubic centimètres—is then added, and a straw-coloured, nearly limpid liquid is obtained, a single drop of which is a sufficient dose. It is injected under the skin of the back with an ordinary subcutaneous syringe, and answers best when the effect does not manifest itself for an hour or two. The most convenient apparatus for the purpose of exposing the mesentery I now show you. It consists of a thin board four inches long and two and a half broad, to one side of which an ordinary three-inch object-glass is fixed by two cork supports, one at either end, each of which is about a quarter of an inch thick. To one side of the object-glass, a glass disk, four-fifths of an inch in width, is cemented with Canada balsam in such a position that it projects slightly beyond the edge of the glass plate near the middle. Around the edge of the disk there is an uncovered space about an eighth of an inch in width for the reception of the coil of intestine. Beyond this annular space the object-glass is covered with cork, to which the intestine may be secured with fine needle-ends. A male frog should always be selected for the purpose, as otherwise the ovaries interfere much with manipulation. The animal is placed on the board in such a position that the right side of its belly rests against the free edge of the disk, and it may be conveniently retained *in situ* by spring clips. A vertical incision is then made in the abdominal wall, about half an inch in length, extending from the lower edge of the liver downwards, and as much of the small intestine drawn gently out of the visceral cavity as is necessary, in order that the mesentery may be evenly spread on the glass disk. With care this may be effected without the slightest derangement of the circulation. It is always desirable to commence the examination with a low power. It is then seen that the arteries are smaller than the veins, the latter exceeding the former in diameter by about a sixth; that the arterial stream is quicker than the venous; that it is accelerated appreciably at each beat of the heart; and that in every artery a space can be distinguished within the outline of the vessel, which is entirely free from corpuscles. The arterial stream, indeed, is so quick that the forms of the corpuscles cannot be discerned, but in the veins both coloured corpuscles and leucocytes can be distinguished; and it is soon noticeable that while the former are confined to the axial current the latter show a tendency to loiter along the inner surface of the vessel, like round pebbles in a shallow but rapid stream. The observation may be continued without material change for many hours, but if any artery is measured from time to time micrometrically, it will be found that after a while it becomes wider. On this dilatation of the arteries follows a corresponding though less marked enlargement of the veins, and, if the attention of the observer is fixed upon these last, it is seen that the circulation, which was before so active, undergoes a marked and almost sudden slowing. This slowing indicates that the membrane, in consequence of its exposure to the air, is becoming inflamed; simultaneously with it, the leucocytes, instead of loitering here and there at the edge of the axial current, crowd in numbers against the venous walls. In this way the vessel becomes lined with a continuous pavement of these bodies, which remain almost motionless, notwithstanding that the axial current still sweeps by them, though with abated velocity. If at this moment the attention is directed to the outer contour of the vessel, it is seen that minute, colourless, button-shaped elevations spring from it,

FIG. 31.



each of which first assumes the form of a hemispherical projection, and is eventually converted into a pear-shaped body, attached by a stalk to the outer surface of the vein. This body, which has thus made its way through the vascular membrane, is, I need scarcely say, an amœboid leucocyte. It soon shows itself to be so by throwing out delicate prongs of transparent protoplasm from its surface, especially in the direction from which it has come. We can have no doubt that the process we have been witnessing is the same as that we studied before, in the coagulation of a drop of batrachian blood in the moist chamber. (See Lecture I.)

That extreme simplicity of structure which renders the mesentery so pre-eminently suitable for the investigation of those phenomena which relate to the vessels themselves, is a disadvantage when it is desired to inquire into the relation between the living tissues and the circulation. It is for this reason that the tongue is of more value as a subject of research than the mesentery to the pathologist; for there is no other organ in which living vascular connective tissue can be placed under the microscope under such natural conditions. For the examination of the tongue, the curarised frog is placed on its back, the organ being extended by a ligature attached to each of its two tips, over a glass disk surrounded by cork. The purpose of this arrangement is that the ligatures may be readily detached, and the tongue replaced in the mouth at the end of each period of observation. When thus arranged, the tongue lies on the glass disk, with its papillary surface upwards. As, however, little can be seen through the mucous membrane, it is desirable to strip it off over a small extent of surface, so as to expose the muscular tissue. It is then observed that in the meshes between the capillaries of the intermuscular spaces there are bodies of the most varied form—the so-called connective-tissue corpuscles. You have already studied these bodies in the histological part of the course. We then saw how rapidly and how completely they change their appearance when removed from the liquids in which they are naturally immersed, or subjected to the action of water or other reagents destructive to their life. You have now the opportunity of studying their vital characters while still receiving their nourishment from the circulating blood. The great value of the experiment lies in this—that it affords us an opportunity of distinguishing between the characters of the connective-tissue corpuscles (fixed corpuscles of the connective tissue, as they are now commonly called) and leucocytes ("wandering corpuscles"). To avail ourselves of it, we must prolong our examination until the tissue begins to pass into the state of inflammation. No sooner do the veins begin to dilate and the venous circulation to slacken than the leucocytes find their way out of the circulating blood into the intervascular spaces, differing from the masses of protoplasm which belong to the connective tissue, only in their changes of form, and locomotion.

We shall find in next lecture that, for investigations relating to the innervation of the bloodvessels, the web is superior both to the tongue and the mesentery, so that each of the three transparent parts has its special advantages. The arteries and veins of the web can be measured in animals which are not too much pigmented as accurately as those of the mesentery. The methods to be employed will be described in next lecture.

Observation XXIII.—Capillary Circulation in Mammalia.

The study of the capillary circulation of mammalia under the microscope is attended with great difficulty—in the first place, because (if we except the wing of the bat) there is no external part sufficiently transparent for observation under high power; and, secondly, that if internal parts are used, the injurious effects of exposure are much greater than those which occur in batrachians. To overcome these difficulties, it is necessary to have recourse to more complicated appliances and apparatus.

The mesenteries of small rodents have been repeatedly used for the demonstration of the mammalian capillary circulation. These, however, are not to be compared, as subjects of observation, with the omentum of the guineapig. This structure forms a delicate membranous expansion of from twelve to fifteen cubic centimètres in extent, which is attached by its upper margin to the greater curvature of the stomach. It differs from the organ of the same name in man in consisting, for the most part, of only two layers of peritoneum, in being much more delicate in its structure, and containing very little fat. Hence, from the simplicity of its anatomical relations, and particularly from its being attached by one side only to the stomach, from its perfect transparency, from its abundant vascularity, and, lastly, from its containing not only vessels but living cells, it is obvious that this membrane offers a good field for research.

The observations hitherto made on the mammalian mesentery have been without practical result, the reason being that so vulnerable a tissue as that of the peritoneum cannot be exposed, even for a few minutes, without injury; so that, although the greatest care is taken in demonstration, only a momentary glimpse can be obtained. To obviate this difficulty, the arrangements for placing the membrane under the microscope must be of such a nature that the structure is bathed during the whole period of observation in a liquid at the temperature of the body. I need not tell you, after what you have learnt of the destructive influence of water on the living tissues, that that liquid would not answer the purpose. Serum would probably be best, if it were always at hand; but, practically, solution of common salt of the strength ordinarily used ($\frac{3}{4}$ per cent.) answers the purpose perfectly. The temperature is maintained by keeping the glass trough in which the membrane is spread out over the warm stage, with the construction of which you are already familiar (see Fig. 3).

The mode of procedure is as follows:—The guineapig is first placed under the influence of chloral by injecting that substance in solution under the skin, three grains being required for an animal about 1 lb. in weight. It is then laid on a support, the upper surface of which is on the same horizontal plane as that of the microscope-stage. An incision not more than an inch in length is next made, extending outwards from the edge of the left rectus muscle a little below the end of the ensiform cartilage. The muscles having been divided, and the peritoneum cautiously opened for about half an inch, or even less, the free edge of the omentum is carefully drawn out. It must then be floated in the warm bath prepared for it, and is ready for examination. It is, however, found very advantageous to cover those parts of it which do not lie under the microscope with sheets of blotting-paper, for by this means the risk of exposure is diminished, and the undulating movements of the water are prevented; so that the object is rendered much steadier than it would otherwise be. So long as low powers are employed, this arrangement is sufficient; but if it is desired to use objectives of short focal distance, it is necessary to warm the objective by allowing a stream of water from the same source as that which supplies the stage to pass round it.

The objects which present themselves to the observer are manifold. Veins and arteries may be studied of various diameters, some of which are free, while others are surrounded by sheaths of tissue in which there are labyrinths of capillaries of surpassing beauty. Several new observations have already been made by this method. One of the most important, physiologically, is the fact that the maintenance of the capillary circulation is wonderfully dependent on temperature; and in particular, that any rise of temperature above the normal is in the highest degree injurious, partly, perhaps, from its direct influence on the blood corpuscles, but mainly because it produces changes similar to those we have already noticed as occurring in batrachians after long exposure—viz., arrest of the capillary blood-stream and escape of the liquor sanguinis and corpuscles into the surrounding tissue.

Chloral in Traumatic Tetanus.—M. Bensasson relates a case of traumatic tetanus occurring in a lad 13 years of age, to whom he was called the third day after the appearance of the symptoms. He found him in a state of almost complete opisthotonos, and determined to try the effects of chloral, and by about the thirty-fifth day the patient had completely recovered. The entire quantity of chloral administered amounted to 180 grammes, commencing with 4 grammes in the twenty-four hours, which almost immediately procured him the sleep he had been so long utterly deprived of. The dose was gradually increased to 8 and 10 grammes in the twenty-four hours.—*Presse Méd. Belge*, March 26.

Accident Statistics.—An Englishman's risk of dying (says the *Engineer*) by strangulation is six times as great as of being killed on a railway, whether by his own carelessness or by an accident. If his own carelessness be excluded from the estimate, his risk of death by hanging is 130 times as great. Ninety-nine times as many people die of cancer in England as are killed on railways. Excluding, as before, the element of carelessness, 2165 persons will die of cancer to one killed on a railway. In England, during five years, 333 accidents occurred—200 from collision, 77 from getting off the line, 36 from damage to machinery, and 20 from other causes. For fourteen years, from 1855 to 1869, one person was killed to 7,161,301 ransported.

LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

A THEORY OF A NERVOUS ATMOSPHERE.(a)

Lecture I.

Gentlemen,—The study of the functions of the nervous systems of animals has, since the days of the illustrious Willis, been the most fascinating of physiological pursuits, and, at the same time, the most deceptive. Willis, if I read him correctly, grasped, in his primitive and wonderful researches, more of the truth and more of the difficulty of research than any other single observer who has followed him; and although, in the two hundred years that have elapsed since his time, thousands of experimental inquiries have been instituted, and, I had almost said, thousands of hypotheses have been framed and given forth, work remains before us of the present day which, except by the aid of some grand generalisation founded on facts of observation, can in no way be expected to be accomplished in our generation. For this important truth requires to be laid bare whenever we touch on the subject of nervous action: that every hour not only brings something new to be learned, but something old, also, to be questioned or relearned which we have thought wholly accepted or discarded. Take, for example, the one curious question respecting the motive character of the nervous mechanism—the current or motion that passes, or is assumed to pass, along the fibres of nerve from the centres towards the periphery, and from the periphery towards the centres. What is this? Is it an imponderable agency, or is it a refined fluid with which the nerves are charged, a fluid susceptible of motion by any and every force, by heat, by mere mechanical impulse, by electrical excitation, by light; or is it derived from one force which the nerve simply and purely conducts, as the metallic wire conducts the electrical charge? On these points, it seems to me, we stand in much the same position as the older physiologists stood when Haller endeavoured to reason upon the rate at which an impression travels from the brain to the muscles, and supplied the sentence—"Ita invenio, summam tamen celeritatem esse muscularis liquidi, ut non minus quam 9000 pedes ni minuto primo percurrat."(b) I mean that we wait to know how the motion is transmitted, and what part the nerves play; whether they lay up force, produce it, convey it, or perform all these duties.

Munro on a Nervous Fluid.

The original idea respecting nervous function is well described by the anatomist Alexander Munro. Most authors, he tells us, up to the time when he wrote (1783), supposed that the nerves are tubes or ducts conveying a fluid secreted in the brain, the cerebellum, and spinal marrow. But, he adds, of late years, several ingenious physiologists have contended that a secreted fluid would be too inert for serving the offices performed by the nerves, and therefore have supposed that the nerves conduct a fluid the same as, or similar to, the electrical fluid. These philosophers reason, he continues, that two arguments stand on their side—one, the rapidity of motion through the nerves; and the other, that some animals, as the torpedo and the gymnotus electricus, have the power of giving an electrical shock, and that, on dissecting these animals, a piece of machinery proper to them is discovered, in which large and numerous nerves terminate. Thence he (Munro) undertakes to refute these arguments. Of the first, the reasoning on the question of velocity, he urges that, if the nerves are constantly filled or charged with fluid (which, from our constantly perceiving injury done to even the most remote part, we have reason, he thinks, to suppose must be the case), an impulse given to that fluid at the brain may be suddenly communicated to the most distant organ, although the velocity of the fluid be very small. Nay, in fact we find, after cutting through the nerve of a muscle, that, by irritating the nerve, repeated motions can be performed; whereas, by Dr. Haller's theory, of great velocity from end to end of the nerve, as the nerve now wants supply from the reservoir in the brain, the fluid should be exhausted by a single effort of the muscle. Such argument as this no more proves, he contends, that the nervous fluid travels with great velocity, than our letting out, in the space of a minute, a hundred successive drops of water from the end of a pipe a mile distant from the reservoir which filled it, would prove that the water in that pipe was moving at the rate of a hundred miles a minute.

And, as to the argument on the torpedo and gymnotus electricus, he urges that all we can conclude from the facts is, that the nerves enable the animal to perform its proper office of collecting the electrical fluid, but without directly furnishing to it any of that fluid—just as we, by rubbing a glass tube, excite electricity without there being any reason to suspect that the electrical matter is in particular derived from the nerves of our hand, since the electricity could be as readily excited by the hand of a dead man as by that of a living rubbed against the glass with the same force.

Thus Munro in his day endeavours to refute the hypothesis of electrical current in nerve, and of it as the excitant of natural muscular motion; and to what he has said already he brings forward other and cogent arguments. When he cuts a nerve across and brings its parts again into contiguity, he does not, he maintains, restore the offices of the nerve immediately. Nay, when he divides a nerve in a frog, and lets the divided parts grow together again, the influence of the nerve beyond the incision is, generally, not restored. On the other hand, the well-known effect of compression on the nerves of a sound animal, and the experiment of producing repeated contractions of muscle by pressing on a nerve after cutting it across, indicate that the energy depends on matter *capable of being affected by simple pressure*.

The hypothesis is simple, but it is not, admits the anatomist, proved. Still, to say that the offices of the nerves are not performed by a secreted fluid merely because we cannot comprehend how any part of the blood, or any humour prepared from it, could render the mind sensible of an injury or throw a muscle into action, is saying a great deal too much; for in the generation of animals effects more incomprehensible and astonishing seem to depend on the secretion and mixture of the fluids of the testes and ovaria—the brain, the nerves, the nervous energy, and the complex fabrics of other organs being thereby produced.(c)

As it is refreshing oftentimes to listen to the simple and natural expressions of children on things in nature which they are trying to comprehend, so is it refreshing oftentimes to read, in philosophy, the utterances of those who first began to study Nature in the way she opens herself to the first searches after her secrets, and, I confess me, the reading of Munro, which I have ventured to revive, conveys to my mind a charming freshness of thought, and a suggestive lesson much to be valued. When, again, I turn to another chapter of his book, on the question "Whether the nerves convey nourishment to our organs," I find a new freshness of discussion replete with instruction. But that which I would dwell upon at this present moment is the fact that even yet we are uncertain whether the original theory of a subtle or refined fluid charging the nervous matter, and *capable of being affected by simple pressure*, be not correct after all, and whether the study of the phenomena of electrical manifestations which Galvani mainly instituted, and which have since been pursued with so much untiring minuteness of industry, may not all be a series of independent facts, produced often by the experimenters themselves, or running only coincidently, when not produced, with the actual phenomena which Nature presents to the observer. It seems to me the most reasonable of propositions that the blood, in the decompositions to which it is subjected in the extreme parts of the organism—in those vital parts which lie, as I may say, on the banks of the stream of blood—should yield, as our earlier masters taught, a true physical quality which the nervous system should have the power of claiming to itself, which should pervade the nervous matter, which should hold the whole nervous system in one connected bond, while, at the same time, it should allow of the local independency of parts, and which should be subject to impression, not from one kind of impulse or *vis*, but from any to which it may be subjected —calorific, mechanical, electrical, chemical. It is, in short, essential to all theories of vibratory motions to presuppose the existence of a veritable ether, in which the more solid particles, atoms, or molecules of matter are distributed, and by which, through vibration, the parts of matter are put into motion. Carry, then, this same view to the animal body: suppose a mechanism such as the nervous system, flexible where needed, protected and fixed where needed, central, linear, peripheral, everywhere built upon bloodvessel and blood current, and everywhere capable, where there is vessel and blood, of taking up from blood a product of the decomposition of blood, the resultant of chemical change; suppose this mechanism persistent in the living body, and what do we endow the body with less than with a subtle spirit, which vibrates to every impulse, and which during life is dependent on the organism for its development; which is indeed a spirit, made within the organism, by and through which the outer universe is received, is communicated, is felt, is known? To my view, there is reason in this theory. To my view, the nerves, without the essential physical quality with which they are charged in life, are as the arteries without blood—the silent, emptied channels of what once was a living thing. To my view, nerves may practically bleed during life, as vessels do—bleed, not blood, but a derivative of blood. To my view, what commonly is called nervous exhaustion may be no metaphor of speech, but a physical reality, as definite as that physical hæmorrhage from bloodvessel to which, in effect, in symptom, it is so near akin.

(a) Preliminary thesis to a course of three lectures on the primary results of organic nervous shock, recently delivered in London, Bradford, and York.

(b) Haller, "Elementa Physiologiæ Corporis Humani." L. x.

(c) "Observations on the Structure and Functions of the Nervous System." By Alexander Munro, M.D. Edinburgh. 1783.

ORIGINS OF ELECTRICAL HYPOTHESES.

When, in 1746, Mr. Cuneus, of Leyden, holding in one hand a glass jar containing water in communication with the prime conductor of a frictional electric machine, unconsciously charged the jar, and, on removing the wire with the hand that was free, got, for the first time in the history of science, a strong electric shock, he, naturally enough, was not the only man astonished. Straightway, Professor Muschenhoeck, of the University of Leyden, taking also a shock, writes to Reaumur that the blow he had received, by the new process, through his arms, shoulders, and chest took away his breath, so that he was two days before he got over his alarm, to the cause of which he solemnly declares he would not again be subjected for the whole kingdom of France. But after Muschenhoeck, other men, more venturesome, repeated the experiment, until it became, for the moment, the great wonder of the civilised world.

When, in a later day—viz., about 1755—Benjamin Franklin illustrated the singular experiment of "knocking down" six men from the discharge of two large jars by laying the end of his discharging-rod upon the head of the first man, the hand of this man on the head of the second, the hand of the second man on the head of the third, and so on to the last man, who held the chain that was connected with the inside of the jars; and when, on making the circuit complete, the men all dropped together and yet declared they had felt no stroke, heard no crack, seen no light, but wondered why they had fallen, the world was again in amazement.

When, later still—in 1790—Galvani, working his electric machine near to some frogs that had been prepared for the purpose of furnishing sick Mrs. Galvani (at the suggestion of her Physician) with a dish of frog-broth, saw the muscles of the animals thrown into active motion by the inductive action of the electricity of the conductor upon the muscles, a line of research was instituted, the results of which so entranced the world that the term "animal electricity" passed into a household phrase, and the idea that electric force and force of life were the same force, became, for a moment, an accepted article of belief.

When, in 1803, Aldini, the learned and enthusiastic follower and nephew of Galvani, restored what seemed to be the phenomena of living motion in a malefactor an hour dead, on a cold day, the marvel of mankind still increased.

When, once more, in times nearer to our own, the electro-magnetic machine came into use, and it was learned that if the hands be made to grasp the poles of the machine at the time it is in action, the muscles are drawn against the will into vehement contraction, the marvel intensified, and the electrical or electro-magnetical character of the force which animates the living organism became such a strict article of belief, it threw completely into the shade all the reasonings of the older physiologists; had they never been born they had hardly been more forgotten—more silent men.

It is no fancy or pleasure of mine to under-estimate the intervening chain of great and startling labour which connects the old world of thought with the new. I admit the singular wonder of this fact—that I can, by the contact of the poles of a battery, make the muscles of an animal recently dead move again in simulation of the motion of life. I know that when I grasp the poles of the electro-magnetic machine with my own hands I feel as though my will were overcome by a power like unto its own, but so much stronger that it is subject to the foreign mastery. This is clear enough—simple enough—but is it all? Were it all, the electrical theory of animal motion were indeed complete. We might fail then, as we fail now, to discover the origin of the force within the body; we might fail to discover the animal electrical mechanism in its details, or to strike the comparison between an animal electrical apparatus and the electrical apparatus the human hand constructs for its own purposes; but we could still say, with convincing truth, that the living impulsive force was electrical and nothing else; therefore the mode of its production within the body must be assumed, and, unknown as yet, must be left as something which in the course time, will be discovered, described, and even copied, in its design, direct from nature. Here, however, the electrical theory breaks atwain. The phenomena of muscular motion, of sensation, of pain, are not solely producible by artificial methods, through electricity. I return to the forces known only to the pre-electricians, and to other influences than electricity of which they knew nothing; and the same phenomena present themselves to our attention through these forces. I mechanically irritate the muscles of an animal living or recently dead, and they forthwith contract; I apply to the muscles warmth, they contract; I proceed to treat the nerves in the same fashion, and again the phenomena of muscular motion are before me. I take an animal recently dead, inject through its arterial vessels water of a temperature of 110° F., and every muscle in the body so responds, that for a brief interval the animal appears to re-live.

I do more than this: I take an organic chemical substance, say nicotine, and injecting it in very minute quantity into the body of a living animal, I excite a muscular convulsion ending in death; or I make an inferior animal, or man, inhale a minute portion of such a chemical substance as the nitrite of amyl, and at once the bloodvessels are unloosened and the heart beats doubly, trebly its natural rate in respect to time; or, once more, I do nothing that seems physical, but I pour into the body through the senses an emotional impulse, and immediately I get a response in disturbed—it may be fearfully disturbed—muscular action. Lastly, if I abstract a sufficient quantity of blood, the inevitable response is severe convulsion; or if upon the brain of an animal I exert a little undue pressure, the effect is declared in a rigid contraction of muscular fibre, universal in its character.

To say nothing at this moment of the production of a negative muscular condition by means of cold, the above-named facts are quite sufficient to demonstrate that neither electricity nor any other initiative force is specially and alone concerned in the propagation of the motion of muscle. It is clear that many of the influences which excite to motion lie out of the body altogether, and affect by contact; some are so subtle—those, for instance, which we call emotional—that we have more difficulty in understanding them than in understanding the action of electric induction; some appear to be within the body, products of a steady-going source of motion, over which we have no determinate control, and which, during the whole of our lives, fan the involuntary organs into living action.

Thus, the longer we think of the phenomena of muscular motion—and, indeed, of all motion in the living animal body—the less we are able to regard with favour, on the evidence before us, the hypothesis of one force in the organism, and of nerves and nervous centres as producers and conductors of that force; while we are the more inclined to extend our relations of life to the universe as a whole, and to take in every motion as belonging to our living receptive organisation. But in order rightly to conceive the adaptation of the organism to the universe, the ideal of a nervous fluid, a true physical something pervading the nervous system, as the first neuro-physicists taught, is indispensable. It, and it alone, affords the connecting-link between force and matter by which force can move matter. Why cannot force—electrical, if you will—move a muscle that has actually passed into the inertia of death?—Why, but that the muscle—or, rather, the nervous matter it contains—has lost some physical thing, without which it is dead to force? Why will not the dead eye see?—Why, but that it has lost some physical thing with which it was wont to be charged, and through which the wave of light could extend vibration? Why, when I freeze a part of the surface of the body, will not the frozen part feel?—Why, but that in the act of freezing I have condensed or have expelled from the nervous matter of the part the physical agent by which the part was connected, in arrangement and condition, with the same agent in the other portions of the nervous organism? Why, when I make an animal inhale a narcotic vapour, do I produce general insensibility?—Why, but that I distribute through the whole nervous system a foreign substance, which interferes with the natural condition for motion of the nervous matter.

THEORY OF A GASEOUS OR VAPOROUS ATMOSPHERE OF NERVOUS MATTER.

The hypothesis of the nervous matter being the receptacle of a special nervous fluid—held by the earlier neuro-philosophers—was abandoned, as we have seen, to be succeeded by the hypothesis of the nervous structures charged with electrical force, such force being also liberated by the nervous system. The earlier hypothesis however, was and is, as a basis of research, by far the most important hypothesis, but it contained an obvious error in this, that its advocates thought the nervous fluid a veritable liquid, which was, as they said, "secreted" by the brain and nerves, as other fluids are secreted by glands. They were led to that view of a fluid naturally enough, because they possessed none of our modern knowledge about organic vapours and of compound organic gases having specific boiling-points, specific weights, specific tensions at different temperatures and pressures, and specific powers of conduction of different kinds of force. We are more fortunately circumstanced, for we are conversant with the facts named, in relation to an infinite number of vapours, and we know how living action is modified by the introduction of some vapours into the body. Nay, on the hypothesis of the existence of a gaseous or vaporous atmosphere pervading nervous matter, there are certain descriptions of it which admit of being actually formulated, with the probability that they are near to the truth. We may think of such an atmosphere, for example, as a substance distilled over from blood, and containing carbon, hydrogen, and perhaps nitrogen, as parts of it; as susceptible of condensation under cold; as susceptible of displacement by simple pressure; as insoluble in blood; as capable of being discharged from portions of the nervous system, and even from the whole under sufficient commotion, and as therefore demanding to be persistently reproduced. We may think of it as holding a precise normal tension at the natural heat of the body; as diffusible readily by heat; as retained longer in cold-blood animals than in warm-blooded animals after death, and longer in warm-blood animals that have died under sudden exposure to cold than in those which have died in heat; as having in itself little cohesion, unless it be condensed round matter which can temporarily retain it; and as having, when condensed in organic matter, the power of conducting electrical vibration, light, heat, mechanical motion; we may think of it as charging the whole nervous system without excess of tension when the natural standard of health is perfect; as allowing other vapours to diffuse through it; as becoming discharged by exercise when the demand for it is greater than the supply; as accumulating in the nervous centres during sleep until the proper tension for motion is acquired when there is awakening; as present always in life, giving not only capacity for motion, but fulness of form and tension to the tissues: and as absent in shrunk death—condensed, or lost by diffusion.

A Spirit, truly, say you, this agent. Yea, truly a spirit, which the ancients thought of in the song and the dream, but which we now foresee as something that may one day pass from the retort into the condenser, to receive a new or retain an old chemical name.

Before I finish this part of my discourse, I would indicate, in a few sentences, how conclusively the theory I have suggested coincides with various best-known phenomena of life and disease; how it correlates, if I may so say. The hypothesis of an absolute fluid matter, a liquid, in the nervous system conveys an idea of grossness of matter incompatible with the refinement of motion peculiar to animal organisms; the hypothesis of an imponderable agency or force, minus matter, is, on the other hand, like leverage without the lever. But substitute for the two hypotheses the theory of the existence of an organic metallic vapour or gas having a specific weight approaching the weight of the outer atmosphere, distilling over into the nervous matter at every point where blood by its vessels comes into contact with nervous matter, condensable by cold, resolvable by easy chemical decomposition into new form of organic substance, and the explanation of action is simple beyond expectation. See, for example, how to the motion of the senses there is application of the principle of this theory. When air is put into motion to produce sound, the communication of motion from the air to the tympanum is reproduced in the nervous atmosphere of the auditory tract, and so to the cerebrum. When vibration of ether of space, in wave of light, impinges on the condensing retina, the communication of motion is reproduced in the optic tract, and so to the cerebrum. When solid particles of matter impinge on the periphery of the olfactory nerve, they excite direct vibration of the nervous atmosphere, and communicate odour. When a mechanical or other impression is made to bear on the periphery or the cord of a nerve away from the senses, the communication of motion again, direct through the nervous atmosphere to the cerebrum, is recognisable as painful or pleasant, accord- to the primitive force of the impression, pain being but excessive motion or vibration, of the nervous atmosphere.

The nervous atmosphere, demanding matter and force for its production, becomes to us a source actually of motion. As water from the earth rises into vapour, and returns again in dew, or liquid, or snow, or hail, and by that change makes a circuit of motion, so the nervous vaporous atmosphere also making constant circuit of motion, is probably, in the fœtus, the primary and inductive cause of the after respiratory actions, and even of all actions that are involuntary.

The nervous atmosphere, diffused wherever nerve-fibre penetrates, gives the mobility of parts required for motion, saves friction of particles, saves accumulation of force from friction, and equalises.

In the sealed cavities of the cranium and spinal canal, the nervous atmosphere is probably always in tension during waking hours, its pressure being compensated for during hours of repose by the less active cerebro-spinal fluid. In the open parts of the body, in the muscles in the secerning organs, it charges the parts, keeping them in required tension, and fitting them ready for motion on disturbance of equilibrium.

To some extent, the nervous atmosphere will be influenced by variations of pressure, and probably, also, by variations of condition of the external atmosphere. We are as persistently told this fact by the experience of our daily lives as if we were observing a demonstration of experiment on a barometer. We feel variations of tension as clearly as we can be made to see them, feel them in limb, in joint, in brain, wherever there is nerve-fibre.

I have suggested that, under some conditions of disease, the nervous vapour may be exhausted, locally or generally. It may, I think, under other circumstances, be increased. In cases of ganglion of nerve following upon operation, we may assume such increase; in some conditions of brain it may increase, and on increase produce apoplexy, as from pressure. It may, I can see, accumulate in special centres of nervous structure, and become equalised by what may almost be called an explosion or storm; I mean by a paroxysm of convulsive motion.

The nervous atmosphere, like the outer atmosphere, may be practically poisoned—*i.e.*, it may have diffused through it by laws of simple diffusion other gases or vapours which interfere with its natural function. Thus, it may be changed by its exposure to gases and vapours derived from without, and reaching it through the blood, or even directly through nerve; or it may be changed by exposure to gases of decomposition produced by disease in the body itself. It may be influenced by electrical conditions of the external atmosphere; it may even be susceptible of decomposition under great force, such as lightning.

All these, and many other considerations, sweep across the mind when once the idea of an inner nervous atmosphere is simply realised. The theory harmonises with our sense of observation and practice. Nervous collapse—Does it not seem clearer? Effects of pressure on nervous matter—Do they not appear less difficult to comprehend? Rapid destruction by subtle organic poisons—Is that not explained more easily than by old hypotheses? And the action of remedies—Does not the study of that action now expand? Suppose I diffuse into the blood a vapour which prevents chemical change, and stops by exclusion the distillation of the nervous vapour—what are the results? Suppose I introduce a gas or vapour, or liberate one in the body, so that it may diffuse through the nervous atmosphere without arresting chemical force—vapour of chloroform, for instance, or of alcohol—what are the results? Interference with motion, insensibility, anæsthesia. The foreign vapour that has been introduced benumbs; in other words, it interferes with the physical conduction of impressions through what should be the cloudless atmosphere between the outer and the inner existence.

I will deal with this subject experimentally another day.

IT is said that Dr. Muter, the well-known analytical chemist, has recently examined twenty specimens of bread bought in bakers' shops in the south of London, and found that sixteen out of the twenty contained blue vitriol, or sulphate of copper. Of the sixteen four-pound loaves examined, the smallest quantity found in any one was 0·43 grains, while the worst sample contained 1·82.

ORIGINAL COMMUNICATIONS.

◆

EPIDEMICS OF SMALL POX, SCARLATINA, AND MEASLES IN ROTTERDAM,

FROM THE YEAR 1778 TO 1811, AND FROM 1815 TO 1870.

By Dr. A. M. BALLOT.

THE English periodicals last year frequently made mention of the occurrence of scarlatina. The annual reports of the Registrar-General state that scarlatina frequently makes great ravages in different parts of the United Kingdom.

In our country, on the contrary, it had appeared to me that scarlatina was less frequent, and that, whatever was the case in other parts of our country, it certainly was so in Rotterdam. But in proportion as scarlatina was less frequent, the epidemics of measles were more frequent. For some years I collected, therefore, the mortality of sixty years from scarlatina, measles, and also from small-pox. To notice the influence on the last malady of vaccination, I divided them into two equal periods of thirty years each, and the result was that the mortality of small-pox was five times less, that of scarlatina four times less; on the contrary, that of measles three times greater, in the second period than in the first.

Seeing that the difference was so great, I determined to continue this investigation, and now I produce a review of ninety years, which I have divided into three equal periods of thirty years each.

The first year for which there exist some statistics of the different causes of death in Rotterdam is the year 1778; before this time there is sometimes mention made of a great epidemic, but no trace of any regular mortuary statistics. In the said year 1778 there was published here monthly a semi-official paper containing the births, deaths, and marriages, and at the end of this paper was a little table of mortuary statistics. Now, it is true that some curious names of maladies, or, better, of causes of death, are mentioned there; and certainly these tables could not serve as a model for an international mortuary statistic; but for my purpose I believe that I can use them without hesitation—First, because maladies, as small-pox, scarlatina, measles, are universally known by the people themselves, and the faults that occur will balance each other. For example, in a year when the scarlatina made great ravages, you will find also some cases of measles, which cases I believe to be often rather dubious; but, on the other hand, in a year of a great epidemic of measles, you will find mention made of some deaths caused by scarlatina, which cases probably belong, at least for a part, to the measles; so the different faults correct each other. Secondly, it is necessary to know the source whence the statistics are collected; if this source is more or less pure. Now for that time the statistics are collected with great care; but, nevertheless, as faults there must be, I would not have made use of them if the differences in the three periods had been very small. But, as the reader will see, the differences are very great; and, as the numbers are great, the differences are much too great to attribute them to accidental circumstances.

During some years, there is no mention made of the causes of death, and so my table is interrupted here, and ends with the year 1870 instead of 1867. The later the statistics, so much greater the possibility of correctness.

For the future we acquire a beautiful fund for epidemiological statistics, caused by the Medical laws of 1865. Since that year the Doctors are obliged to give a certificate containing the cause of death of their patients; and although the opinions on a malady may differ, or the diagnosis may be less true, the reigning maladies of our country will be more correctly known than before. Yearly an account is given to the King, of the actions of the Medical department,(a) and it contains the mortuary statistics of the most reigning maladies in the form of the "deaths from several causes" mentioned in the annual reports of the Registrar-General. This promises much for the future; for the moment, the time is yet too short since the beginning of these statistics to make general deductions from them.

My table ends with the year 1870; that is very lucky, for if the year 1871 had to be inclosed, all my reasonings as to the constant diminution of the deaths from small-pox had been thrown over by the present fearful epidemic, the greatest of this century. Is this, now, a proof that I only played with ciphers, and made use of the so-called "*Art de grouper les chiffres*," and should I not do better not to show my table? On the contrary. Even supposing there did rage this year an epidemic of scarlatina of the same proportions as now is the case with small-pox, I should say, it appears that the diminution of the epidemic of scarlatina was only a mere accident, but the ciphers would not be less true. But now, with this epidemic of small-pox, I say—this epidemic under which we live now is a shame. The more my table shows the constant diminution of the deaths from small-pox, and the more the effectiveness of vaccination is thereby proved in the manner the most clear, the more shameful is the progressive abstention from vaccination in the last few years. We now see what an enemy we are constantly nourishing amongst us, and what his weapons are.

My table needs little explanation. The little lines indicate that in those years there were no deaths from the maladies mentioned at the head of the column.

Table indicating the Deaths from Small-pox, Scarlatina, and Measles in Rotterdam from the Year 1788 *to* 1811, *and from* 1815 *to* 1870.

First Period.				Second Period.				Third Period.			
Years.	Small-pox.	Scarlatina.	Measles.	Years.	Small-pox.	Scarlatina.	Measles.	Years.	Small-pox.	Scarlatina.	Measles.
1778	2	118	1	1808 ...	9	35	—	1841 ...	325	2	3
1779	2	127	1	1809 ...	—	14	—	1842 ...	1	10	168
1780	45	11	33	1810 ...	2	5	—	1843 ...	3	10	10
1781	424	4	4	1811 ...	—	100	102	1844 ...	13	31	7
1782	4	—	—	1815 ..	—	12	1	1845 ...	21	11	4
1783	8	16	140	1816 ...	6	43	—	1846 ...	3	11	68
1784	214	1	15	1817 ...	122	170	237	1847 ...	—	11	166
1785	202	—	—	1818 ...	391	29	24	1848 ...	—	4	—
1786	43	66	1	1819 ...	10	34	65	1849 ...	3	3	3
1787	1	66	—	1820 ...	1	25	5	1850 ...	153	17	120
1788	144	6	1	1821 ...	2	95	162	1851 ...	45	6	8
1789	707	2	87	1822 ...	2	12	26	1852 ...	11	6	33
1790	35	—	7	1823 ...	6	24	—	1853 ...	5	5	110
1791	370	4	—	1824 ...	2	12	1	1854 ...	1	—	3
1792	122	6	—	1825 ...	207	8	—	1855 ...	3	11	426
1793	263	99	32	1826 ...	52	—	—	1856 ...	84	3	9
1794	237	79	10	1827 ...	—	7	40	1857 ...	124	—	—
1795	69	11	1	1828 ...	—	—	—	1858 ...	39	5	138
1796	14	—	—	1829 ...	—	40	287	1859 ..	21	2	48
1797	904	5	19	1830 ...	—	3	6	1860 ...	—	6	153
1798	54	—	1	1831 ...	102	6	2	1861 ...	18	2	4
1799	2	43	—	1832 ...	215	13	3	1862 ...	152	1	9
1800	305	122	9	1833 ...	8	30	327	1863 ...	34	8	295
1801	178	59	28	1834 ...	—	26	62	1864 ...	58	2	71
1802	144	29	13	1835 ...	390	240	45	1865 ...	125	3	26
1803	217	29	28	1836 ...	50	28	23	1866 ...	5	7	56
1804	58	10	7	1837 ...	8	28	46	1867 ...	9	13	31
1805	17	35	17	1838 ...	3	4	14	1868 ...	1	3	243
1806	25	12	—	1839 ...	1	25	73	1869 ...	—	1	25
1807	506	94	49	1840 ...	59	1	4	1870 ...	56	4	149
Total	5316	1048	504		1648	1089	1555		1313	196	2386
Average population.(b)	53,212				69,000				98,700		

Already, in superficially inspecting the table, it strikes you what I mentioned previously—namely, the diminution of small-pox and scarlatina and the increase of measles, and this yet more so whilst the population was always increasing. This will be made more clear when we divide the total number of each period by 30, so that we have the yearly average mortality of the different maladies, and when we reduce them to the average population or to a constant number of the population.

Table II.

Maladies.	Periods.	Total number of deaths.	Deaths per year.	1 death in inhabitants.	Deaths in 100,000 inhabitants.
Small-pox ...	First period ...	5,316	177	300	333
	Second period	1,648	55	1,254	80
	Third period...	1,313	44	2,243	44
Scarlatina ...	First period ...	1,048	35	1,514	66
	Second period	1,089	36	1,916	52
	Third period...	196	6·5	15,169	6·6
Measles ...	First period ...	504	17	3,117	32
	Second period	1,555	51	1,353	73
	Third period...	2,386	80	1,233	81

When we examine now the different maladies, we find the small-pox very diminishing from the first to the second period;

(a) This account is given: Verslag aan den Koning van de bevindingen en handelingen van het geneeskundig staatstoezicht in het jaar.

(b) The population of Rotterdam is estimated in the first period as 53,212 inhabitants; from 1816 to 1840 it increased from 60,291 to 78,898, and till the year 1870 to 121,027.

and although a little less, the diminutions from the second to the third period remains very great. The second period begins shortly after the introduction of vaccination, and it is probable that in this period the vaccination was better applied than later on. The decreasing numbers show the influence of vaccination on this malady; but because this diminution is only artificial, and is not caused by the extinction of the malady itself, it is natural that as soon as the preservative is neglected the malady will assume again its old hideous proportions. And as in the last years a great deal of the population is not vaccinated—*i.e.*, of the lower classes, the greatest part of those who do not yet go to school—the fearful epidemic under which we live now is easily explained.

As to scarlatina, I remarked that this malady seems to be leaving us, and by examining the table you will see my opinion confirmed. The numbers of the three periods stand to each other as 66 : 52 : 6·5; the difference between the first and second period is not so great as between the second and third, but almost at the end of the second period we find a great epidemic, the greatest of all the ninety years.

In examining the first period we find many years where the mortality of scarlatina is not so very little. We find, then, the years 1778 and 1779 together with 245 deaths from scarlet fever, 1786 and 1787 with 132, 1793 and 1794 with 178, 1799 to 1801 with 234, and 1807 with 99 deaths. The greatest interval between two epidemics is here seven years.

In the second period, we find only mentioned the year 1811 with 100, 1817 with 120, 1821 with 95, and 1835 with 240 deaths in one year. The interval between the epidemics of 1817 and 1835 is eighteen years. But after the last epidemic you find no other epidemic of scarlatina in the table, and this during a period of thirty-five years; for

In the third period, the greatest mortality was 31, 17, and 13, and if we compare these numbers with the increased population, we cannot say that the scarlatina appeared in those years as epidemic.

In opposition to the deaths from the first-mentioned epidemics, those from measles are steadily increasing. The last period shows a gross mortality exactly five times greater than that of the first period, and, if corrected for the increased population, it still is nearly two and a half times greater. The numbers of the three periods stand to each other as 32 : 73 : 81.

In the first period it is the inverse of the scarlatina; except the years 1783 and 1789, with a death-rate of 140 and 87, there were no epidemics of measles of any signification. In many years there were no measles at all. In this period there is only one epidemic, with 100 deaths, or 2 in 1000 inhabitants.

In the second period we find, also, many years in which there occurred no measles; but here we find already some years with more extensive epidemics, as the years 1817, 1829 and 1833, with 237, 287, and 327 deaths. In this period there are five years with more than 100 deaths; three there are with 4 and 5 deaths per 1000 inhabitants.

The last period has two years only without deaths from measles. Epidemics of some severity approach each other more and more with intervals of three, four, and five years. The epidemics of 1855, 1863, and 1868 were very severe; in the first the death-rate was 426. There were ten years with more than 100 deaths, or with a death-rate of 1½ to 5 per 1000 inhabitants. When we now consider that, although an epidemic of measles can be very extensive and intense, the mortality of this disease is not very great, we can comprehend what a quantity, how many thousands, of measle patients there must have been here in this last period.

To recapitulate: We saw (1) that the epidemics of small-pox were steadily diminishing; (2) that those of scarlatina also diminished, and were almost disappearing from the table; and (3) that, on the contrary, those of measles were always increasing.

What can be the reason of this? Why is the susceptibility for measles increased, and that for scarlatina diminished? Can it be that, in general, the sanitary condition is so much ameliorated that scarlatina cannot find here a footing? It may be that some circumstances which have influence on the propagation of scarlatina are altered; but that the general sanitary condition is much bettered is not the case. The increase of the epidemics of measles is less strange, for the causes of this malady would be similar to the others, which are the results of overcrowding.

Although both maladies—scarlatina and measles—are contagious, there seems to be a great difference in their contagiosity. In the past year, I witnessed a nice case of scarlatina in a poor family with four children—I say nice, because it was, so to say, a model case for a student. The little patient recovered, and neither the other children, nor the parents, nor the neighbours were attacked, whilst nothing was done to prevent the spread of the disease.

Although I cannot give an oversight of many years how it is with the frequency of scarlatina and measles in our country, the above-mentioned reports of our Medical Department show already that it is not everywhere as in Rotterdam. I arrange, therefore, two small tables of the two greatest provinces of our country, with the two greatest cities in them, and the total mortality of scarlatina and measles in the kingdom:—

Scarlatina.

	Average population.(c)	1866.	1867.	1868.	1869.	Total.	Per year.	1 death in inhabitants.
North Holland ...	570,742	91	430	182	87	790	192	2900
Amsterdam ...	266,681	86	410	89	2	587	146	1900
South Holland ...	679,950	12	36	11	8	67	16	42374
Rotterdam ...	116,650	7	13	3	1	24	8	14511
The Kingdom ...	3,576,382	393	565	325	283	1566	391	9146

Measles.

	Average population.(c)	1866.	1867.	1868.	1869.	Total.	Per year.	1 death in inhabitants.
North Holland ...	570,742	161	153	520	241	1075	268	2129
Amsterdam ...	266,681	143	29	288	189	649	162	1649
South Holland ...	679,950	232	163	597	125	1117	279	2470
Rotterdam ...	116,650	56	31	243	25	355	88	1325
The Kingdom ...	3,576,382	854	710	1680	1095	4379	1094	3270

The difference in the mortality from scarlatina between the two principal provinces of our country is very great, and the proportion almost as 1 : 13. The mortality from scarlatina in North Holland falls for the greatest part on Amsterdam, in South Holland only for the half on Rotterdam. The proportion in the mortality from scarlatina between Amsterdam and Rotterdam stands as 8 : 1. The mortality of scarlatina in the whole Kingdom is 1 in 10,000. Now, this difference in the mortality from scarlatina between North Holland with Amsterdam, and South Holland with Rotterdam does not exist for that of measles. There is a difference, but too little to be of any moment. After some years, this same difference may be on the other side.

As is to be seen, the mortality for the other provinces and towns is too insignificant to be of much moment; after many years, when we have greater numbers at our disposition, we can see if here, also, is a difference in the mortality of scarlatina. And as to small-pox, I have little to add. The epidemics were always diminishing; but, as the diminution was only artificial, so by neglecting the prophylactic against the disease, it was natural that one day or other a great epidemic would follow.(d)

As everywhere, so also here, there were many persons who have warned against vaccination, and who attributed all sorts of maladies as originated by it. Then there were many persons very careless; but, thirdly, in the last period falls the origin of a sect of puritans, called Separatists, who profess all prophylactic measures to be a sin against Providence, and the greater part of the Protestant poorer class belongs to them. The poor children are the victims thereof, and, although the parents who have been vaccinated in their youth rest unattacked, for the greatest part, in the midst of an immense infection, this fact has no influence with them. Amongst the better classes, which are for the greater part revaccinated, this year the malady is as good as unknown; and the very, very single cases which occur are amongst those who were against revaccination and amidst great infection.

Rotterdam.

DETERIORATION OF MILK BY FEEDING-BOTTLES. — Professor Gunning, the Government Analyst at Amsterdam, writes: — "I object to the infants' feeding-bottles in all instances when any part of them is composed of caoutchouc or indiarubber, or any like material. There is nothing so ill-suited to the constitution of the human body as the material in question. When, in consequence of suction, the pores of the caoutchouc are enlarged, some portion of milk always remains behind in them, which cannot, or, at least, cannot without great difficulty, be removed. This milk quickly becomes bad, and spoils the fresh milk with which it comes in contact. The caoutchouc material in question is made up of several ingredients. White zinc, or white lead, is very commonly employed, which is very poisonous. My objections are not founded exclusively on *à priori* conclusions. In this country many fatal cases have happened among infants, which, on solid grounds, may be ascribed to the use of these bottles."

(c) Mean of the population of four years.

(d) On April 29 we have already a small-pox mortality of 1368 in this year in Rotterdam.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

DISPUTED POINTS IN THE DOCTRINE OF SYPHILIS.

Some time ago we issued to a few of our most esteemed authorities a series of queries on syphilis, and having now received, in almost every instance, suitable replies, we proceed to lay the information thus acquired before our readers.

Before doing so, however, we beg leave to return our most cordial thanks to the gentlemen who have taken the trouble to reply to these queries. In certain instances we could give, were it not invidious where all have been most considerate, the pains taken to give exact and reliable information have been very great. A few of our inquiry papers have not yet been returned, and these we shall still be glad to receive, as well as any facts of interest our readers may care to forward to us. No one will under-estimate the value of a thorough sifting of fact and doctrine on this most important subject, when it is considered what consequences the acceptance or not of certain doctrines may involve—for instance, if it be accepted doctrine that secondary syphilis cannot be inoculated.

Our first query was—

"What are the ordinary primary lesions (*a*) in man, (*b*) in woman?"

The reply has been invariably that there are two kinds at least, hard and soft; though some tell us they have no great experience of sores in females. Those who have such in all cases state that hard sores are much more rare in females than in males. Thus, Mr. James R. Lane, Senior Surgeon to the London Female Lock Hospital, perhaps the widest field for observation in the kingdom, says—"The soft sore and the hard sore are the ordinary primary lesions. Well-marked hard sores are rare in women."

Mr. Buxton Shillitoe, who long had charge of the out-patient department of the same Hospital in Dean-street, where he saw the females, says—"In both you may have hard sores, beginning from a mere papule or superficial sore, and in both you may have mixed sores and soft sores."

Mr. Berkeley Hill, who more recently has been at the head of the same department, enters into fuller detail. He says there may be found—"(1) The suppurating sore, with spongy surface, sharply cut, and undermined edges; (2) the superficial suppurating erosion; (3) the serpiginous, irregular, suppurating sore—these are not, I believe, necessarily connected with syphilis. Also, (1) the erosion with viscid diphtheritic secretion and hard elevated base; (2) the hard-based suppurating ulcer; (3) the elevated papule, either desquamating, or, if kept moist, secreting a thin discharge, and thus resembling, and closely allied to, the mucous patch—these are, I believe, part and parcel of syphilis. All these forms are found in both men and women, but the typical early manifestations of syphilis so usual in men are rare in women. In the latter sex the most common lesion of the genitals in early syphilis is the papule that resembles the mucous patch."

Mr. Langston Parker, of Birmingham, gives very strong testimony to the rarity of hard sores in women. He says, in reply:—"Soft and hard chancres in man—the former most prevalent; and the same in the female; but in the woman the hard chancre is so rare that its existence has been by some actually denied."

Nor is the statement of Mr. Gascoyen, Surgeon to the London Female Lock in the Harrow-road, of less importance and value. He says:—"The ordinary primary syphilitic lesions (*a*) in men are sores upon the genital organs, especially at the corona glandis and on the inner surface of the foreskin; (*b*) in women similar sores situated upon any part of the vulva—but their most usual seat is at the inferior commissure or on the inner surface of the nymphæ. The base of these sores differs much in different individuals and according to situation, varying in character from a large mass of almost stony hardness down to a mere inflammatory thickening. The amount of deposit or induration at the base of a sore is seldom so great on the female genitals as on the male; nor does it continue so long."

The only other gentleman who gave us the benefit of his experience on these points is Dr. Barton, of Dublin. His statement is as follows:—"The ordinary primary lesions in man are superficial sores, with parchment induration; but the most frequent venereal sores in man are simple suppurating or soft sores. In women the great majority of the venereal sores are hardly to be distinguished from ordinary simple sores, whether afterwards they prove syphilitic or not."

With query No. 1 may be well combined query No. 3—"What are the varieties of sore recognised by you?"

Mr. Gascoyen says—"3. I recognise two forms of sore: one with a soft base, or only a little inflammatory thickening, which secretes pus freely throughout, and is prone to take on an ulcerative or sloughing action. The other is situated upon a hard base, its secretion becomes serous or sero-purulent, and it is very indolent in its character. I do not, however, consider these sores to be distinct varieties of venereal disease, but as different forms of the same disease."

Dr. Macdonnell, of Dublin, recognises the following varieties,—viz., "the 'simple' and the 'syphilitic.' Of the latter I recognise three varieties tolerably well marked—1st, dry papule; 2nd, chancrous erosion; 3rd, hard sore." This is substantially the grouping of Lancereaux.

Mr. Maunder recognises the hard and soft varieties; so does Mr. Langston Parker; whilst Mr. J. R. Lane says, in reply to the query as to varieties—"The two sores above mentioned. I consider phagedena an accidental complication, which may occur in either." Mr. Shillitoe recognises three—the hard or specific, the soft or non-specific, and the mixed sores."

Bumstead, the best-known American authority, is a vigorous supporter of the twofold nature of these sores; but his belief seems shaken as to the invariable characters of them, or at least of their non-interchangeability.

Mr. Henry Lee also holds firmly to the belief that there are two varieties of venereal sore. The one, he says, is the precursor of constitutional manifestions; the other is itself the disease, the history of the case terminating with its cicatrisation and that of the bubo in the groin where present.

From all this, it is plain that there is no one sign to be relied upon in the diagnosis of a primary syphilitic ulcer. The peculiar hardness which by many is held to be pathognomonic is not always present—nay, as several of the above gentlemen testify, is rare in females; so that it would seem to depend rather on anatomical seat or structural characteristics than on any special constitutional characteristic. Then, again, the hardness may be, and often is, to some degree simulated by local inflammations, however excited. It is quite true that a sore weeping but slightly, and with a well-defined hard base, giving rise to symmetrical glandular enlargements in both groins, may be safely predicted to be the precursor of constitutional symptoms; but it by no means follows that a sore without indurated base may not be the origin of identical symptoms. This Practitioners will do well to bear in mind, if they value their own reputations.

(*To be continued.*)

City of London Union.—The small-pox in District No. 1 is very much on the decrease. Vaccination had been general and successful. With one exception, all the deaths in this district occurred in unvaccinated persons. The Amalgamation Committee have decided on recommending the board to reply to the Poor-law Board that in their opinion Dr. Fowler's claim for compensation for loss of office should be entertained only so far as regarded his annual salary and emoluments as district Medical Officer, making together a total of £166 2s. 4d. They also stated that, in their opinion, the powers given by the 30th and 31st Vict., cap. 106, sect. 20, were permissive and not compulsory.

Sheffield.—At the meeting of the Board of Guardians, last week, Mr. Melluish, the Vaccination Officer, stated that at the date of his last report 144 persons were then under notice, and since the notices were served 131 had complied with the Act, leaving a small number from whom no certificates had been sent in. He had gone through the Registrar's sheets from March 1, 1870, to September 1, 1870. They contained 1244 entries:—470 had been vaccinated; those under notice at present were 243; ill, 46; removals, 483; making a total of 1244. Only two cases of small-pox had come under his notice in the Sheffield township, and those had not been vaccinated.

In the new merchant shipping code there is a clause providing for the Medical inspection of cabin as well as steerage passengers. In a joint report of the Liverpool Chamber of Commerce, Shipowners' Association, Underwriters' Association, and other bodies, this clause is condemned, it being urged that cabin passengers are able to judge for themselves.

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Medical Times and Gazette.

SATURDAY, MAY 6, 1871.

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THE SMALL-POX EPIDEMIC.

A SLIGHT—very slight—decline in the registered deaths from small-pox in London was noticed last week. Instead of 276 there were 261 deaths recorded. Comparing the district mortality with that of the previous week, we find that the Northern and Southern districts still hold their bad preeminence, that in the Northern districts, where 64 deaths were recorded in the week ending April 22, there were 78 deaths registered last week, while in the South districts the deaths last week were 97 against 99 the week before. In all the other districts there has been a reduction of mortality. Small-pox, we learn, was most fatal last week in Battersea, Newington, Bethnal-green, and Islington. A severe outbreak has occurred in Southampton, where small-pox became epidemic towards the end of last quarter. In the past four weeks, 24, 12, 14, and 27 deaths respectively have been referred to it, equivalent to an annual death-rate of 18 per 1000. We may estimate the meaning of this when we state that in London last week the annual small-pox death-rate was equal to 4 per 1000, in Liverpool to 7 per 1000, and at Newcastle to 5 per 1000. Here, again, there is the report of neglected vaccination.

Not only has small-pox of late been making considerable advances in the metropolis, but the character of the cases has been assuming greater virulence. The reports of the superintendents of the several Hospitals under the Asylum District Board all tend in the same direction. During the fortnight ending April 15, applications for admission were obliged to be refused both at Hampstead and Stockwell. At the Stockwell Small-pox Hospital, the committee, with very questionable propriety, have filled the corridors with convalescents. At the Hampstead Hospital no less a number than 443 patients were congregated on April 14, while 304 females (mostly convalescents) were accommodated in the old workhouse at Islington. Dr. Grieve is, we imagine, correct when he says that this is the largest number under a single Hospital administration in Great Britain. When we read in his report that the patients in the Hampstead Hospital come (many of them) from such distant parishes as Chelsea, Fulham, Shoreditch, Whitechapel, St. Olave's, Stepney, Poplar, etc., we cannot avoid repeating how much better it would have been to have established a number of smaller temporary Hospitals in localities more convenient to those districts of London. And with regard to the severity of the cases, Dr. Collie and Dr. Gayton at Homerton, and Dr. Grieve at Hampstead, all testify to the great increase of virulent and hæmorrhagic cases, while Mr. McCann, at Stockwell, states that a large proportion of his admissions have been cases of suppressed small-pox, scarcely less dangerous than the hæmorrhagic form. At Homerton Fever Hospital, in addition, erysipelas broke out, but from what cause it is not stated. Dr. Collie mentions the interesting facts that, during all the time the latter Hospital has been open for small-pox, no revaccinated person has been admitted, and also that no vaccinated child has died there of the disease. Dr. Grieve also mentions in his report that out of 549 patients whose nationality he inquired into, only four were born in Ireland. The inference he draws is that this is a proof of the efficacious manner in which vaccination is carried out in that division of the United Kingdom. Possibly there may be some other reason assignable for this curious circumstance. The following summary, constructed from the reports of the several Hospitals, shows the number of cases received altogether during the fortnight from the several metropolitan unions :—

	Total Cases.		Total Cases.
St. Pancras	190	St. Giles	27
Lambeth	158	Mile-end Old Town	25
St. Saviour	140	Camberwell	25
Shoreditch	133	Chelsea	22
Holborn	118	Strand	22
Clapham & Wandsworth	117	Hampstead	22
Islington	103	Fulham	21
Bethnal-green	101	Westminster	20
Hackney	77	Kensington	19
Marylebone	64	Poplar	18
St. George's Union	62	Greenwich	12
Whitechapel	48	Stepney	11
Paddington	34	Lewisham	6
City of London	31	Woolwich	6
St. Olave's	28		

We were recently alluding to the fact that the Asylums Board were providing accommodation for others beside the pauper class. The extent to which they have done this appears from an analysis made by Dr. Grieve of the occupations of 223 male patients in the Hampstead Hospital on the night of the census. Out of the entire number there were but 40 who could be regarded as belonging to those classes which can with justice be called paupers—viz., 35 labourers, 3 costermongers, and 2 of no occupation. The remaining 183 represented their occupations as follows, viz. :—

Professional men	6
Master tradesmen	2
Railway and post-office officials, etc.	8
Shopmen and clerks	24
Domestic servants	3
Barmen, waiters, etc.	9
Skilled artisans	94
Omnibus drivers, carmen, stablemen, etc.	26
Porters	9
Seamen	2

A similar statement as to the mode in which the women were employing themselves prior to the time when they were attacked with small-pox would be interesting.

We this week publish two important documents, to which we desire to direct particular attention. The one, proceeding from our own Registrar-General, shows distinctly that the present epidemic of small-pox broke out in the last quarter of 1870, and that it has been almost confined to four great centres of infection—namely, London, Liverpool, the mining districts of Durham and South Wales—the smaller local outbreaks being more or less distinctly traceable to communication with these centres. The coincidence of the outbreak of the epidemic in London with the arrival of large numbers of French emigrants, and the fact that small-pox has been in many cases clearly introduced by sailors into seaside towns, are pointed to by the Registrar-General as evidence that the epidemic originated to a great extent from our foreign communications. The other paper to which we refer is that of Dr. Ballot, of Rotterdam, which seems to teach this important lesson—namely, that up to the present time we have not arrived at the conditions which govern the varying prevalence of our common epidemic disorders. Small-pox, measles, and scarlatina are diseases never absent from our population altogether, but sometimes they spread extensively, while at others their spreading power is very slight. There is something here more than can be accounted for by the variations of what we commonly call "unsanitary conditions." The experiences of Rotterdam during ninety years, as analysed by Dr. Ballot, afford matter for thought, and may direct our inquiries into new channels. He shows that during that period in Rotterdam scarlatina has been fading away both in the frequency and severity of its epidemic visitations; while measles, formerly less frequent, has become a far more common and frequently recurring epidemic. The "contagiosity" of the one has been lessening, while that of the other has been increasing. Why? The answer has yet to be discovered. Dr. Ballot points out that the diminished mortality from small-pox coincident with that from scarlatina was of artificial origin, and the result of popular vaccination; and, this being so, that, on the neglect of the prophylactic, it was natural that one day or other a great epidemic would follow. And this has come to pass. It appears that in Rotterdam the carelessness of the lower classes in respect of vaccination has of late years been greatly on the increase. As amongst ourselves, also, there are those who object to vaccinations as introducing disease into the system. But another cause is also operative there—namely, a religious prejudice, to which, as prevailing largely among the lower classes, the children of the poor are the victims. The parents who hold the peculiar doctrines Dr. Ballot alludes to, having been vaccinated in their youth, mostly escape the influence of the epidemic, and among the better classes, who are for the greater part revaccinated, the malady is as good as unknown. The result has been that this year, up to April 29, 1368 persons have died in that town of small-pox. A similar explanation is to be given of the epidemic extension of small-pox among ourselves in London. From the time that vaccination began to be practised in this country to the outbreak of the epidemic, the mortality from small-pox has been steadily decreasing from a mean annual death-rate of 88 per 1000 in 1790-1800, to 10½ per 1000 in 1861-5, notwithstanding that this last period included the epidemic year 1863. People have forgotten, in fact, what small-pox was, and, as the Registrar-General says, the steady decline of deaths from the disease had induced a certain apathy in the matter of vaccination which has left a large portion of the population unprotected. May we not echo the words of Dr. Ballot?—"I say, this epidemic under which we now live is a shame. The more my table shows the constant diminution of the deaths from small-pox, and the more the effectiveness of vaccination is thereby proved in the manner the most clear, the more shameful is the progressive abstention from vaccination in the last few years. We now see what an enemy we are constantly nourishing among us, and what his weapons are."

PRACTICAL PHYSIOLOGY.

It is seldom—at all events, until their conclusion—that we specially direct the attention of our readers to courses of lectures that appear in our pages. Cases may, however, occur in which it may seem expedient to break through this rule, and we think that we shall be doing good service to science by devoting a few observations to the very remarkable series of lectures on Practical Physiology that have been recently delivered by Dr. Burdon-Sanderson in the newly-established laboratory in University College.

By "instruction in practical physiology" the Professor means "instruction in the methods by which the subject is to be worked at," rather than "its application to practical ends"; for "the more we regard physiology as a subject based from first to last on experiment, the better for us and for our science." The purpose of this course, which is the most complete of the kind that has ever been carried out in any of our metropolitan schools, is "the study and observation of the mechanical and chemical changes which take place in living beings, and particularly in that one living being whose diseases it is our business, if possible, to prevent or cure."

The course begins with the consideration of cell-life in the higher animals, two special types of cell or corpuscle being taken for study—the locomotive and contractile corpuscle, or leucocyte; and the stationary corpuscle, as best seen in cartilage or in connective tissue.

Each lecture contains a certain number of "Observations," or special experiments, which the student is taught to perform for himself, and to which a commentary is appended. The earliest lectures are devoted to "Leucocytes," and, in the first "Observation," the Professor teaches us how to study these objects in the living state. An extremely small quantity of the blood of the newt (an animal that is always on sale in Covent-garden) must be placed in the centre of a thin cover-glass, which must then be inverted and placed over a "putty cell," which is thus converted into an air-tight chamber. For a description of "How carefully he builds his cell," we must refer to the lecture itself, and shall pass on to state some of the leading facts to which the Professor directs the attention of his students in the examination of the imprisoned blood-drop. The first is that the blood has coagulated in a tubular form, whence he infers that the change took place in the capillary tube that was used for transferring the fluid from the vein to the cover-glass, and hence was instantaneous, which, as we know, is not the case with mammalian blood. The second is, that if we carefully watch the edges of the red clot, we see it surrounded by a margin of transparent serum, in which at first only a few floating red cells can be noticed; but soon projections shoot out from what may be called the coast-line of the clot, which rapidly increase in size, and finally become liberated and float freely in the serum; these are the amœboid leucocytes, in which no granule or nucleus can be detected, and whose forms are most irregular, ever-changing, and grotesque. If seen in the act of separation, their outline towards the clot is smooth and rounded, while the opposite surface has a shaggy or serrated appearance, due to the presence of conical processes, which, to be properly observed, require a really good objective. As the process of emigration goes on, the number of free leucocytes increases, till the clot is at length bordered by a dense layer of them. Most have the characters already described; others have neither processes nor amœboid movements; a few, moreover, are filled with strongly refracting granules, and regarding these the Professor has nothing to say, "for nothing is positively known."

We have entered into these details regarding the first "Observation" not only in consequence of its intrinsic value, but because it is one that any student can, with ordinary care and a moderately good microscope, repeat for himself.

The second "Observation" is devoted to "Lortet's experiment" which consists in inserting under the skin of a rabbit or other mammal the swimming-bladder of a fish filled with an indifferent fluid—as, for example, a solution of common salt. On removing the bladder after twenty-four hours, its contents, instead of being transparent, are thick and opaque, from the presence of hosts of leucocytes. This experiment, which may be altered in various ways, is of importance, as showing—first, that the migration of leucocytes is not dependent on difference of pressure between the liquids inside and out, but merely on a property inherent in the leucocytes; and, secondly, that they are capable of passing along channels so narrow as not only to be imperceptible by the microscope, but to be impermeable to water.

The third "Observation"—Professor von Recklinghausen's experiment—is of interest, from its leading him to the discovery of the amœboid movements of pus corpuscles, which, by the way, had long before been described by Beale. He removes the cornea from the eye of a frog, and introduces it, with a few drops of water containing aniline blue in a state of extreme comminution, into one of the subcutaneous lymphatic sacs. On examining the cornea after it has remained for some time in the sac, although it appears transparent to the unaided eye, it is found, when examined with the microscope, to be rendered opaque by the presence of leucocytes or pus cells, which are marked with the aniline stamp, and which have migrated into it from the liquid contained in the inflamed lymph-sac. The fact that leucocytes, each containing one or two aniline grains, are seen in the very centre of the cornea, is, as the Professor observes, very convincing; and nothing can be more interesting than to observe the peculiar forms they assume as they squeeze their way along the interstices of the tissue.

"Observation IV." illustrates the changes which occur in mammalian leucocytes when they are exposed to various temperatures. With the aid of an apparatus for keeping up a definite temperature, we learn that at 98° F. the leucocytes are seen in active motion; at a lower temperature the movements are more sluggish; while at 107° F. they draw in their arms, and shrink into globular, motionless, and lifeless masses—the conventional white corpuscles of our text-books.

In "Observation V." the methods of exciting a selected leucocyte by electricity are discussed, and the results are described and depicted, while in the next "Observation" the action of the electrical stimulus on other living cells—as, for example, the cells in the ensiform cartilage of the frog—are considered; and the changes observed here are similar to those induced in the leucocyte, except that the cartilage cell, when it has once shrivelled up, is no longer capable of recovery. The Professor concludes his remarks on this subject with the following practical—*i.e.*, pathological—remarks, which we offer no apology for reprinting:—

> "It was for a time supposed that suppuration always depends on emigration of the blood leucocyte, and at the beginning of many acute inflammations the formation of pus is so rapid that we cannot hesitate to admit that the leucocytes have come out of the blood; but in the later stages we always find the plainest indication that the corpuscles are formed in the tissues. To prove this there is no experiment which is more satisfactory than that of Lortet (already described); for while, on the one hand, the crowding of the bladder with corpuscles in so short a period as twenty-four hours affords undoubted evidence of locomotion, the production of innumerable young leucocytes from masses of protoplasm, or, as Dr. Beale calls it, 'germinal matter,' which is derived from the surrounding connective tissue, is still more certain."

We now come to the consideration of the "Coloured Blood Corpuscles," and the "observations" which the Professor makes upon them. He first explains and repeats Dr. Norris's experiment, which has for its object to show why the corpuscles of human blood, when seen under the microscope, have a tendency to stick together in rolls by their concave surfaces. Model corpuscles are made of circular discs of cork, thoroughly wetted and weighted so as to float vertically in a basin of petroleum. They attract each other and coalesce like oil-drops on the surface of water, and if they are then separated by agitating the fluid, they soon again become drawn together into *rouleaux*. The experiment, as far as it goes, is very instructive, but *why* do the corpuscles of blood which have just been removed from the body attract each other, while those of defibrinated blood have no such tendency? and *why* do they not do so within the vessels, even when the blood is quite motionless?(a)

Professor Rollett's experiment, made with the view to prove that the blood corpuscle consists of a homogeneous material throughout, is then considered, and the conclusion arrived at is that it is neither a mere lump of transparent matter nor a vesicle, but that "it consists of two substances, one of which is concrete, the other in a state at all events approaching fluidity—the fluid not being inclosed in a cavity, but pervading or soaking through the substance." This view is in accordance with those expressed by Professors Brücke and Stricker. The former, by a very simple experiment—by treating the blood of the newt with a solution of boracic acid, when the contour of the corpuscles changes more or less from oval to circular, and the colouring matter is apparently retracted from the circumference and collected round the nucleus, from which it stretches outwards in rays in a stellate form(b)—is led to regard the corpuscle as a porous structure of colourless hyaline substance (*œcoid*), the pores of which are occupied by a coloured living pulp (*zooid*). The latter, by a far more complicated experiment, arrives at a similar view with regard to the colourless part, but differs from Brücke as to the constitution of the zooid, which he designates as the "body" (*Leib*) of the corpuscle.

The coloured constituent (the zooid) can be demonstrated in a most striking and remarkable way by the action of tannin on the blood. On mixing a droplet of blood with a drop of tannin-solution (four grains to one ounce of water), each corpuscle becomes divided into two parts, one of which has an irregular, strongly-defined, hard outline, and is deeply coloured, while the other is merely a pale, faint circle, the diameter of which corresponds to that of the corpuscle. These remarkable appearances are rendered even more striking by the addition of a solution of aniline, which gives a very deep colour to the projections. For this marvellous experiment we are indebted to Dr. Roberts, of Manchester. "Here," says the Professor, "we have again to do with Brücke's zooid, which seems under the action of tannin to shrink together in such a way that it can no longer be retained in its spongy dwelling, and makes its exit *en masse*."

The different methods by which the more delicate, coloured part of the corpuscle (the zooid) may be caused to leave the more solid resistent stroma (the œcoid) are then noticed, the simplest being that which consists in freezing and thawing the blood. Similar effects are produced by electrical discharges and induction currents; and in the third lecture the Professor notices some very singular effects that are produced by electricity on the shape of the corpuscle, and on "the conduct of the nucleus" before the ultimate result is obtained.

We now arrive at the consideration of "The Blood Plasma," which is discussed under "Observation XIII."; but this and the subsequent section, on "The Conditions of Coagulation," call for no special remark, and we pass on to "The Colouring Matter of the Blood." This colouring matter, known as hæmoglobin, hæmatoglobulin, and hæmatocrystalline, is a "crystallisable immediate principle, readily soluble in warm water and in weak spirit," and remarkable for the readiness with which it is decomposed either by acids or alkalies into hæmatin and an albuminous compound; and the lecturer devotes four "observations" to prove the propositions—(1) that it exists as such in the blood; (2) that, although a crystalline body, it is indiffusible; (3) that, when subjected to the action of reducing agents, it undergoes a change of colour identical with that which arterial blood undergoes when it becomes venous, and that the original colour can be restored by agitation with air; and (4) that when subjected to the prolonged action of acids and alkalies it undergoes a change of colour of a different nature, due to the formation of hæmatin, which is permanent.

No Medical Practitioner, old or young, would like to admit that he was not thoroughly conversant with so important a subject as the composition of the blood; yet, if we are not much mistaken, many of our readers have passed over these most remarkable lectures with a rapid glance, under the idea that their study required a degree of application and an amount of time that they could not afford to bestow upon them. If, by setting before this class of readers in simple language some of the gems that we have extracted from these mines of deep physiological knowledge, we have succeeded in showing them the value of such investigations, our labour will not have been in vain. It may be remarked that the properties of leucocytes were brought forward by Mr. Simon at the last meeting of the Medical and Chirurgical Society as reasons for certain precautions in vaccination. Yet the word "leucocyte" is not familiar to some vaccinators.

(a) For further details on this subject we may refer to Professor Rollett's article, "The Blood," in Stricker's "Histology," vol. i., p. 408.

(b) A diagram of the corpuscle thus changed may be seen in Stricker, *op. cit.*, p. 396.

In a future article we shall give a similar popular *résumé* of the remaining part of this course of lectures.

THE WEEK.

TOPICS OF THE DAY.

The minutes of the meeting of the Branch Council for England of the General Medical Council do not contain information of importance, with the exception of the fact "that the President communicated to the Branch Council that, by a letter addressed to him as President, Dr. Rumsey had resigned his appointment as a Member of the General Medical Council." We are sure that Dr. Rumsey's retirement, should it prove a final one, will be regretted by a large majority of the Profession. He has been a very active and valuable Member of the General Medical Council. Two cases of complaint against Medical Practitioners were submitted to Mr. Ouvry, the solicitor to the Council. One—a charge of infamous conduct in a Professional respect—will be brought before the General Medical Council; on the other, by the advice of Mr. Ouvry, the Council will not take action. The application of a student to be registered who had passed the Oxford Local Examination (Senior), not including Latin, was not acceded to. Another application for registration was reserved for further consideration. This was the whole of the business done.

There is just now a pause in the various movements which have taken place in the matter of Medical reform. The day for the reassembling of the Committees of the three Corporations is not yet announced, and it is clear that until they meet no further progress can be made in the settlement of the various questions connected with the conjoint scheme of examination. We hope that unnecessary delay will not be allowed to interfere with the framing of a scheme which may be submitted to the General Medical Council at their meeting in the latter part of the summer. There seem to us to be only two real difficulties raised by the recent resolutions of the Council of the Royal College of Surgeons. One is a very small one, which should never have been raised—it is that of the Medical and Surgical qualifications to be held by examiners. What seems desirable to the Council of the Royal College of Surgeons is, in the first place, impossible in the present state of the law; in the second place it is unjust, because it would exclude all men possessing the ordinary diplomas of English general Practitioners from the examination of persons who apply for admission into their own ranks; in the third place it is absurd, for it would exclude from the office of examiner persons of European reputation who are foremost in the ranks of science (to take an illustration from men who have died within the last few years, under such a rule Professor Brande could not have been elected to examine in chemistry or Professor Lindley in botany); in the fourth place, to attempt to enforce such restrictions upon the other Medical authorities would be simply fatal to any prospect of united action. We may hope, therefore, that the very trumpery difficulty which has been thus unadvisedly created will at once be disposed of on the reassembling of the Committees. The more serious one is the pecuniary question. On it we would repeat what we have already said—that the maintenance of the Hunterian Museum and Library must, in the first place, be amply secured. This being done, we cannot conceive that any real impediment will remain. It would be simply disgraceful to the Medical Authorities of this country, if a great public and Professional reform were to be indefinitely postponed, or the alternative of new legislation forced upon an unwilling Profession, because certain of the great Medical institutions could not agree upon the division of the fees for examination.

The second reading of the two surviving Medical Bills—Dr. Brady's (that of the Irish College of Surgeons), and Dr. Lush's (that of the *Lancet*)—is put off to June 14; practically, to the Greek kalends. Some people have talked about a select committee on Medical reform, which might prove a convenient way of shelving the whole thing, but could throw no light upon the real and very simple reforms that are needed.

At the meeting of the Poor-law Medical Officers' Association, a report of which appears in another column, the very serious question of the propriety of the change in the arrangements for public vaccination, which the Privy Council has pressed upon boards of guardians, was discussed. Whatever may be said in favour of large areas of vaccination, and the raising of vaccination into a specialty, to be performed by special Medical officers at the public cost, at least it will be conceded that the time to make the change was not during the height of an epidemic of small-pox. That, for instance, in a large parish such as St. Pancras, to place one public vaccinator in a vast and densely populated district in the place of six efficient and largely employed vaccinators, seems an extraordinary mode of meeting the epidemic. We think it highly advisable, as recommended at the meeting, that evidence as to the practical results of the change should be taken by the Parliamentary Committee now sitting on vaccination.

The House of Commons may be said to have agreed, under protest, to the sixpenny income-tax, in which Mr. Lowe took refuge after the practical defeat of his ill-advised Budget. Professional men throughout the country can only do the same, but as representing a large professional section we must continue strongly to remonstrate against taxing the uncertain and precarious income of the Physician, Surgeon, or general Practitioner at the same rate that the incomes of landholders and fundholders are taxed.

Great interest is felt in the coming election into the Royal Society, which will take place in June next. We have already published a list of the Medical candidates for admission, which, it will be remembered, contains several distinguished names. It is an honour to be proposed for election into the Royal Society, and on the present occasion many of the nominations are alike creditable to the nominators and to the nominees.

Mr. Bruce's Bill, which is now trembling in the balance of public opinion, contains many clauses which undoubtedly should have the support of the Medical Profession. The adulteration of liquors, and the uncontrolled temptations to tipple which the present licensing system encourages, are things which demand the opposition of sanitary and social reformers. We notice that the Parliamentary Committee of the British Medical Association have determined to petition Parliament in favour of the Bill.

From his speech on the Woman's Suffrage Bill, it is evident that Mr. Gladstone has begun a dangerous flirtation with the strong-minded ladies. We mean dangerous to himself, for we do not believe that the common sense of the country will allow him to make the flirtation dangerous to the community at large. Mr. Jacob Bright's Bill for unsexing the fair sex was thrown out by a large majority. But still the masculine ladies have admirers on both sides of the House, and a half-implied promise from the Prime Minister to support some kind of Woman's Suffrage Bill under favourable circumstances, will be eagerly caught at as a consolation for defeat by the unwomanly sect and their admirers, and remembered. Mankind is, we suppose, developing into a new kind of unisexual mammal. With women in Parliament, in the pulpit, and in the lecture-room, the world would be very amusing if less wise. When breeches are universal, motley will be the only wear.

Mr. Paget's retirement from the Surgeoncy of St. Bartholomew's Hospital, which is announced, cannot but be a source of regret to the students and staff. Mr. Paget, however, has done more than enough for his Hospital to deserve the *otium* of an honorary consulting appointment.

Dr. Dudfield has been appointed to succeed Mr. Godrich as Medical Officer of Health in Kensington. Dr. Dudfield has been a leading member of the Parochial Works' Committee, and has taken much interest in local sanitary questions.

News of Livingstone has been received from Zanzibar; he is said to be alive and well, but destitute.

The discussion on the subject of syphilis and vaccination will be resumed at the Medico-Chirurgical Society on Tuesday next.

The University of Cambridge has conferred an honorary degree in Arts on Dr. Michael Foster, Prælector of Physiology at Trinity College.

Two cases of scalding to death in baths have been before the public lately. In one, an attendant at the Wandsworth Lunatic Asylum, one William Cooper, through carelessness, scalded an inmate so severely that he died from secondary bronchitis. He has been tried at the Central Criminal Court, and found guilty of manslaughter, and sentenced to a month's imprisonment. The evidence went to show that the accident occurred through turning on a stream of hot water, which came in contact with the patient's back. Cooper bore a good character for humanity, and was recommended to mercy by the jury. In the other case, a schoolboy of 16 scalded to death his schoolfellow, a little boy of 7. The story, as given in the newspapers, is utterly horrible. The boy's scarf-skin is said to have peeled off in the bath. He was flogged by the elder boy, and forced back into the scalding water when he made his escape. The old stories of roasting fags at Winchester and Westminster are matched by this. Some boys—aye, and girls, too—are so naturally and causelessly cruel that we defy Mr. Darwin to find in his long line of ancestry their prototypes.

A fatal accident at gymnastics is reported to have taken place at the High School, Nottingham. A boy was practising on the horizontal bar. He was seated on the bar and swinging himself backwards when he fell and broke his neck. Why are not the floors of gymnasia covered with some soft material?

At the dinner of the Royal Academy, Professor Huxley, who returned thanks for the Royal Society, proposed a new and artistic division of the animal kingdom, and a new distinction between man and animals. His speech was so happy a specimen of the after-dinner kind that we make no apology for reproducing it. He said:—

"Your Royal Highness, my Lords, and Gentlemen,—I beg leave to offer you my hearty thanks for the great honour you have done me in connecting my name with the toast of the Royal Society, as the lieutenant of the venerable President of that body. Like the Academy, the Royal Society has its annual gathering of members and other guests; but I cannot say that our meeting is quite so numerously attended or so brilliant as this. The fact is that, though, I suppose, we could show work not inferior in quality or proportional in quantity to that which adorns these rooms, it wouldn't hang well in any light; and though we might be able to cover a large amount of wall-space with the pages of the Philosophical *Transactions*, I am afraid the public would not care to look at them when we had done. This is undoubtedly rather hard upon us, for our purpose is the same as yours—namely, to seize the idea which lies hidden under the shifting phenomena of nature, and to bind it in such fetters that it may increase the pleasure and the profit of endless generations of men. We both seek truth, and we both seek beauty. Even your terminology has a certain appropriateness to us. And he who has eyes to see will note in the dry pages of our *Transactions* the vast aërial perspectives of discovery, and the wonderful chiaroscuro of the intellectual world, as thought throws here and there a ray amid the shadows of the unknown. But, Sir, I will not complain of the unavoidable. Art is the elder sister of Science, and reached her maturity while Science was in leading-strings. Nay, I will be generous, and acquaint you with a fact not generally known; to wit, that the recent progress of biological speculation leads to the conclusion that the scale of being must be thus stated—minerals, plants, animals, men who can't draw, artists. Thence I conclude, Sir, that you, as President of the Academy, are the crown and summit of creation. My statement, however complimentary, may be a little startling, and you will, therefore, I hope, permit me to state the grounds on which it takes rank as scientific truth. We have been long seeking, as you may be aware, for a distinction between men and animals. The old barriers have long broken away. Other things walk on two legs and have no feathers, caterpillars make themselves clothes, kangaroos have pockets. If I am not to believe that my dog reasons, loves, and hates, how am I to be sure that my neighbour does? Parrots, again, talk what deserves the name of sense as much as a great deal which it would be rude to call nonsense. Again, beavers and ants engineer as well as the members of the noblest of professions. But, as a friend of mine discovered a few years ago, man alone can draw or make unto himself a likeness. This, then, is the great distinction of humanity, and it follows that the most pre-eminently human of creatures are those who possess this distinction in the highest degree. Such, Sir, is the best return which at the present date Science can give you for your kind words about her. I trust you will not use your proud position too haughtily; but as before and now, so in future, permit such an one of the humble primates as myself to share in your triumphs."

THE MEDICAL SOCIETY OF LONDON.

The Society held a *conversazione* on Monday last, at the Hanover-square Rooms. There was a numerous attendance of Fellows and visitors. Dr. Andrew Clark, the President, was in the chair. The oration was delivered by Dr. Cholmeley: it was a most able production, and was listened to with great attention. A report of it will be found at page 521. Amongst the objects of interest exhibited were the following:—A number of drawings, casts, and wax models relating to anatomy, physiology, and pathology, as well as some of the bones of a fossil whale, the skeleton of which was exhumed by himself in Suffolk, two models from nature of the viscera of the gorilla, etc., all very interesting, by Dr. Edwards Crisp; various forms of galvanic apparatus, and a new form of electric cautery, etc., by Messrs. Krohne and Sesemann; a beautiful coloured cast of a vesicle from revaccination, by Dr. Brunton; an etching, by Seymour Haden, F.R.C.S.; new ophthalmological instruments, and a collection of Japanese enamels, by Brudenell Carter, F.R.C.S.; Surgical instruments, by Messrs. Matthews Brothers, Messrs. Arnold, and Mr. Hawksley; microscopes, by M. T. Ross; photographs, by Mr. Samuel Walker and Messrs. Barraud and Jerrard; a couch and other spinal appliances, of great variety and ingenuity, by Mr. Ernst; Surgical instruments, etc., by Mr. J. T. Pratt; some excellent crystals, etc., by Messrs. Squire; and some new chemical preparations by Messrs. Young and Postans.

INSPECTOR-GENERAL DANIEL SCOTT.

Dr. Daniel Scott, Inspector-General of Army Hospitals (half-pay), has been nominated for the good-service pension of £100 per annum, which fell vacant on the death of Inspector-General Dr. James Henderson. Dr. Scott served for forty-six years on full pay, and more than thirty years of that period on foreign service. He entered the army in February, 1813, as Hospital mate and assistant, and served in the Peninsula from March, 1813, till May, 1814, afterwards for varying periods in Sicily, Genoa, and the Ionian Islands, at the latter station for ten years. In October, 1830, he went to the West Indies, where he remained till August, 1846, and on his return to this country was appointed Inspectorial Medical Officer of the Barracks and Hospitals in the United Kingdom. In May, 1854, he went to the Mediterranean, and superintended the Medical arrangements of the troops at Malta during their transit to and from the Crimea. This duty he performed with great efficiency and zeal. His several commissions were dated as follows:—Hospital mate and assistant, February 8, 1813; Assistant-Surgeon, March 13, 1824; Surgeon, October 17, 1834; Deputy Inspector-General, August 2, 1850; Local Inspector-General, June 7, 1854; Inspector-General, September 25, 1857. He retired on half-pay on February 21, 1859.

CORONERS' INQUESTS.

On Friday, the 14th ult., the Judge-Advocate-General, the Right Hon. J. R. Davison, Q.C., M.P., arrived on a visit at the Aubreyes, the seat of a personal and Professional friend in Essex. Mr. Davison went to bed apparently in his usual health. The next morning he was found dead in bed, with a Parliamentary Blue-book lying by his side. No suspicion whatever attached, but, because the death was sudden, the coroner thought fit to hold an inquest under the roof of Mr. J. St. George Burke, Q.C., the host of Mr. Davison. Of course, the verdict was "Death from natural causes," no one having ever entertained a doubt that the diseased had "died by the visitation of God." This proceeding has been objected to in legal circles as not only needless and offensive, but also illegal. In 11 East's Reports, p. 229, which was an application for a mandamus by the Coroner for Kent to compel the justices of that county to allow his fee for holding an inquest, Lord Ellenborough, in refusing the rule, said "that there were many instances of coroners having exercised their office in the most vexatious and oppressive manner, by obtruding themselves into private families, to their great annoyance and discomfort, without any pretence of the deceased having died otherwise than a natural death, which was highly illegal." Also, in The Queen *v.* the Great Western Railway Company, 3 Q. B. Reports, p. 333, Lord Denman said—"The mere fact of a body lying dead does not give the coroner jurisdiction, nor even the circumstance that the death was sudden. There ought to be a reasonable suspicion that the party came to his death by violent or unnatural causes. . . . If," continues Lord Denman, "the verdict be 'Death by the visitation of God,' nothing more is done; for, in truth, it appears that there was no occasion for an inquest. . . . The coroner must, therefore," he adds, "before he summons a jury, make some inquiry." There may be doubts as to the necessity for an inquest on the body of Mr. Davison; and if the Coroner for Essex should be so ill-advised as the former Coroner for Kent, in the event of the justices disallowing his fee, as to apply to the Court of Queen's Bench for a mandamus, probably Sir Alexander Cockburn will but re-echo the opinion of his predecessors. The justices of every county would do well strictly to scrutinise all inquests resulting in a verdict of "Died by the visitation of God." Apart from the expense to the county, such inquests are vexatious, and might well be superseded by a private inquiry conducted by a Medical Officer of Health.

CHELSEA BOTANIC GARDEN.

The Society of Apothecaries has for some years past been paying a good deal of attention to the maintenance and improvement of the valuable collection of medicinal plants in its garden at Chelsea. When Dr. Lindley was Professor of Botany to the Society, a lecture-room within the garden was used during several summer sessions for demonstrations from fresh specimens of those plants used in Medicine which could be seen growing at Chelsea on the spot, and tickets of admission to the garden and the lectures were given to all students of Medical schools who applied for them. This custom is now to be revived, and a series of six lectures, open without charge to all registered Medical students and to members of the Medical Profession who apply for tickets for the course, is to be given. The lectures will be delivered at the garden by the present Curator, Mr. Thomas Moore, F.L.S. They will begin on Wednesday, May 31, and end on Saturday, June 31. These lectures are to be delivered on Wednesdays and Saturdays throughout the course, from four to five o'clock, and they will be illustrated with specimens from the garden, selected as far as possible from the plants possessing medicinal properties. This utilisation of the Chelsea Garden will be at least an attempt to carry out the wishes of Sir Hans Sloane, who bequeathed the garden to the Society, and we may hope that it will be useful in reviving amongst Medical students a love for the most delightful and elegant of the sciences subservient to Medicine. Tickets for the lectures can be obtained at the Hall up to May 20.

WOMEN'S RIGHTS IN MEDICINE.

It will be within the recollection of some of our readers that a little time ago, when the Women's Righters succeeded in forcing their way into the Pennsylvania Hospital, there was an *émeute* among the students, and the ladies who made their appearance there were not received with the politeness to which they had been elsewhere accustomed, to put the mildest point upon it. But the ladies were not daunted; they forced their way into the operating theatre, where their demeanour was described by their admirers as angelic—by their opponents as something very different; and the youths who resisted their entrance, out of respect to their own modesty, were sternly denounced all over the land. They had made their protest, however, roughly, and it was unheeded. But the following extract from the latest *Philadelphia Medical Times* all unwillingly teaches the result. The Pennsylvania Hospital is an institution of which men on this side the water say no evil. It is the oldest, and was for long the best, school in America. And now what has it come to? A refuge for Women's Righters and quacks!—for the so-called Eclectics are eclectics only in the sense that they reject all those mineral remedies which the experience of ages has proved useful. Really they belong to the Coffinite persuasion.

"There is no other institution in Philadelphia in which the interests of the Medical Profession have centred for so long a time as the Pennsylvania Hospital. We cannot, therefore, look with equanimity or indifference upon its present decline in popularity with students.

"In the early part of November, 1869, nearly 500 tickets were sold, and we are told that on one or two occasions that number of students actually assembled in its amphitheatre, constituting, it is believed, the largest class in attendance upon clinical lectures in the world. During the past winter less than 200 students attended the clinics. Why has this change occurred? More favourably situated than any other Hospital in the city, within ten minutes' walk of two great schools of Medicine and of the homes or boarding-houses of the students, with precisely the same Medical staff, many of the members of which are popular teachers, and affording opportunities for clinical study unsurpassed elsewhere, the change since last year seems incomprehensible.

"We know that it is a prevailing impression in the community that students are deterred from coming simply because women are now instructed in its wards. This petty feeling has, we know, no existence. Nor was there at any time any desire on the part of the students to prevent women from studying Medicine, although this has, time and again, been asserted. The position which they took last year—and we have never seen it successfully assailed—was that clinical instruction should not be abridged in consequence of the presence of women. The tickets had been bought with the implied, if tacit, understanding that the cases exhibited and lectured upon should be as varied as they had always been, and the disturbances which took place upon the appearance of the students of the Women's Medical College were in great measure due to the ill-advised announcement which was made to the class that cases of venereal disease, or those involving exposure of the person, could no longer be shown.

"There is a point which seems to have been systematically ignored by the advocates of women's rights, and that is, that there is no necessity now, nor has there ever been any, for women who desire to be instructed in clinical Medicine to attend Hospitals in which male students are taught. The Women's Medical College is situated in a part of the city unprovided with a dispensary with the exception of the one attached to it. During the time it has been in existence, dispensaries have started up in other parts of the city, and have attracted a large number of patients. The Hospital attached to the Women's College has also, within the last few years, been the object of liberal bequests; and, with the interest which is manifested in it, there ought to be no difficulty in procuring such a subscription-list as would insure its permanent success. Why, then, should women continue to force themselves upon teachers who are not interested in their progress, and who can see already, in this attempt to force them into a Profession for which they are not specially fitted, the foreshadowings of failure?

"The mere paucity of attendance upon the regular lectures of the Pennsylvania Hospital is not the only evil in the present condition of things there. If the class, poor as it is in numbers, was made up of the students of either of the scientific Medical schools of the city, the lecturer would at least have the satisfaction of feeling that he was casting seed where it was likely to grow and bring forth good fruit; but we are told that the large majority come from the Homœopathic and so-called Eclectic Colleges—for what purpose we cannot imagine, unless it be to acquire a right to the certificate of the Hospital, which we have reason to believe is not unfrequently made to pass for a diploma, although it is simply a certificate that the student has attended a course of clinical instruction, and may be had without an examination, on the payment of five dollars, by anyone who has already bought the Hospital ticket."

Will Edinburgh be warned, and hold fast to its present wise determination, or shall that honoured name also be relegated to quacks and humbugs?

DR. ODLING ON PHLOGISTON.

Dr. Odling charmed a large audience at the Royal Institution on Friday evening last, by a brilliant discourse, intended to rehabilitate the doctrine of "phlogiston," or rather, perhaps, to show how the opinions held by the illustrious Stahl and his followers harmonise with facts and doctrines admitted at the present day. Want of space this week prevents us from giving the details.

THE LIVERPOOL BOTANIC GARDENS.

Some portion of the conservatories of the Liverpool Botanic Gardens having been for some time past in a very dilapidated and unsafe condition, much to the detriment of numerous valuable foreign plants which they contain, a vigorous memorial was adopted by the Medical Institution, at its last meeting, to the Corporation on the subject. This memorial, accompanied by similar ones from other scientific societies, has had the desired effect, the Finance Committee having recommended the outlay of £3500 for the erection of a new plant-house.

SMALL-POX IN LIVERPOOL.

Notwithstanding occasional oscillations, the mortality from small-pox in Liverpool is, on the whole, pretty steadily declining. The fatal cases last week were 74, as against 68 and 77 in the previous weeks. Of the 74, 45 were returned as unvaccinated, and of 7 no report was given. Thus, 21 weeks after the outbreak of the epidemic, nearly 60 per cent. of those who die from it are unvaccinated.

DR. BALLARD ON THE HEALTH OF ISLINGTON.

Dr. Ballard, in his Report on the Sanitary Condition of St. Mary, Islington, for March, 1871, says that—

"Since the end of March a sudden and extensive outbreak of the disease (small-pox) has occurred at the north-eastern part of the parish, coincidently with a similar outburst in the adjoining parish of St. Pancras. Of the 198 cases mentioned above, not more than half—viz., 98—were sent to the small-pox Hospitals, the remaining 100 being treated at home. This arose in some instances from the unwillingness of the patients to be removed, in other instances from the lack of sufficient Hospital accommodation. There is just above the pauper class, for whom the Board was bound to provide, a class of persons—artisans, shopmen, clerks, laundresses, petty tradesmen, and such-like—who, although never in the receipt of parochial relief, have been driven to seek refuge in the Hospitals of the Asylums Board when attacked with small-pox. To have refused such persons admission would have been to compromise one of the grand objects with which these Hospitals were founded—viz., the isolation, not otherwise procurable, of cases of contagious disease. Such persons, when, as is commonly the case, occupying with their families a single room of a house let in tenements, or only a portion of their own house, while the remainder is let to other families, are as likely to disseminate the contagion to those about them as a pauper would be under similar circumstances. They have no convenience for isolating themselves, and cannot afford the payment of three guineas demanded at the Highgate Hospital, even supposing there were room to receive them there."

THE MORTALITY OF ENGLAND FROM SMALL-POX IN THE FIRST QUARTER OF 1871.

"The registrars of the 2197 sub-districts of England and Wales last quarter reported 21,577 fatal cases of the seven principal diseases of the zymotic class, against 20,091 in the first quarter of 1870; 6086 were referred to scarlet fever, 4899 to small-pox, 4073 to different forms of fever, 2632 to hooping-cough, and 1476 to measles. The deaths from scarlet fever showed a considerable decline upon the last quarter of 1870, but were only 600 lower than in the first quarter of that year. The fatal cases of fever, hooping-cough, and measles each showed a considerable decline last quarter upon the corresponding three months of 1870, while those of small-pox showed an excess of nearly 4500, of which further details will be found below.

"The epidemic of small-pox, which has more or less generally prevailed throughout the country, is doubtless the most important feature in the death returns for the first quarter of this year. The deaths from small-pox in England and Wales in 1864 were 7684, and steadily declined to 6411, 3029, 2513, 2052, and 1565 in the five following years—1865-9. In 1869, therefore, the fatal cases of this disease averaged rather less than 400 per quarter. In the four quarters of 1870 the 2197 registrars of England and Wales reported successively 405, 446, 500, and 1229 fatal cases of small-pox. The present epidemic may therefore be said to have broken out in the last quarter of 1870, the 1229 deaths in that quarter having further increased to 4903 in the first quarter of this year. Of these, 2400 occurred in the metropolitan division; their distribution in the various parts of London have been dwelt upon in the weekly returns. In the South-Eastern counties 203 deaths occurred, of which 42 were returned in Brighton, 32 in Croydon, 24 in Southampton, 14 in Medway, and 13 in Kingston. In the South Midland counties 102 deaths were returned, of which 11 occurred in Staines, 10 in Uxbridge, 12 in Brentford, and 18 in Edmonton. It will be seen that most of these places are in close proximity to the metropolitan district. In the Eastern counties 88 deaths were referred to this disease, including 60 in West Ham and Epping, also close to London. In the South-Western counties there were 54 deaths, of which 11 each occurred in Tavistock and Falmouth. Only 40 deaths were returned in the West Midland counties, with their more than two and a half millions of population; the highest district number was 9 in Nuneaton and 8 in Oswestry. In the North Midland counties, of the 25 deaths 18 occurred in Great Grimsby. In Lancashire and Cheshire, the North-Western counties, 1224 deaths were reported, of which 1062 occurred in Liverpool borough, 43 in Ormskirk district (including Southport), 16 in Birkenhead, 18 in Manchester city, and 10 in Northwich. In the three Ridings of Yorkshire, containing over two millions of inhabitants, only 69 deaths occurred from this disease, including 13 in Keighley and 15 in Kirkleatham sub-district. In the Northern counties there were 463 deaths, of which 411 were returned in the county of Durham, including no less than 238 in South Shields, also 78 in Stockton, 37 in Hartlepool, 17 in Durham, 15 in Auckland, and 13 in Gateshead; in Northumberland, 25 and 23 respectively occurred in Newcastle-upon-Tyne and Tynemouth. In the Welsh counties (with Monmouthshire) 235 deaths occurred; of these 141 were returned in Llanelly, 34 in Swansea, and 11 in Llanfyllin. From this *résumé* of the distribution of the fatal cases of small-pox last quarter, it will be seen that the epidemic was almost confined to four great centres of infection, London, Liverpool, and the mining districts of Durham and South Wales. Nearly all the smaller outbreaks may be more or less directly traced to one of these centres; Brighton, for instance, has doubtless suffered from its intimate communication with London. There is distinct evidence in many cases of the introduction of the disease into several seaside towns by sailors; and considering its fatal prevalence in Holland, Belgium, and many parts of France, it is not a matter for great surprise that Southampton, Great Grimsby, and one or two other ports have suffered from the epidemic. It is indeed very probable that the epidemic in London was due to the large arrivals of French emigrants during the latter part of last autumn. That the epidemic may to a great extent be traced to our foreign communications is beyond doubt, and it is to be regretted that the steady decline of deaths from small-pox in England, in the six years 1864-69, had induced a certain apathy in the matter of vaccination, and thus left a large portion of the population unprotected from the disease. In times of severe epidemic, like the present, large numbers of the vaccinated, in some way or other, also suffer for the neglect which has left so many unvaccinated.

"Scarlet fever, although showing a decline of 5660 fatal cases upon the last quarter of 1870, continued fatally prevalent during the first quarter of this year, in nearly all the counties of England and Wales."

FROM ABROAD.—M. GALEZOWSKI ON THE INFLUENCE OF ALCOHOLISM ON THE SIGHT.

At one of the meetings of the Académie de Médecine, held just after the siege of Paris, M. Galezowski read an interesting paper, which we have hitherto omitted to notice. He entitles it "The Influence of Alcoholism on the Sight," and describes a form of amblyopia which is induced by the excessive use of alcohol. Delirium tremens is often accompanied by disturbances of the senses, and especially of vision; but the amblyopia which supervenes in persons suffering from chronic alcoholism is of a much more marked character, and its symptoms are so little known, that a short account of them will probably be acceptable.

Alcoholic amblyopia has been unfortunately of very frequent occurrence in Paris, especially since the siege was commenced, as may be judged from the following figures taken from the records of the author's clinic:—During the five months ending in February, fifty patients presented themselves suffering from this malady; while during the twelve months which preceded the siege, only nineteen cases were met with. This increase would seem to arise from the habit which prevailed during the siege of drinking alcoholic liquids in the morning fasting, the stomach being in general entirely void of any nutritive aliment. The affection was only met with in men, with the exception of one case. The following are the characteristic symptoms:—1. The patients perceive that their sight has become somewhat suddenly enfeebled, but it then remains in a stationary condition for several weeks. 2. The acuteness of vision is sensibly diminished, the patients being scarcely able to read the characters 8 or 10 of the author's typographic scale; while in some cases they cannot distinguish even the largest, as No. 50. 3. Distant vision is much diminished, the face of a person not being recognisable at some paces' distance. A sort of white haze seems to envelope every object. 4. A kind of nyctalopia accompanies this form of amblyopia, the patients seeing more distinctly as the evening approaches, the haze then being less apparent. 5. The perversion of the chromatic faculty is not less characteristic. Carmine, red, and green are often confounded with each other; violet is taken for red, and yellow for red. In these patients a peculiar form of morbid dyschromatopsy is sometimes observed, which is characterised by the too prolonged persistence of each coloured impression upon the retina giving rise to a confusion of colours. Thus, these patients recognise accurately at first each distinct colour, but as soon as they direct the eye to another colour, the perception becomes confused, and they perceive either the primary colour, or a mixture resulting from a combination of the two colours. 6. These patients frequently see double or triple, probably on account of spasmodic contractions of the muscles of the eye. A waiter at a *café* lost his situation because, as he saw every cup double, he poured the coffee on the outside of it. 7. In some of the patients the peculiarity is observed of the objects which they look at seeming to advance or recede, owing to a kind of spasmodic action of the accommodating muscle. 8. The amblyopia is very frequently accompanied by visual hallucinations, which are, however, rather due to a cerebral than an ocular affection. 9. The pupils are not alike in the two eyes, one being generally larger than the other, and often irregular. No other alteration is observed in the exterior of the eyes. 10. Ophthalmoscopic examination, as a general rule, only furnishes negative results, the papilla of the optic nerve remaining of its normal colour. In some cases, however, there may be observed a kind of serous suffusion, especially in the vicinity of the vessels. The arteries in some places exhibit spasmodic contractions, while the veins are tortuous and gorged. This disposition is observed to be more marked as the disease becomes prolonged, and then the papilla of the optic nerve is pale and whitened, without, however, exhibiting that pearly whiteness which is met with in progressive atrophy of the papilla.

The differential diagnosis of the disease need not be insisted upon after the above statement of symptoms, which proves that alcoholic amblyopia is an affection of the eye apart, which can only be simulated by commencing atrophy of the papilla. But any doubts that may be entertained become dissipated in the subsequent course of the affection; for, while the atrophy advances progressively, the amblyopia remains stationary for weeks or months. It may even be completely cured, to return again after renewed excesses in drinking. With respect to the pathology of this form of amblyopia, M. Galezowski says that "it is due to a kind of paresis of the longitudinal muscular fibres of the arteries, which act in dilating them, and to a spasmodic contraction of the circular fibres of these same vessels. The blood does not arrive in a sufficient quantity for the arteries, while the veins undergo a kind of passive stasis." In conformity with this view, a collyrium of ésérine or calabarine has been employed as a means of inducing relaxation of the spasmodic contraction of the arteries. The efficacy of this agent is incontestable, for the patients are immediately relieved, seeing better during the whole period that its action continues, while its daily use leads to a sensible amelioration. In many of the cases large doses of bromide of potassium have produced sensible amelioration, confirming M. Gübler's good opinions of that medicine in the treatment of alcoholism in general.

Alcoholism exerts, also, a very mischievous effect on operations on the eye; and the want of success of the operation for cataract in the poorer classes should often be attributed to alcoholism and a shattered general health. The paper terminates with the following summary:—1. This disease appears as a consequence of prolonged indulgence in alcoholic drinks, and especially when these are taken fasting or before dinner. 2. Bad food and a wretched condition of existence predispose to its development. 3. Complete abstinence from alcoholic drinks during several weeks or months is an indispensable condition for recovery. 4. The bromide of potassium is a very efficacious remedy; and the ésérine collyrium is one of the best means of combating the visual disturbance. 5. This amblyopia is tractable when combated at an early period; but later it becomes a serious affection, which is very difficult of cure.

PARLIAMENTARY.—HABITUAL DRUNKARDS—SMALL-POX AT HOUNSLOW—LUNACY REGULATION (IRELAND) BILL—EPPING FOREST—VACCINATION RETURNS—PENALTIES FOR NON-VACCINATION—THE BUDGET.

In the House of Commons, on Thursday, April 27,

A petition from the Royal College of Surgeons of Edinburgh in favour of the Bill for the regulation of habitual drunkards was presented by Mr. McLaren.

Lord George Hamilton asked the Secretary of State for War whether, considering that a death from confluent small-pox had occurred recently at Hounslow at the barracks of the 4th Middlesex Militia, and that the militiamen themselves were drawn from parts of London where the disease was prevalent, he would consider the expediency of deferring the training of the regiment until it could with safety be billeted upon the neighbouring villages.

Mr. Cardwell: A death occurred in the case of one of the permanent staff, who resided at Hounslow, about a month ago. The regiment assembles on Monday next, and careful precautions will be taken by the Surgeon to prevent any risk of infection. The recruits, who have been there nearly a month, are very free from sickness, and it has not been thought necessary to postpone the training of the regiment.

The Lunacy Regulation (Ireland) Bill passed through committee.

On Friday,

Mr. Cowper-Temple, seconded by Mr. Holmes, moved an address calling on the Government to take measures, in accordance with the address to the Crown carried last year, for preserving as an open space, for purposes of health and recreation, those parts of Epping Forest which have not been enclosed with the assent of the Crown or by legal authority.

This motion was opposed by the Chancellor of the Exchequer and by Mr. Gladstone, but was ultimately carried, the Government being beaten by a majority of 101—197 to 96.

On Monday, May 1,

In answer to Mr. Jacob Bright,

Mr. Bruce said that the Registrar-General, at his own instance and for the public information, obtained returns of the proportions of vaccinated and unvaccinated persons who died of small-pox in the metropolis; but after two months' experience he discovered that the returns were inaccurate and incomplete, and he, therefore, of his own authority discontinued the publication of them. With respect to the vaccinated, there was no evidence of the completeness of the vaccination, and, further, the returns would be misleading unless something like the proportion of vaccinated to unvaccinated persons in the kingdom could be ascertained.

Mr. T. Chambers asked the Secretary of State for the Home Department whether his attention had been called to the fact that the Medical Officer of the Privy Council had stated his opinion, in evidence before the Vaccination Committee, that the penalties of the Compulsory Vaccination Act were too severe, and that a nominal penalty first, and, in case of neglect, one penalty of 20s., was all that ought to be enforced; and whether, in consequence of that opinion, the Home Secretary had given instructions to magistrates to refrain from inflicting repeated fines or imprisonment on successive prosecutions for the neglect of vaccination in the same case where parents had a conscientious objection to the practice.

Mr. Bruce said the committee referred to was still sitting, and had not reported. He had not heard that any such expression of opinion had been given by the Medical Officer, and he rather had reason to believe that it had not; but, however this might be, he should not interfere with magistrates in regard to the administration of an Act of Parliament on the mere opinion of a Medical Officer.

There was a brilliant debate on Mr. W. H. Smith's resolution in amendment to Mr. Lowe's amended Budget, in which he now proposes to meet his deficit by a sixpenny income-tax. Mr. W. H. Smith moved—"That it is inexpedient that the income-tax should be increased to the extent contemplated in the financial proposals of the Government."

On a division, Mr. Smith's resolution was negatived by a majority of 85—335 to 250; and in Committee of Ways and Means the income-tax resolution was agreed to.

The late Sir James Simpson.—A large and influential meeting of the London and Edinburgh Committees for raising a memorial to the late Sir James Simpson was held at Stafford House on Thursday last, the Duke of Sutherland in the chair. The Lord Provost of Edinburgh and many of the members of the joint committees were present. It was announced that the progress of the subscriptions was up to this time very satisfactory, upwards of £5000 having been collected in this country alone. The friends of Sir James in America were actively engaged in raising contributions. A hope was expressed that intending subscribers would forward their contributions as soon as possible, so that the list might be closed.

Mr. Darwin.—Mr. Darwin has presented to the University of Cambridge the remainder of the collections in invertebrate zoology made by him during the celebrated voyage of the *Beagle*.—*Athenæum.*

THE ANNUAL ORATION

DELIVERED BEFORE THE

MEDICAL SOCIETY OF LONDON,

MONDAY, MAY 1.

By WM. CHOLMELEY, M.D., F.R.C.P.

After some introductory observations on the honoured age of the office of Orator to the Medical Society of London, and the long line of distinguished men who had held it, the Orator remarked that he proposed to show from the records of the meetings of the Society since 1773, the share it had had in the advancement of therapeutics and the science of Medicine; and as an example of the care, resolution, and persistence with which it worked out subjects brought before it, he first traced out the history of vaccination in connexion with it.

In June, 1798, Dr. Sims, the President of the Society, related "Some circumstances lately observed in a disease incident to Cows, called the Cow-pock, which, when communicated to the Human Species, is said to remove the liability to Small-pox, in persons who have had that disease. These observations had been made by a Dr. Jenner, of Cheltenham, who is about to publish them." It may be suspected, from the way in which Dr. Sims mentions Dr. Jenner here, that he had not recognised him as being the "Edward Jenner, F.R.S., Surgeon, of Berkely, Gloucester," who had in 1789 been made a Corresponding Member of the Society. In April, 1799, a letter was read on the subject of cow-pock from Dr. Jenner; on April 28, in the following year, he was present at the meeting of the Society, and on that and several succeeding evenings cow-pock occupied the attention of the Fellows. On June 8, 1801, it is recorded that "Edward Jenner, M.D., of Bond-street, a Corresponding Fellow, was elected one of the ordinary Fellows;" and on March 29, 1802, it was resolved—"That the Members of the Medical Society of London, on taking into consideration the very important discovery made by Dr. Edward Jenner, are of opinion that great benefit will accrue to the inhabitants of these islands, and to mankind in general, from the introduction of vaccine inoculation, and that, from their own experience, as well as from the extensive and successful trials made in various parts of the world, it will in all probability eradicate the small-pox, one of the most fatal diseases to which the human species is liable."

A copy of this resolution, signed by the President, was ordered to be sent to Dr. Jenner. These facts show, gentlemen, that at any rate the Medical Society of London is not open to the reproach of having opposed Dr. Jenner's great discovery, or of having been slow to appreciate and honour his labours. In 1804 the Society further signified their appreciation of the value of Dr. Jenner's discovery by presenting him with a gold medal, "struck from the Fothergillian medal die," with the inscription "E. Jenner, socio suo eximio ob vaccinationem exploratam," and on the presentation of the medal, at the annual meeting of the Society, Dr. Lettsom, by request, gave an oration on the discovery of vaccine inoculation, and a biographical account of Dr. Jenner. Evidence may be found in the records of your Society at this time, and later, that when men had once accepted the doctrine of vaccine inoculation they often expected more from it than did its discoverer—they credited it with a more invariable, absolute, and lasting protective power; and some of them even hoped to find in it a protective against other diseases than variola. Then, as in our own time and in all times has so often happened, the disciples outran their master in enthusiasm, though not in knowledge or discretion. In November, 1803, Dr. Marcet read to the Society a letter from Dr. De Carro, of Vienna, on the supposed discovery at Constantinople of the vaccine inoculation being a preventive of the plague. It was stated that 5000 or 6000 persons had been inoculated (or, as we call it, vaccinated) at or near Constantinople, none of whom had since been infected with plague; that Dr. Valli had inoculated "himself without effect with matter from a plague-carbuncle mixed with vaccine matter, and that Dr. Auban had visited two villages near Constantinople in which the vaccine pustules were observed on certain cows, and the inhabitants of which affirmed that the plague never appeared among them." All this information had been communicated by the Physicians to the French Embassy at Constantinople. But at the very next meeting of the Society Mr. King reported that Dr. Lafont, of Salonica, had had two patients with the plague, one of whom died of it, who had both been previously vaccinated. A few years later it was also reported, "upon the authority of a person keeping a large number of dogs, that the cow-pox prevented the distemper from ever ensuing. It was his practice, accordingly, to vaccinate the young dogs within the ear. He never knew them after to have the distemper." I remember this idea cropped up again some years ago; great numbers of dogs were vaccinated inside the ear, and the question of vaccination *versus* distemper was much agitated, and then again died away. In 1837 Mr. Whitmore, Mr. Dendy, and other Fellows observed that vaccination would always cure pertussis, and it was stated that this had been well known to Mr. Ring so long back as in the year 1809. Probably whatever truth there was in this might be explained by the fact that one acute constitutional affection will sometimes mask, or cause the temporary disappearance of another. From 1805 the subject of vaccination was frequently before the Society, and objections and doubts were raised and discussed, which are matters of discussion to the present day. In April, 1805, the President of the Society "mentioned that a gentleman had stated that if syphilis was communicated by vaccine inoculation, it might readily be distinguished by the appearance of the pustules. Dr. Lettsom asked, Could the disease be "so communicated"? but he appears not to have obtained any answer. Very frequently cases of variola, after vaccination, were brought forward to prove the failure of the vaunted protective power of vaccination; then, as still in our days, some men were disposed to make too much of these cases, and to regard them as proving that vaccination only created a false and dangerous confidence of security; and others were too much inclined to explain away or make light of them, and to declare "that cases of variola after vaccination were much more rare than cases of second attacks of small-pox;" both parties being alike forgetful of Dr. Jenner's estimate of his great discovery. But your Society was careful to note and examine into any public statements of injurious effects having followed vaccination, and in November, 1812, it was stated to the Society that "one of the cases of reported death by cow-pox in the weekly bills of mortality had been satisfactorily accounted for; the child had, a week after vaccination, been kept out for three hours, in consequence of which the patient had inflammation of the lungs, of which it died. The searchers, hearing that the child had cow-pox, reported its death accordingly. A letter from the father of the child had been inserted in several of the newspapers, asserting that its death was occasioned as just stated, and not by cow-pox, as inserted." I will not try your patience, gentlemen, by pursuing this subject further, though I might show you (and it seems rather a depressing fact) that thirty, forty, and fifty, and more years ago, the Society discussed the efficacy of diluted vaccine lymph, the necessity of revaccination, the importance of the number of inoculations to be made, and the propriety of now and then having recourse to the cow to restrengthen the lymph, just as the Profession is discussing them now. I will only give one more quotation from our records on this matter, and then I will leave it; and I make this quotation because it seems to give an answer to two questions which I have heard asked during the present epidemic of small-pox—viz., whether it can be necessary to give the protection of vaccination to people who have had small-pox, or to those who are very advanced in life. At a meeting of the Society in January, 1820, a Mr. Brown adduced an instance of the occurrence of small-pox in a married woman who had been inoculated with variolous matter in her infancy. The disease proceeded regularly, and left the cicatrices of pustules, which were intermixed with the marks of those produced by the inoculation." And Dr. Merriman made the following statement:—"A young gentleman at school at the Charterhouse was brought to the residence of his grandmother, the Hon. Mrs. Anson, having been attacked with disease, which turned out to be small-pox. He went through the disorder, and was visited by Lady W. Anson and Lady Lloyd, ladies related to the family. These ladies, who had been inoculated for small-pox many years ago, both received the disease, and went through it. Lady Lloyd, who was 80 years of age, was inoculated in her infancy."

In the first year of the Society's existence, it was determined to offer, every second year, a gold medal for the best dissertation on some general Medical subject, and that the learned of all countries should be invited to compete for it. The first subject chosen was "Fever," and this led to the incident mentioned by your late President (Mr. Gay), in his valuable address last year—viz., that in 1775 the Society received a dissertation from a lady—Dorothea Anna Maria Lucia Hogan Horick van Lobrecht—and that, on the recommendation of the Council, the Society resolved that the lady's dissertation should be returned to her, with a letter, "to be wrote in Latin," stating the reasons why the Society could not admit it. Nothing more than this is to be found in the minutes of the Society's meetings; but, on examining the minutes of Council, I find that the dissertation, written in Latin, was received in competition for the Society's gold medal for the best essay on fevers, and that the Council, together with the Committee of Adjudication, having examined it, recorded their opinion—"That the Society cannot properly take cognisance of it, it being calculated to introduce some empirical nostrum of the authoress, which is to cure fevers in general." One cannot but feel curious to know a little more about this Dorothea Anna Maria Lucia Hogan Horick van Lobrecht, who thus wrote an essay for the first gold medal offered by the Medical Society of London. Was she a forerunner, a type, of the Medical ladies of the present day? If so, then, "appearing ere the times were ripe," and lacking, I suppose, the mental force necessary for making her mark on the age in which she lived, she seems to have disappeared into the darkness and oblivion that envelope many another apostle of progress; for the above entries in the records of your Society tell all that I can discover concerning this learned lady of the multitudinous names.

The first paper read before the Society, on September, 1773, appears to have been "On Loss of Voice," by Dr. John Millar, the President; and the second, read the same evening, was by that untiring and eminent supporter of the Society, Dr. Lettsom, and was entitled "Some Observations on the Cause of Pain in Chronic Rheumatism;" but only the titles of the papers are given in the Minutes. At the next meeting Dr. Sims contributed "An Essay on the Ability of the Physician to Cure Simple Fevers;" and Mr. Blizzard a paper "On the Use of Bell-metal Mortars in Apothecaries' Shops;" and in December, Dr. Lettsom read some "Observations on the use of Cold Bathing in Fevers, and on the Effects of Perspiration;" and a paper "On the use of Elm-bark in the Cure of Leprosy." The bell-metal mortar question may be regarded as settled; and I suppose we are pretty well agreed that we may guide a patient through a fever, but cannot *cure* it; but we are still questioning and writing about the value and safety of cold applications in fevers, and our German brethren especially are pointing out their great efficacy in typhus and other pyretic conditions; and the value of elm-bark in skin diseases remains undetermined. I find very early in the records of the Society many instances of the value of electricity in the cure of disease. In 1777, Mr. Robert Sherson reported "A Case of Severe Rheumatism of the Arm, cured by Electricity after other Remedies had failed." He said also that "he had found electricity singularly beneficial in spasms, and various obstructions, particularly of the menses." His paper may be found at page 221 of the first volume of the "Memoirs of the Medical Society of London," published in 1787.(a) And in November, 1779, Mr. Ford read a paper "On the Loss of Voice cured by Electricity." In 1783 and 1787 Mr. Hooper reported "Cases of Periodical Headache cured by Electricity," and at the latter date gave some particulars relative to animal magnetism. In 1789 Dr. Thomas Fowler, of Stafford, reports "A Case of Obstinate Quartan Ague, of five months' continuance, cured by Electricity." It had resisted bark and arsenic, which we may be sure *he* gave full trial to, and other remedies, and then he recollected that "in the early part of his practice he had known of a number of agues cured by the application of electricity in different parts of the country, under the direction of persons no way connected with the Faculty. I observed," he says, "that the chief cures were performed by a number of smart shocks being given, by which the patients were impressed with a strong sensation of fear, and frequently thrown into a copious sweat." Accordingly he ordered the patient, "as soon as she perceived the least sensation of the fit, to receive ten or more smart shocks through her arm and thorax from a ten-ounce vial, until she was seized with fear and began to sweat, and then to go immediately into a warm bed, and promote the sudorific effect for some hours by taking frequent draughts of tepid small-wine whey," and by this means he completely cured his patient. This paper will be found in the third volume of the Society's Memoirs. Towards the end of 1792 another case of the cure of aphonia by electricity was reported, and a letter was read from Dr. Jameson on animal electricity, "showing the existence of such a power in the nerves of animal bodies"; and the next notice of the therapeutical value of electricity is, I think, in November, 1816, when Dr. Clutterbuck related a case of profuse hæmatemesis with amenorrhœa, in which nothing did good till repeated slight shocks of electricity, passed through the pelvis, brought on the catamenia. After that date I have not found any proofs that Medical electrisation was specially brought before the Society till we come to our own days, when, as I need not remind you, the subject has been ably treated by Dr. Althaus, and others of our existing Fellows.

(a) The second volume of these Memoirs also contains a case, reported in 1779, of tetanus (or rather trismus) cured by electricity.

In September, 1790, several of the members reported to the Society "Cases showing the value of Cowhage as a Vermifuge in tænia and other worms," and in 1791 Mr. Chamberlain, an authority then on vermifuge medicines, reported "that he had met with a case of worms in an infant three weeks old, and brought up at the breast." In February, 1792, Mr. Jonas Maldon, of Putney, related a case of tænia successfully treated by oil of turpentine; and in 1809 Dr. Southey, of Durham, informed the Society "that a labouring man there had been extremely successful in curing tape-worm, and that on inquiry it was found that his remedy was oil of turpentine taken fasting in doses of two ounces." In the years 1810 and 1811 the value and the dose of this remedy were frequently discussed; but I find that in April, 1812, Dr. Walker, of Leeds (a Corresponding Member, I think), addressed a letter on the subject to the Society, asserting that *he* had been, in 1798, the first to employ the oil of turpentine in tænia, and that he had given it with success in ninety cases. In 1809, also, the modern use of fern-root as a remedy in tapeworm was brought before the Society.

In 1799, during a discussion on the value and safety of lead as a remedy in hæmorrhages, it was mentioned that in St. George's Hospital the oil of turpentine was employed internally as a styptic. These are instances of what must have been one of the specially great and beneficial uses of the Society in those days—the spread of the knowledge of new or little known medicines and Medical appliances. The following are other examples:—In 1797 Mr. Hurlock informed the Fellows that he had found an ointment prepared with extract of common savin very efficacious for keeping blisters open. In 1813 Mr. Powell mentioned that "many persons suffered extremely from blisters, the fly being absorbed and producing strangury; but he had now adopted the practice of placing over the plaister a piece of silver paper, which does not prevent it from acting, and never occasions strangury or ulceration, so common in children." In 1807 Dr. Taylor sent to the Society, from India, some specimens of the gentiana chirayta, as a new and valuable bitter.

Dr. Fowler's "Medical Report of the Effects of Arsenic" was published in 1786, and, in 1790, Dr. May reported to your Society "A Case of Ague cured by Arsenic"; in 1795 "A Case of Obstinate Intermittent Fever cured by Arseniate of Soda" was related; and in 1790 Dr. Bradley and the President (Dr. Sims) spoke of the great value of Fowler's solution in intermittents. In 1802, I meet with mention of an employment of arsenic, with which I was not previously acquainted. Mr. Pears informed the Society that he had found arsenic of great use in pertussis; "that it relieved this distressing complaint on the second day of its administration. He gave one drop of Fowler's solution three or four times a day." Dr. Yellowby stated that "it had been recommended in this disorder by Dr. Ferriar, of Manchester, a very trustworthy Practitioner." In 1813, Dr. Lettsom and Mr. Adams related cases of the good effects of the arsenical solution in hemicrania; "in Mr. Adams's own case it had afforded sudden and permanent relief."

In 1794, Dr. Sims spoke of the effects of nitrate of silver when taken internally; and, in 1802, he read a paper on its great value as a remedy in epilepsy and chorea. This paper, which was published in the fourth volume of the "Memoirs of the Medical Society of London," contains, I believe, the earliest notice of the efficacy of this salt in those diseases. The dose of nitrate of silver was frequently discussed, and very small doses were generally recommended; in 1806, Dr. Sims stated that, "though he had never been able to give more than one-fifth of a grain, three times a day, without causing pain in the stomach, he had heard of a Physician in town who had given eighteen grains a day." At one of the meetings in 1819, it is mentioned that "Dr. Clutterbuck briefly adverted to the blue colour imparted to the body by the internal use of nitrate of silver."

In 1790 a case of dropsy cured by digitalis is reported, and again, in 1798, the tincture of digitalis, in twenty-minim doses, is recommended "as a valuable remedy in dropsy." And in 1806, Mr. Leese stated that "he found that hooping-cough could generally be cured in three weeks by tincture of digitalis. He began by "giving two drops in milk of almonds, and gradually increased the dose till sickness." In 1810 Mr. André related that "a gentleman of his acquaintance had found out a remedy for palpitation of the heart, with which he was afflicted, and the remedy was the tincture of digitalis, taken in drachm doses."

The value of elaterium as a purgative in dropsy is mentioned by Dr. Sims as early as 1798. In 1819 I meet with the first mention of prussic acid as a medicine, and it was not an encouraging one. Dr. Uwins had tried it, and found it to be quite inert, Dr. Clutterbuck thought it objectionable on account of the uncertainty of the dose and its liability to decomposition; he had tried it at the General Dispensary, but had not observed any good effects from it. In Paris, it was stated, no confidence was placed in it. Later on it is spoken of with much more respect, and warnings given against its incautious employment.

In 1820 the President of the Society, Dr. Clutterbuck, introduced croton oil to the notice of the Fellows as "a new purgative sent over by Mr. Cornwell, Surgeon at Madras, to his friend Mr. Short, an apothecary in Ratcliff-highway. Dr. Clutterbuck had given half a drop in fifteen cases, and found that it generally produced from three to twelve stools, while in one case it caused as many as twenty." Dr. Copland observed that on the coast of Africa, where the nut grows, the natives are in the habit of taking twenty grains of the powdered nut as a common purgative. In Pereira's "Materia Medica" we are told that ergot of rye was not employed in England to excite labour-pains till 1824; but I find that at a meeting of your Society in April, 1823, Mr. Kingdon asked "whether ergot of rye, recommended for causing uterine contractions, might not be employed for the purpose of arresting uterine hæmorrhage. For several years after this, the value of secale cornutum in labour and in post-partum hæmorrhage, its uses and abuses, are frequently and warmly discussed. In 1825, Dr. Clutterbuck, then again President, "alluded to the sulphate of quinine as a new remedy, the value of which, and the question of its superiority to bark, required inquiry and discussion;" and he also referred to iodine, "the worth of which, especially in scrofula, was still unsettled."

The value of burnt sponge, the forerunner of iodine, as a cure for bronchocele, was noticed in 1798; but in 1813 Dr. Clutterbuck recommended *ironing* the part three or four times daily as a cure for this affection. "A young woman at the General Dispensary, who had patiently tried all the ordinary remedies without advantage, tried this three or four times daily, for a quarter of an hour at a time, placing flannel between the iron and the skin. For two or three "months it had no effect, but at the end of eight months the bronchocele had entirely disappeared, and there had been no return." The patience and perseverance of the young woman certainly were admirable, and richly merited rewarding by success. In 1818 the Society's attention was directed to a means of saving life, or, at least, averting imminent danger, which has been before it again very lately. Mr. Brine mentioned the case of a man in Guy's Hospital with organic disease of the stomach, in whom, when nearly dead, ten ounces of blood from the arm of a gentleman were transfused into the jugular vein with a common syringe. Instant revival followed, but death occurred thirty-six hours afterwards. The short notes of the discussion in this case might almost serve as some notes of the observations made when Dr. Richardson brought the subject before us in January this year. Objections were made to the employment of *venous* blood, to which it was replied, that its use had answered perfectly well in experiments on animals, and that it was the appropriate stimulant to one side of the heart at any rate. Suggestions were made as to the employment of transfusion, especially in cases of exhaustion from uterine hæmorrhage. In October, 1825, Mr. Doubleday reported its successful employment. "A woman was apparently *in articulo* from post-partum hæmorrhage, when fourteen ounces of blood, taken from the arm of her husband, were slowly injected by a syringe, two ounces at a time, into a vein of her arm. After the injection of six ounces she had greatly revived, pulse, warmth, etc., reappearing, and eventually she perfectly recovered. She had a copious secretion of milk, and in every way did well." In November of the same year, a similar case, also perfectly successful, was reported by Dr. Uwins, and a third, where from eight to ten ounces of blood were transfused by Mr. Doubleday, in 1826. This, also, resulted in recovery. I fear we have made no advance in the employment of this means since that date; but with the greatly improved and admirably simple instruments for transfusion placed at our service by Dr. Richardson, and with his help and teaching, we may perhaps be emboldened to a renewed and more extended use of what does undoubtedly seem to be a most powerful and prompt remedy in dangerous exhaustion. Paracentesis thoracis is first mentioned in March, 1830, when the operation was recommended by Mr. Kingdon, who had performed it on a patient of Dr. Babbington's. During four successive meetings the Society then discussed the symptoms and treatment of effusions into the chest, and Dr. Thomas Davies related that "he had known of seventeen cases of paracentesis thoracis, twelve of which occurred in his own practice; in nine there was fluid only in the chest, and of these six were perfectly well, one still under treatment, and two had died.

(To be continued.)

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	Mar. 25.	April 1.	April 8.	April 15.	April 22.	April 29.	April 29. Sent to Hospital.
West—							
Chelsea	5	6	4	9	9	?	—
St. George, Hanover-square . . .	10	11	12	16	19	23	13
St. James, Westminster .	4	4	8	8	6	2	2
Paddington . . .	?	?	?	?	24	12	9
North—							
St. Pancras . . .	65	44	122	102	121	?	—
Islington	49	26	45	58	57	61	29
Hackney	24*	29	31	?	46	30	15
Central—							
City of London . .	13	13	7	16	14	13	6
St. Giles-in-the-Fields .	5	8	?	11	2	14	14
Holborn	2	3	4	8	8	9	7
St. Luke's . . .	12	25	20	20	17	25	20
East—							
Whitechapel . . .	33	15	19	14	17	?	—
Poplar	?	11	?	?	?	?	—
South—							
St. Mary, Newington .	28	23	27	34	37	47	44
St. Olave, Southwark .	11	5	3	3	3	5	3
St. George-the-Martyr, Southwark . . .	?	9	19	30	31	26	16
Lambeth	33	17	32	24	?	?	—
Clapham	22	13	40	28	23	32	18
Wandsworth . . .	5	10	13	6	6	8	6
Putney	?	?	?	1	?	?	—
Streatham . . .	3	3	4	7	2	?	—
Camberwell . . .	4	4	?	?	?	?	—
Greenwich . . .	—	—	—	?	?	—	—
Lewisham . . .	?	2	4	?	?	?	—
Plumstead . . .	6	4	19	5	3	3	—

* Return imperfect.

POOR-LAW DISPENSARIES IN THE METROPOLIS.

The Poor-law Board have just issued an order varying in certain important particulars the duties of district Medical officers in some of the unions and parishes in the metropolis. This order applies to the following unions:—Greenwich, Hackney, Holborn, Poplar, St. George's, St. Olave's, St. Saviour's, Stepney, Westminster, Whitechapel, Woolwich; and to the undermentioned parishes or places:—Mile-end Old Town; Paddington; St. George-in-the-East; St. Giles, Camberwell; St. Giles-in-the-Fields, and St. George, Bloomsbury; St. Leonard, Shoreditch; St. Luke, Chelsea; St. Mary Abbot's, Kensington; St. Mary, Islington; St. Mary, Lambeth; and St. Pancras.

The guardians are required, in June next (and subsequently in April of each year), to appoint a dispensary visiting committee, and also to appoint one or more of their district Medical officers to the dispensary which shall be provided in his or their districts. The committee is to meet once a fortnight, at least, to inspect the books kept by the Medical officer and the dispenser, and to ascertain, as far as practicable, whether the several Medical and other officers attached to the dispensary have duly discharged their duties "in the interval since their last visit." These words, limiting, as they do, the period to which the investigation is to extend, appear designed to save the dispensary Medical officer from the annoyance to which district Medical officers are now not infrequently subjected by the raking up of complaints in respect of attendances long previously given, and of which neither record nor recollection is preserved.

The committee is to approve the estimate of drugs, etc., for use at the dispensary, when prepared by the dispenser and certified by the Medical officer. They are to report to the board of guardians the result of their labours.

The following are the newly prescribed duties of each district Medical officer when a dispensary has been established for his district:—

"No. 1. To attend at the dispensary to which he shall be appointed by the guardians, every day except Sundays, at such time as may be appointed by the said guardians, and to remain there for one hour at the least, or for such longer period as the guardians may direct, for the purpose of affording such Medical or Surgical aid and advice, and prescribing such medicines, as may be necessary, to all paupers for whom application is made, and in respect of whom an order is presented, as hereinafter provided, and to enter in a book kept for that purpose at the dispensary the time of his arrival and departure, and to write his name or the initials of his name against such entry at the time of his attendance.

"No. 2. To attend upon, duly and punctually, either at the dispensary during the appointed hours for attendance thereat, or at the home of the poor person on whose behalf application is made, or elsewhere, as the case may require, and supply all requisite Medical or Surgical advice and assistance to every pauper in the district placed under his charge, whom he shall be required to attend as Medical officer by a written or printed order of the guardians, or of a relieving officer, or of an overseer, when such overseer shall be lawfully entitled to grant relief to such pauper.

"No. 3. To file, and keep at the dispensary until the guardians shall otherwise direct, all such orders as last aforesaid received by him, which orders, when given by direction of the guardians or by a relieving officer, shall be in the forms A and B respectively in the schedule (B) hereunto annexed.

"No. 4. To keep and duly enter up daily a Medical Relief Register, and index thereto, in the form C in the last-mentioned schedule, and submit the same to the guardians at the first ordinary meeting in each quarter, and whenever the guardians shall require it to be produced to them, which register shall be deposited at the dispensary, except on the days when the same is required to be submitted to the guardians, and shall be open to the inspection of the Dispensary Visiting Committee, *and, at any time between the hours of ten o'clock in the forenoon and four o'clock in the afternoon, to the Medical Officer of Health*, if any, appointed by the vestry or other competent authority within whose jurisdiction the dispensary shall be situate.

"No. 5. To supply to each pauper under his treatment when requisite a written prescription in one of the forms D and E in the last-mentioned schedule, signed with his initials, and to renew such signature, with the proper date, whenever the prescription may be changed or renewed by him either at the dispensary or at the home of the pauper or elsewhere.

"No. 6. To notify, at the commencement of every quarter of a year, to the board of guardians, the paupers whose names have been inserted in the Permanent Medical Relief List for a period of six months, and advise the guardians as to the continuance of such paupers in such list, and to take the directions of the board of guardians thereon.

"No. 7. To attend any meeting of the Dispensary Visiting Committee, when required by them so to do."

Those provisions of existing orders relating to the duties of district Medical Officers which are inconsistent with the foregoing are rescinded.

A very salutary provision requires that the relieving officer shall mark upon the order for Medical relief the word "urgent" in every case requiring immediate attention.

District Medical officers will be glad to observe the terms of a note appended to the form of "Order for attendance at the pauper's home," to the effect that, unless it be presented before noon on the day of its date, the Medical officer will not be expected to visit the patient on that day except the order be marked "urgent."

The Medical officer is entirely relieved from the duty of dispensing. For this purpose a dispenser is to be appointed, who must be a "Licentiate of the Apothecaries' Company of London, or duly registered under the Pharmacy Act, 1868, or some other authority of law in that behalf." Besides dispensing, he is to keep the drug accounts, to file the prescriptions, and to assist the Medical officer in keeping the alphabetical index of the paupers attended.

This order will probably be extended to the rest of the metropolis when the remaining unions and parishes have sufficiently advanced with their dispensary arrangements. It is a step towards establishing, throughout England and Wales, the system which has already worked so well in Ireland.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A MEETING of this Association was held on Wednesday evening last, at the Freemasons' Tavern, the President, Dr. J. ROGERS, in the chair.

Mr. BENSON BAKER gave an account of what had been done by the Council since the last meeting to further the interests of the Association. The epidemic of small-pox had been the subject of much consideration, and in conjunction with the British Medical Association they had taken part in a deputation to Mr. Simon to represent to him the bad effects of the introduction of the Privy Council's new system of concentrating vaccination at one station, and dismissing a large number of tried vaccinators, especially at the height of a very severe epidemic. Every effort had been made to increase the number of members. Applications for admission had been received from Poor-law Medical Officers in Scotland, but the Council had advised them to establish an association of their own, so that they hoped at their next meeting to be able to announce that there was a Poor-law Association in England, Ireland, and Scotland, and that all three were acting in concert.

Mr. CORRANCE, M.P., moved the first resolution—"That this meeting, considering the present inefficient system of Medical relief in the United Kingdom, as contrasted with the beneficial and economic arrangements prevailing in Ireland since the introduction of the Medical Charities Act of 1852, are of opinion that the adoption of a similar system here would prove highly beneficial to the sick-poor and economical to the ratepayers." Mr. Corrance regretted that there was not a larger attendance, because, since the commencement of the Association, no more important matter, nor one more likely to become law, had been brought before them than that laid down by their President. Opposition would be raised, jealousy might arise, but he believed that would soon disappear, and it would be found, as in Ireland, that private practice was benefited. As to payment of Medical officers, it seemed to him that Dr. Rogers was right in urging that this should be drawn from the consolidated fund. Mr. Corrance condemned the narrowness of views entertained at Gwydyr House in this respect. Their wisdom was about on a par with that of the guardians, and about equally successful in defeating its own ends. Mr. Corrance noticed how benefit societies had long ago discovered that good Medical attendance for their members was a most economic measure; and he should like to see a dispensary system established with which these societies should act in cordial co-operation. He thought it was abundantly proved that the introduction of such a system as the Medical Charities Act would tend to diminish pain and suffering, and to lessen the burdens of the ratepayers. To every close observer it must be evident that our present poor-law system was a failure. We try now this system, now that; but the rates do not decrease, while pauperism increases. A radical reform was therefore necessary. He (Mr. Corrance) was in favour of separating the young and the sick from all pauperising influences; the remainder forming pauperism would be small.

Mr. BENSON BAKER seconded the resolution, and in doing so gave his experience of the ill effects of the concentration of vaccination and of the carrying of small-pox patients long distances to Hospital. Our whole poor-law system was in a chaotic state.

The resolution was put and carried unanimously.

Dr. HARDING moved the second resolution:—"That this meeting regrets that at a time of epidemic of small-pox the Privy Council has advised guardians to lessen the facilities for vaccination by the dismissal of district vaccinators, and the appointment of one vaccinator to large areas and populations, as in St. Marylebone and St. Pancras. This meeting further suggests that the evidence of district Medical officers should be taken by the Parliamentary Committee now sitting on the vaccination question." In support of the resolution, Dr. Hardinge adduced statistics showing that the dismissal of the district vaccinators was not in consequence of any neglect of duty. Of the six vaccinators in St. Pancras, wherein the system of the Privy Council had been introduced, he had the returns of three. From these he found that between January 21 and April 21 the number of revaccinations performed by Mr. Harvey was 2400, of primary vaccinations nearly 1200; by himself, 1500 revaccinations, and nearly 500 primary vaccinations; by Dr. Thomson, upwards of 1000 revaccinations, and 500 primary vaccinations.

Mr. KNIGHT, M.P., seconded the resolution. He condemned the present system of Poor-law relief, and explained how beneficial improvements were opposed by the permanent officials at Gwydyr House. There was almost a refusal on the part of the Committee, which sat for three years considering poor-law matters, to hear evidence from Poor-law Medical Officers.

The Rev. W. H. JOY moved—"That the Council of the Poor-law Medical Officers' Association having considered the unjust prosecution of Mr. Defriez, one of the Medical officers of Bethnal-green, beg to tender to him their heartfelt sympathy for the mental anxiety to which he has been so iniquitously subjected. They congratulate him on the result of the trial, and express their determination to open a subscription in order to relieve him of some of his legal expenses."

This was seconded by Dr. STALLARD, and supported by Dr. JARVIS, and carried unanimously.

A vote of thanks was passed to the President, and the meeting then concluded.

FOREIGN CORRESPONDENCE.

FRANCE.

(*From our own Correspondent.*)

MEDICINE UNDER THE COMMUNE.

PARIS, April 26.

AMONG the late changes in the Medical Department which have taken place since my last communication is the suppression of the administration at the Hôtel de Ville, composed of Drs. Herzfeld and Courtillier, and the creation of a new service, opened in the building of the Ministry of War, Rue Saint Dominique. The former Surgeons-in-Chief thus find themselves disposed of without any further explanation.

Inasmuch as new comers nowadays must do something to satisfy public opinion, our Director of Hospitals has thought fit to create in each Hospital a reading-room for the benefit of convalescents. But it is not so much for the comforts of patients that this *salle de lecture* is to be opened, as to strike a blow at the books which our Hospital libraries contain, for they are mostly of a religious character, and, therefore, says the Commune, "of a tendency to degrade the soul and bury all patriotic aspirations." The editors of different journals have offered to send their papers daily free of charge, in order to supply the tables with democratic periodicals, "which defend the Republic and propagate Socialism." Similar measures have been taken for public schools—that is to say, nothing appertaining to religious worship of any kind is to be taught, and no Bible or catechism shall enter the premises. Out of a new Medical staff recently appointed for the different battalions, composed of forty odd persons, only six of that number are Physicians. I mention this, not to astonish anyone, but merely to show that, as previously observed, no colleague of any standing will mix with the Communal Guards.

I find, upon further investigation, that I have greatly underrated the number of wounded since the rebellion; they have been distributed in such a manner that it is next to impossible to get an exact account, and I still believe it to be under the estimate in putting the figure at 12,000. The *infirmiers*, too, have suffered pretty heavily, in spite of their flags of Geneva: from thirty-eight to forty have been killed or wounded thus far; and it is owing to the utter disregard which is had of the white-and-red-cross band that the litter-bearers of the Ambulance de la Presse have refused their services.

GENERAL CORRESPONDENCE.

COMPULSORY VACCINATION.

Letter from Dr. R. H. Bakewell.

[To the Editor of the Medical Times and Gazette.]

Sir,—Is there to be a new test of Medical orthodoxy? Are qualified Medical men, who have dutifully paid their two guineas for the doubtful privilege of seeing their names and qualifications inscribed in the Medical Register, no longer to be allowed to have an opinion of their own about vaccination without being branded as heretics if they venture to differ from Mr. Simon and Dr. Seaton? It seems so. One may hold the most widely divergent opinions about almost every other subject—one may treat pneumonia by mint-water or extractum graminis, or by bleeding and calomel and antimony, or by brandy and strong beef-tea—and one may still be considered an Hebrew of the Hebrews and of the straitest sect of the Pharisees. But to doubt, or, at least, to express a doubt, whether it is advisable and prudent, or the perfection of wisdom and justice, to send people to gaol because they do not believe in vaccination is (to use Mr. Simon's elegant language at the Medico-Chirurgical Society on Tuesday night) showing oneself to belong to "a set of humbugs and impostors." Again, according to the Medical Officer of the Privy Council, as he stated in his evidence before the Vaccination Committee a few days ago (I heard him with mine ears, which, I am sure, he will consider long enough to be accurate), everybody who, at the present time, when it is notorious that the large majority of cases of small-pox occur in vaccinated persons, doubts that vaccination is a prophylactic against that disease "is either ignorant or dishonest." This is pretty language to be imported into a scientific discussion!

Your contemporary the *Lancet*, with that exquisite good taste and sense of propriety which always distinguishes its classical pages, branded one of the candidates for the appointment of Medical Officer of Health for Kensington as "an inveterate opponent of vaccination." The gentleman in question (Dr. Edward Haughton), in a very temperate and quiet letter, denies the charge; whereupon the *Lancet* begins a charming note to his letter by saying "*Qui s'excuse, s'accuse*," and goes on to say that "Dr. Haughton has only himself to blame for being considered an anti-vaccinator," because "he says it is not correct to attribute the present epidemic altogether to neglect of vaccination."

Now, putting aside for the present the cause of the present epidemic, which, considering that we have had a compulsory vaccination law for seventeen years, can hardly be attributed entirely to the neglect of vaccination, I should like to know why a man is to blame even if he be "an anti-vaccinator." Why is a man who, after careful study, shares the opinion of the late Dr. Copland, to be nicknamed an anti-vaccinator? No General Medical Council has pronounced Jenner to be infallible; nor is vaccination the one subject which it is to be forbidden us to think about and discuss.

At the Medical and Chirurgical Society the other night, several speakers praised Mr. Hutchinson for his "courage" in bringing forward the eleven cases of chancres produced by vaccination. Why should it require any more "courage" to report such cases than to report a death from chloroform, or from pyæmia after an operation? But it does, and it could only be done by a man occupying Mr. Hutchinson's high position in the Profession. A couple of years ago there appeared in your columns the meekest little article that could be written, in which I ventured to insinuate the possibility that leprosy is sometimes conveyed by vaccination. In the following number, a gentleman, whose name I had never heard before, lectured me in the severest style, and showed the depravity of my conduct and the absurdity of my suspicions in such a way as to make me shed tears of repentance when I read his letter. I thought him very harsh at the time; but I hope I have been a wiser man since.

Believing that, when properly performed with pure lymph and with all reasonable precautions, vaccination is a very useful protection in the majority of cases against small-pox, I yet do not believe that it ought to be enforced by law. I was called as a witness the other day before the Vaccination Committee, but was not allowed to give evidence on the general question, but only on my personal experience as an official charged with carrying out a compulsory vaccination law, and as to the consequences of vaccination in the tropics. Having prepared evidence on the whole question, and intending to show the Committee the process of reasoning by which I had been converted from a compulsory to a non-compulsory vaccinator, I was rather put out by being informed by the chairman that my evidence must be restricted to my personal experience in Trinidad. I had thus at a moment's notice to perform a task that would have puzzled a German metaphysician, and separate the *ego* of Trinidad from the *ego* of England. The consequence naturally is that my evidence was very incomplete, and was not sufficient to justify my change of opinion.

Without repeating what I said before the Committee, which will be duly reported, allow me to state very briefly the reasons why I think compulsory vaccination unjust and impolitic.

First, I take it as an axiom that the State has no right to force a parent to submit his child to any Surgical operation, however trivial, and more especially to one involving the conveyance of an animal fluid from one human body to another, with all its possible risks of syphilis, etc., unless it can be proved that there is a clear gain of lives to the State sufficient to compensate for all the risks of the operation.

Now, we have reliable statistics, extending far beyond the date when the first Compulsory Vaccination Act was passed. Not only has the general mortality of the country not diminished since that Act was in full operation, but it has increased. Not only has this been the case, but the proportion of deaths from zymotic diseases other than small-pox has increased one-fourth; and more significant even than this is the fact that the death-rate of children under 5 years old has increased also. In the five years 1838-42 the mean annual death-rate of England and Wales was 22·09 per 1000; the mean annual death-rate from zymotic diseases was 4·39 per 1000, of which no less than ·57 (or nearly one-eighth) arose from small-pox. That was at a time when inoculation with variolous matter was largely practised, and long before compulsory vaccination was thought of.

Now, let us compare these rates of mortality with those of the last six years, for which the Registrar-General's reports are published. The six years 1863-68 show an annual death-rate of 23·01, a death-rate from zymotic diseases of 5·40, of which only ·22 arise from small-pox. Thus it is clearly shown that, although the mortality from small-pox has lessened, the death-rate from other zymotic diseases has so much increased as to swallow up all the gain by small-pox and raise the general death-rate as well.

Now, let anyone look at the Registrar-General's weekly returns, and they will see that the weekly mortality even now is not above the average. The present small-pox epidemic began when scarlatina was epidemic, but as small-pox increased scarlatina diminished, and now scarlatina is much below the average. During the late scarlatina epidemic small-pox was extremely low.

Then, again, as to the death-rate of children, I have carefully examined into this point, and find from the Registrar-General's returns that (taking his, or, rather, Dr. Farr's figures) the death-rate of males under 5 years averaged 70·86 per 1000 annually during the eight years 1838-45, and of females 59·91 per 1000. In the seven years ending 1867 the mean death-rate of males was 72·87; of females, 63·31. This shows a serious deterioration of the public health.

It is impossible to go fully into this subject within the limits of a letter, or I could produce overwhelming proof that compulsory vaccination has done nothing to improve the public health, and that it has done much, very much, to excite prejudice against vaccination, and to arouse a violence of opposition such as we never heard of under the old system.

In conclusion, I would say with Dr. Farr, that in all sanitary measures "the primary object to aim at is placing a healthy stock of men in conditions of air, water, warmth, food, dwelling, and work most favourable to their own development. The vigour of their own life is the best security men have against the invasion of their organisation by low corpuscular forms of life. Vaccinate by all means, but at the same time provide streets, spaces, dwellings, water, and drainage." These are wise and noble words, and, notwithstanding the anathemas of Mr. Simon, I for one adopt them as my creed. In questions of pure pathology I have the highest respect for Mr. Simon's opinion, but in questions of vital statistics I prefer Dr. Farr's, or even that of one who has in the present letter been guilty of the "reckless absurdity" and the "dishonesty" of speaking of the general death-rate of the country.(a)

I am, &c., R. H. Bakewell, M.D.,
Medical Officer of Health and Vaccinator-General for the Colony of Trinidad, etc.
Hendon, N.W., April 30.

(a) *Vide* Mr. Simon's evidence before the Vaccination Committee.

FEMALE PHYSIC IN EDINBURGH.

[To the Editor of the Medical Times and Gazette.]

SIR,—The *Scotsman* of the 29th of April contained the following:—

"LADY STUDENTS AND THE LEITH HOSPITAL.—Some time ago the Acting Committee of the Association for Promoting the Medical Education of Women communicated with the directors of the Leith Hospital, with the view, if possible, of having that institution made available for the clinical instruction of ladies. In order to adapt the Hospital for the purpose in question, it would have been necessary to extend its accommodation by thirty additional beds, and to procure the services of competent clinical instructors. After various communications had passed between the directors and the committee, the matter was remitted to the Medical officers of the Hospital. The result of the remit has been that these gentlemen, by a majority, agreed to report as follows to the directors:—'That it is inexpedient to alter the present arrangement of the Hospital, or to convert it into a Medical and Surgical Hospital for the clinical instruction of ladies.' The directors have approved of the report, and the negotiations, so far as we can learn, are now at an end."

Such is the latest "slough of despond" in which, with characteristic skill, the guides of the Female Medical Movement here have laid floundering their unfortunate victims.

You and other sensible people at a distance may, perhaps, hope that here at last is the inextricable dead-lock. Far from it. Those who, like myself, for our sins, know Edinburgh better, know that this is but the momentary pause of an avalanche—and such an avalanche!

It is, alas! a too common error with sensible people to imagine that stupidity must necessarily issue in failure. Such, doubtless, in the long run, is the doom awaiting it. The eternal laws of God and His universe will, sooner or later, assert their rights. How easy, however, even for stupidity to draw a bill on the book of eternity at a longer date than our poor balance of three score years and ten! Are we not told that against stupidity the gods themselves, unbacked by such eternity, were powerless? These, its latest votaries, then, doubt it not, will again return to the charge; nay, what is more, will one day return successfully. For pandering, under their mask of humility and Christian philanthropy, to every low instinct of an ignorant and vainglorious mobocracy, superciliously as far above argument by the fulness of its purse, as hopelessly below it by the emptiness of its skull—wisely, moreover, like other ignoble vermin, raising a rampart of filth around them that the boldest may well shrink from scaling (an arm-to-arm wrestle with a skunk, how horrible!)—what is to hinder their triumphant entry, after a little more mining and sulphuretted hydrogen, into our Infirmary, yoked as it is by its glorious constitution to the wriggling tail of that quack-ridden hack an "enlightened public"? Put on the black cap, then; pronounce sentence. Write "Ichabod" over the portal; and God have mercy on our miserable souls! for, with Miss Jex Blake and the Jex Blakeites in possession of the Infirmary, the latitude and longitude of the Edinburgh School of Medicine in the depths of the bottomless pit will be a simple schoolboy's task in logarithmic calculation. Can such infamy, you ask, be in store for the glorious home of the Munroes and Bells, of Liston and Knox, of Simpson and Syme? Go, gaze on Marathon, and have your throat cut by Greek brigands!

I am, &c., M.D.

EARLY RETIREMENTS AND THE RESERVE FOR ARMY MEDICAL OFFICERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Some time ago I wrote a letter to your journal on the subject of an Army Medical Reserve, and proposed that Army Medical Officers of ten years' service should be allowed to retire from the active army on some modification of their ultimate claim to pension, and become connected with the reserve forces of the country. I proposed that they should be allowed to settle down in one place and engage in private practice, doing duty with the reserves of the district when required. I hoped that by these early retirements being allowed a great acceleration of promotion would be the result; and I attempted to give weight to my proposal by what I may term the moral argument that Government ought either properly to provide for its officers or allow them to leave the active army sufficiently early to have a fair chance of engaging with success in a new walk of life. At present, a Medical officer, in most cases, cannot afford to leave the army till entitled to claim his permanent pension, and, indeed, I may say, not then. In thinking over the subject again, it has occurred to me that it might be for the advantage of the State as well as for the advantage of the Medical Department and individual officers if retirements were allowed at any period of service—say after five years' service—on some small temporary pension. I would suggest the half-pay of the rank for a similar number of years to what the Medical officer had served. Thus, a man of five years' service, whose pay is 12s. 6d. a day, would retire on 6s. 3d. a day for five years; a man of ten years' service, on 7s. 6d. a day for ten years, and so on—pensions only becoming permanent after twenty years' service, as at present. If these figures will not suit the Chancellor of the Exchequer, perhaps some other terms might be invented that would pay the State, and at the same time induce a great exodus of Army Medical Officers at all periods of service. At present, there is a dead lock in the way of promotion, which is likely to continue unless something is done to induce men to retire. That no sufficient inducements are held out at present may be accepted as a fact. Men will not retire. Year by year Medical examinations are becoming more difficult, which will tend to thin the ranks of Medicine as a Profession; and, consequently, in years to come, greater difficulty may be experienced in obtaining Surgeons for the army, especially as the combatant branch will probably become more of a profession, and attract many who now enter the army as Medical officers. Men who can enter the army at 18 will not go and study Medicine to gain nothing except a little knowledge, in order to enter the service at 21 or 25. In fact, the combatant branch will compete for recruits against the Medical, and attract most of those with military tastes. As a means for inducing present promotion and attracting future Medical recruits, I propose short service and temporary pensions, with the chance of engaging in private practice before it is too late, with a little assistance from the State for the first few years. A pension of a few shillings a day would be a great help to a young man for the first five years of his Professional life, while the State would retain his services for the reserve. The alternative is greatly to increase the amount of permanent pensions. Which would pay best? By allowing men to select their own time for leaving the army, they would be enabled to seize any good opportunity for starting on a civil career, and those who found that the army did not suit them, or they the army, would be able to leave after their first five years. The idea with the recruit nowadays seems to be that he should return to the ranks of civil life after a short army service, being available for some years after for military service if required. Why should not the same principle be applied to Medical men who bring to the service a Profession already learned, and consequently do not require much teaching at the hands of the State?

Perhaps, if you are so kind as to publish these remarks, they may induce someone else to state his opinions, and, if my plan will not do, some other may be devised for accelerating promotion. While Government is reorganising the army in general, they may perhaps take the Army Medical Department in hand, and, by either providing properly for its members, or by offering them inducements to leave while they are sufficiently young to provide for themselves, put an end to the grumbling and discontent that has cast a shadow over the department for years.

I am, &c., X. X.

A PRUSSIAN "REQUISITION."—A correspondent informs us of a "requisition" which can scarcely be recorded in any other than a Medical journal. A staff officer, in full dress, with white gloves, presented to the town of Mullhouse a demand for injection syringes and several kilogrammes of balsam of copaiba, which were sent in some days afterwards. "History," says the Emperor William, in his address to the German Parliament, "will register the mighty deeds of the Prussians."—*Lyon Médical*, April 16.

TANNIN IN SWEATING FEET.—Tannin forms a most excellent remedy against the inconveniences produced by excessive transpiration of the feet. The epidermis, softened by the moisture and warmth, is at once transformed by the tannin into a coating of leather, without preventing the continuance of the necessary transpiration. As the products of the ammoniacal decomposition of the skin are immediately combined with the tannin, all smell ceases. The interior of the boots or shoes should be sprinkled every third day with a pinch of tannin. This also prevents the formation of blisters.—*Presse Belge*, April 16.—[Query: Hot-water and Calvert's carbolic soap!]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, APRIL 25.

MR. CURLING, F.R.C.S., President, in the Chair.

MR. JONATHAN HUTCHINSON read a paper

ON A SERIES OF CASES IN WHICH CHANCRES HAVE FOLLOWED VACCINATION.

On February 7 thirteen persons (young adults) were vaccinated from the arm of a healthy-looking infant. All, except one, had normal vaccine vesicles, which healed well. In all, except two, indurated chancres have since developed in the vaccination scars. In nearly all, the scars began to inflame and harden during the fifth or six week. Several of them have two or three chancres. The infant vaccinifer now has condylomata at the anus, and is beginning to waste (age 6 months). She is undoubtedly the subject of inherited syphilis, the taint having been latent at the time of vaccination. None of those vaccinated have as yet shown any persistent secondary rash, but several have been feverish for a day or two, and have had transitory roseola. In all, the sores are disappearing under mercurial treatment. The two who escaped the syphilitic contagion were the first two vaccinated, and probably they received pure lymph, whilst the others received blood as well. It is known that the vaccinifer's spots bled during the vaccination. The inferences from the cases were—1. That the blood of a child in the latent stage of inherited syphilis is capable of producing primary syphilitic sores in its recipients, and is indeed remarkably efficient as a means of contagion. 2. That the vaccine virus itself, even when taken from a syphilitic subject, produces nothing but the true vaccine disease. 3. That the two poisons may be conveyed (in two fluids) at the same time, and may each produce its specific effects.

Dr. BAKEWELL called attention to the possibility that syphilis might be conveyed in vaccination, not by blood only, but also by the mingling of epidermic scales from the vaccinifer with the lymph. He suggested, also, that the vaccinifer might receive syphilis from the vaccinated if the lancet that had drawn blood from the latter was introduced into the vesicle to obtain its charge of lymph.

Mr. HENRY LEE thought Dr. Bakewell's suggestion about the possible conveyance of syphilis by epithelium scales was well worthy of attention. He commended Mr. Hutchinson's courage in bringing these cases before the Society. In this country there was much difference of opinion about the production of disease by vaccination; and while many disbelieved that syphilis could be communicated by vaccine matter, their incredulity was confirmed by the official reports. There was, however, a very general belief that impure blood would be injurious; and it was very desirable that the conditions under which harm could be done should be fully made known, in order that Medical men might be protected from undeserved obloquy. Mr. Hutchinson had said that if nothing but vaccine lymph were taken, even from the arm of a syphilitic child, nothing but cow-pox could be communicated. He himself would go still further, and would say that if small-pox and cow-pox were co-existent in the same subject, only cow-pox would be communicated by lymph from the vaccine vesicle. There could be no doubt, however, that vaccination might call previously latent disease into activity; and in this way it might appear to convey syphilis when it had not done so in reality. He had seen three cases in which syphilis was supposed to have been communicated by vaccination; and he thought induration of the axillary glands unusual, although possibly to be accounted for by the part of the arm on which the vaccination had been performed.

Mr. DE MERIC joined with the last speaker in congratulating Mr. Hutchinson upon his courage in bringing forward the facts; and thought that the paper would change the opinions of many persons who had previously been incredulous about the conveyance of syphilis by vaccination. He thought, however, it would have been better to have delayed the publication for a few weeks, in order to see whether any secondary symptoms would have appeared in the vaccinated persons. He did not believe that it would be safe to use the vaccine lymph yielded by a syphilitic subject, because the vaccine lymph was formed from the blood, and might therefore possibly become a channel for the communication of disease. At the same time, it must be remembered that the sores formed by vaccination sometimes assumed various unusual appearances; and it should not be hastily concluded that these were due to syphilis. There could, notwithstanding, be no doubt that syphilis might be communicated by vaccination, and such an occurrence had taken place in Brittany. The facts had been investigated by a commission of the Paris Academy of Medicine, and had been placed beyond all question.

Mr. BRUDENELL CARTER said that the canon of Medical orthodoxy, as regards vaccination, had hitherto been founded upon three cardinal points of belief. These were, that the relation between the vaccinifer and the vaccinated was the only human relation, that the transference of vaccine lymph was the only mode of human intercommunication, and that the vaccine lymph itself was the only human secretion by which syphilis could not be conveyed. For his own part, encouraged by the well-known maxim of philosophy, that the multitude of people who believe in a thing do not in the least add to its credibility, he had long had the hardihood to dissent from all three propositions, and he thought that the first two, at least, had now been shown to be utterly untenable. Mr. Hutchinson still gave the weight of his authority to the last; but in doing so he surely rested a very wide generalisation upon a slender basis of fact. It was difficult to discover any reason for the distinction so much insisted upon between blood and lymph; and it was the practice of many vaccinators, after having taken the first yield of a vesicle, to wait for a few minutes until another drop exuded, a drop that could be nothing but liquor sanguinis, containing all the essential constituents of the blood, and also carrying the peculiar morbid products of the vesicle. Moreover, a few years ago, when he was in the habit of vaccinating, and occasionally sent for tubes of lymph to the Privy Council, the liquid supplied to him was always turbid, often inert, and, on one occasion, he believed, had been mingled with saliva and buccal mucus. He attributed the ordinary turbidity to over-filling of the tubes. To his mind, considering the wide diffusion of syphilis, its occasional invaccination was a matter that could only be prevented by a full recognition of the possibility of the occurrence, and by the most stringent precautions with regard to it. The chorus of "*Je n'ai jamais vu*" was alone almost sufficient to prove that those who joined in it had not turned their eyes in the right direction; and was pernicious as a cause of carelessness in the selection of vaccinifers. The public would not receive the full benefits of vaccination until the dangers connected with it were candidly admitted, dispassionately studied, and carefully guarded against.

Dr. DRYSDALE said that he had once vaccinated a syphilitic child, and had given strict injunctions that no lymph should be taken from it. He afterwards heard that it had been taken to a public institution, where his caution, although mentioned, was disregarded, and that several others were vaccinated from it.

Mr. SIMON said that the statements made with regard to the lymph supplied by the Privy Council were such as could not be substantiated. In the course of a speech of more than half an hour's duration he repeated the already published history of his circulars of inquiry about the revaccination of syphilis; and threw out the suggestion that the products of inflammation might be sources of danger, and that hence the use of tenth-day lymph, not infrequent upon the Continent, might be a reason why there had been more evidence of the communication of syphilis abroad than in England. He asked the Society to strengthen the hands of Government by expressing an opinion as to the precautions that should be observed in vaccination.

The PRESIDENT said that the hour for the conclusion of the meeting had arrived, upon which

Mr. HENRY LEE moved the adjournment of the debate to the next meeting.

Mr. BRUDENELL CARTER seconded the motion, and entered into a detailed history of the circumstances on which his statement of the quality of the lymph supplied by the Privy Council was founded.

Mr. SIMON said that he had not meant to question the statement with regard to any particular instance, but only if regarded as a general one.

The motion for adjournment was then put and carried.

HEROINE.—Miss Esther Johnston, of Jersey, who followed the German army throughout the late campaign as lady nurse, and at its termination devoted herself to attend on patients suffering from small-pox, has unhappily fallen a victim to that disease.

MEDICAL NEWS.

University of Glasgow.—The following is a list of names of those gentlemen who graduated at this University during last session :—

Doctors of Medicine.

Armour, Andrew, M.B., Scotland.
Bell, Robert, M.B., England.
Bereford, Robert de la Poer, Ireland.
Borthwick, C. J., M.B., Scotland.
Buchanan, Alex. M., M.A., M.B., Scotland.
Cameron, Evan, M.B., Scotland.
Chalmers, John, M.B., Scotland.
Coats, Joseph, M.B., Scotland.
Dougall, John, M.B., Scotland.
Fraser, Donald, M.B., Scotland.
Gibb, James, M.B., Canada.
Haydon, Wm. R., M.B., England.
Hutchison, George, M.B., Scotland.
Jack, John, M.B., Scotland.
Logan, Archibald, M.B., Scotland.
M'Laren, John, Scotland.
Moore, James T., M.B., Ireland.
Ritchie, Andrew, M.B., Scotland.
Ross, John Harris, Scotland.
Roy, G. C., B.M.S., Calcutta, India.
Sloan, David, M.B., Scotland.
Sutherland, Walter, M.B., Scotland.
Waddington, Isaac, M.B., England.
Weir, J., M.B., Cape of Good Hope.
Wolseley, Richard, Ireland.

Bachelors of Medicine and Masters in Surgery.

Aikman, John, Scotland.
Anderson, James W., ditto.
Brown, James, England.
Carmichael, Daniel, Scotland.
Cunningham, John, ditto.
Dow, James C., America.
Forbes, Robert T., Scotland.
Grant, William, ditto.
Henderson, Thomas B., ditto.
Holmes, John, ditto.
Lewis, William, ditto.
Lynn, Thomas, ditto.
Mancor, Alexander F., Ireland.
Millar, John N., Scotland.
Miller, Hugh, ditto.
Muir, John P., ditto.
M'Closky, James, Ireland.
M'Consghy, James F., ditto.
M'Fadyen, Charles, Scotland.
M'Kellar, Chas. K., Australia.
M'Kerrow, George, Scotland.
M'Lean, William F., ditto.
Reid, James W., ditto.
Rodman, Robert, ditto.
Scanlan, Henry, ditto.
Sinclair, Robert, ditto.
Sloan, John, ditto.
Stuart, John, ditto.
Thomson, George W., ditto.
Whitson, James, ditto.
Wilkie, David, ditto.

Bachelors of Medicine.

Allan, James, Scotland.
Craig, Archibald, ditto.
Douglas, John C., ditto.
Glendinning, James, ditto.
Lindsay, Alexander, ditto.
Lambie, James, ditto.
M'Cosh, Robert N., ditto.
M'Lelland, Alex., Scotland.
M'Naul, Hugh H., Ireland.
M'Pherson, Chas., Scotland.
Sneddon, William, ditto.
Watt, James R., ditto.
Weir, James B., ditto.

Masters in Surgery.

Bigger, David, M.D., Scotland.
Robertson, John L., M.D., Scotland.

The following gentlemen were named as entitled to honours, to special commendation, and to commendation, on account of distinguished merit at the various examinations for the degree of M.D., M.B., and C.M. :—

I. Honours.
Aikman, John, M.B., C.M., Scotland.
Wilkie, David, M.B., C.M., Scotland.
II. Special Commendation.
M'Cosh, Robert M., M.A., M.B., Scotland.
Roy, Gopaul Chunder, M.D., India.
III. Commendation.
Forbes, Robert T., M.B., C.M., Scotland.
M'Kellar, Charles K., M.B., C.M., New South Wales.
Millar, John N., M.B., C.M., Scotland.

Royal College of Physicians of London.—At the ordinary quarterly meeting of the College, on Thursday, the 27th ult., the following gentlemen, having passed the required examinations, were admitted as Members :—

Dickinson, Edward Harriman, M.A. Oxon., M.B. and M.C. Edin., St. George's Hospital.
Fotherby, Henry Isaac, M.D. Lond., 3, Finsbury-square, E.C.
Winslow, Lyttleton Stewart, LL.B. and M.B. Camb., Sussex House, Hammersmith, W.

And the following candidate, having conformed to the by-laws and regulations, and passed the required examinations, was granted licence to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery :—

Reston, Henry, M.R.C.S., 6, Dorset-street, Stretford, Manchester.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 2nd inst., viz. :—

Bentley, Arthur James McDonald, Edinburgh, of the Edinburgh School.
Budd, William Alexander, Exeter, of King's College.
Frankerd, Orlando Reeves, M.B. Edin., Langport, Somerset, of St. Mary's Hospital.
Freau, Richard, L.S.A., of the Middlesex Hospital.
Giles, Peter Bronme, Staunton-on-Wye, of the University College.
Hall, Geoffry Craythorne, Portsmouth, of Guy's Hospital.
Kay, William Towlson, Middlesborough, of the Newcastle School.
Lang, John Alfred Thomas, L.S.A., Stoke Newington, of the London Hospital.
Langridge, George Thomas, Bath, of St. Bartholomew's Hospital.
Maberly, Frederick Herbert, Exeter, of the Birmingham School.
Marshall, John, L.S.A., Devonport, of Guy's Hospital.
Moore, Edward William, Grove-park, Chiswick, of St. Mary's Hospital.
Parrott, Edward John, Buckland, Herts, of St. Mary's Hospital.
Parsons, Joshua Frederick, L.S.A., Frome, Somerset, of St. Mary's Hospital.
Parsons, Francis John Crane, L.S.A., Bridgewater, of King's College.
Percival, George Henry, L.S.A., Northampton, of Guy's Hospital.
Pitts, Henry Yate Walton, Lancashire, of the Liverpool School.
Pope, Harry Campbell, Tring, Herts, of the Liverpool School.
Thomas, George Danford Phillips, Yeovil, Somerset, of St. Mary's Hospital.
Thompson, William, Todmorden, of the University College.
West, John Gilby Uvedale, Alford, Lincolnshire, of the University College.
Williams, Morgan, Cardiff, of the Manchester School.
Williams, Henry, L.S.A., Gloucester, of St. Thomas's Hospital.

Five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for the usual period. The next primary examination will take place on the 6th inst.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, April 27, 1871 :—

Baumgartner, John Richard, Gorleston, Norfolk.
Bernard, David Edward, Bristol.
Burroughs, John Edward Buckland, Lee, Kent.
Hood, Donald W. Charles, Guy's Hospital.
Parsons, Joshua Frederick, Frome, Somerset.
Percival, George Henry, Northampton.
Stothard, James, Hull.
Tudge, James McDougall, Hereford.
Whitmarsh, John Lloyd, Chippenham.

As an Assistant in Compounding and Dispensing Medicines:

Saunders, Charles Price, Haverfordwest.

At the Preliminary Examination in Arts held at the Hall of the Society on April 28 and 29, 1871, eighty-four candidates presented themselves, of whom twenty-six were rejected, and the following fifty-eight passed and received certificates of Proficiency in General Education—viz., in the First-class, in order of merit :—

Pedley, Frederick Newland (first).
Pope, Frederick Montague (first).
Kerans, Percy George (third).
Sellers, Richard Burdett (third).

In the Second-class—

Barlow, T. C.
Bearpark, G. E.
Boodle, G. A.
Braithwaite, S.
Burgess, W. M.
Clowes, J. S.
Colborne, W. W.
Crane, A. Wyatt.
Crocker, H. L.
Davis, F. Howard.
Davis, George.
De Korte, R. J.
Ellis, J. Watson.
Gamble, H. W. B.
Gravely, J. G.
Hawkins, H.
Higgs, Augustus W.
Hitchens, J. J.
Holderness, H. O.
Howard, Robert.
Hulme, Wynne P.
Karop, George Charles.
McDonogh, E. F.
Marsh, Joseph H.
Mayne, Walter F.
Newland, C. F.
Newton, R. A.
Parke, J. L.
Potter, Henry P.
Pratt, Walter.
Rawlings, Alfred.
Richards, Thomas.
Röhrs, Godfrey Charles.
Romano, F. W.
Sagar, Robert.
Satchell, W. M.
Smith, Ferdinand Clarence.
Smith, Gerard Henry.
Smith, Tom.
Snook, W. Ernest.
Standly, Thomas.
Strange, Bailey.
Stillwell, Alfred.
Sugden, D'Arcy.
Sutton, Thomas S.
Sworder, Horace.
Thomas, Arthur.
Thompson, Harold.
Vickerstaff, William Henry.
Waldo, Frederick Joseph.
Ward, George James.
Warner, James.
Weekes, Francis Henry.
Wright, Henry.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Briggs, G. C., L.S.A.—Resident Accoucheur to King's College Hospital.

Hamilton, R., M.D. Cantab., M.R.C.S.E.—Honorary Physician to the Westminster General Dispensary.

Hope, William, M.D., M.R.C.P. Lond.—Physician to the In-patients of Queen Charlotte's Lying-in Hospital, Marylebone.

Lloyd, J., L.R.C.P.L., M.R.C.S.E.—Resident Medical Officer to the Swansea Hospital.

Millson, G., M.R.C.S.E., L.R.C.P.L.—Assistant Medical Officer to the Female Department, Middlesex Lunatic Asylum, Colney Hatch.

Parsons, F. J. C., M.R.C.S., L.R.C.P. Lond., L.S.A.—House-Physician to King's College Hospital.

Roche, E. B., M.R.C.S.—House-Surgeon to King's College Hospital.

MILITARY APPOINTMENTS.

Royal Artillery.—Staff Assistant-Surgeons Hunter Alexander Colan, Thomas John Peatfield, William Henry Steele, M.B., and James Daniel Crowe, to be Assistant-Surgeons.

1st Foot.—Staff-Surgeon Alexander Clark Ross, M.D., to be Surgeon, *vice* Augustus Morphew, who exchanges; Staff Assistant-Surgeon John Latchford, M.B., to be Assistant-Surgeon, *vice* James Francis Supple, appointed to the Staff.

Medical Department.—Surgeon Augustus Morphew, from 1st Foot, to be Staff-Surgeon, *vice* Alexander Clark Ross, M.D., who exchanges; Staff Assistant-Surgeon George Palatiano, M.D., to be Staff Surgeon, *vice* Allan Bryson, M.D., placed upon half-pay; Assistant-Surgeon James Francis Supple, from 1st Foot, to be Staff Assistant-Surgeon, *vice* John Latchford, M.B., appointed to the 1st Foot; Staff Assistant-Surgeon William White has been permitted to retire upon temporary half-pay.

Brevet.—Staff Surgeon-Major Usher Williamson Evans, M.D., who retires upon half-pay, to have the honorary rank of Duputy Inspector-General of Hospitals.

BIRTHS.

Barber.—On May 2, at Ulverston, the wife of H. Barber, M.D., of a daughter.

Coleman.—On April 19, at Lutterworth, Leicestershire, C. S. (*née* Martin), wife of Dr. Coleman, late of Peru, of a son.

Donahoo.—On April 25, at at 129, Blackfriars-road, S.E., the wife of Thomas Malcolmson Donahoo, Surgeon, of a daughter.

Simpson.—On April 27, at 29, Canonbury-park North, the wife of Archibald Simpson, M.D., of a daughter.

Turle.—On April 30, at Cromwell Villa, Finchley-road, N.W., the wife of James Turle, M.D., of a daughter.

Whipple.—On April 18, at Arcachon, the wife of Dr. J. Whipple, of a daughter.

Williams.—On May 1, at Uffculme, Devon, the wife of William Joseph Williams, M.D., of a daughter.

MARRIAGES.

Anderson—Clutsam.—On April 11, at the Cathedral, Nassau, Bahamas, William John Anderson, of Lincoln's-inn, barrister-at-law, second son of the Hon. G. C. Anderson, Esq., Attorney-General, to Mary Dora Somerville, youngest daughter of the late S. J. Clutsam, M.D.

Barker—Parnell.—On May 2, at Camden-town parish church, C. E. M. Barker, the second surviving son of the late William D. Barker, M.D., of Weymouth, Dorset, to Elizabeth, only daughter of the late John Parnell, Esq., of Waltham Abbey, Essex.

Barraclough—Croft.—On April 27, at Christ Church, Clapham, Dr. R. W. Sutton Barraclough, youngest son of George Barraclough, Esq., of Streatham-hill, to Elizabeth Hannah, only daughter of J. Croft, solicitor, South Lambeth.

Croft—Middleton.—On April 26, at St. Peter's Church, Forest-side, Walthamstow, George Crafter Croft, of Rayleigh, Essex, third son of the late Charles Ilderton Croft, F.R.C.S., to Mary Fowler, youngest daughter of James Middleton, L.R.C.P. and M.R.C.S., of 46, Watling-street, and Mill Cottage, Walthamstow.

Dickson—Thompson.—At All Souls', Langham-place, Dr. J. Thompson Dickson, of 59, Queen Anne-street, Cavendish-square, W., to Henrietta Elizabeth, youngest daughter of the late William Thompson, M.D., of Fox Rock Lodge, county Dublin, formerly Inspector-General of Hospitals, Madras.

Farthing—Jackson.—On April 27, at the parish church of Allhallows, Tottenham, George Lax Farthing, M.A., curate of the parish, to Anna Elizabeth (Minnie), elder daughter of George Henry Jackson, M.D., of Lower Tottenham, N.

Gripper—Smiles.—On April 25, at St. Matthew's Church, Oakley-square, N.W., Alexander, youngest son of the late John Jasper Gripper, Esq., of Hertford, to Catherine Mary, youngest daughter of the late William Smiles, Surgeon, of Shipton-on-Stour.

Hicks—Ayrton.—On April 29, at St. Thomas's, Marylebone, Charles Cyril Hicks, M.D., to Agnes Nugent, daughter of Frederick Ayrton, Esq., of the Middle Temple.

Jones—Jay.—On April 27, at St. Paul's, Tupsley, Herefordshire, Dr. Leslie Hudson Jones, fourth son of the late W. T. Jones, M.D., of Cork, to Laura Katherine Isabella, fourth daughter of James Jay, Esq., of Litley Court, Herefordshire.

Morris—Holt.—On April 27, at Christ Church, Eccleston, Richard, eldest son of the late R. T. Morris, Surgeon, Upholland, to Sarah Ellen, youngest daughter of the late W. Holt, Esq., Bispham Hall, near Wigan.

Norton—Prentice.—On April 21, at St. Stephen's, Bow, Fletcher Norton, of the Inland Revenue Department and Tomlin's-grove, Bow, to Catherine Sarah, only daughter of Alfred Prentice, M.D., Bow.

Rowlands—Horton.—On April 29, at Christ Church, North Brixton, James David, eldest son of James Rowlands, F.R.C.S., of Carmarthen, to Elizabeth, eldest daughter of Isaac Horton, of Clapham-rise, London, and Ystrad, Carmarthenshire.

Scott—Osborne.—On April 27, at St. George's, Hanover-square, William Scott, Esq., 4, Park-quadrant, Glasgow, to Rosa, second daughter of J. F. Osborne, M.R.C.P., Osborne House, Romsey, Hampshire.

Wingate—Higgs.—On May 2, after banns, at St. Leonard's Church, Streatham-hill, Robert Wingate, M.R.C.S. and L.S.A., of Leicester, son of the late W. B. Wingate, Esq., of Hareby, Lincolnshire, to Bertha, eldest daughter of Thomas Higgs, Esq., Streatham-hill, Surrey.

Woodman—Lloyd.—On April 25, at St. Jude's, Mildmay-park, W. Bathurst Woodman, M.D., to Elizabeth Mary, only surviving child of the late T. J. Lloyd, Esq., of Tranmere, Cheshire, and daughter-in-law of the late Rev. E. F. Woodman, M.A., LL.D., rector of Walton West and Talbeny, J.P. in the county of Pembroke.

Woods—Duck.—On April 27, at Holy Trinity Church, Southport, Dr. G. A. Woods, eldest son of Geo. Woods, Esq., Surgeon, Southport, to Lilias, youngest daughter of the late Robt. Duck, Esq., of Norwood, Alderley-edge, Cheshire.

DEATHS.

Birch, De Burgh, M.D., late Madras Medical Service, at Clifton, on April 28.

Drake, May, the dearly-beloved wife of Thomas Drake, Esq., and daughter of the late William Elliot, M.D., at Stratford, Essex, on April 30, aged 31.

Evans, Elizabeth, relict of the Rev. Thomas Evans, D.D., and second daughter of the late Thomas Best Pitt, M.D., Brighton, on April 29, at her residence in the College-green, Gloucester.

Knowles, Alice Jane, the youngest daughter of Edmund Yaldon Knowles, at Farnham, Surrey, on April 29, aged 23.

Moore, Elizabeth Mary, wife of John Percy Moore, Esq., M.R.C.S., at Hitchin, on April 29, aged 54.

Murray, Katharine Annie, daughter of John Murray, M.D., at Wickham, Hants, on April 28.

Ryder, Laura Jones, relict of T. J. Ryder, M.R.C.S., late of Greenwich on April 30.

Stewart, H. C., M.R.C.S., at Hong-Kong, on board H.M.S. *Melville*, on February 6.

Swales, Mary, the wife of Edward Swales, Surgeon, at Sheerness, on April 25, aged 49.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Cheltenham General Hospital and Dispensary.—Resident Surgeon to the Branch Dispensary. Candidates must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Mr. D. Hartley, on or before May 20.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

Huddersfield Infirmary.—Assistant House-Surgeon; must be a Medical student of not less than three years' standing. Applications and testimonials to Mr. E. J. Hardy Booth, House-Surgeon, on or before May 15.

Littlemore Pauper Lunatic Asylum.—Resident Assistant Medical Officer; must be duly qualified and registered. Applications and testimonials to J. M. Davenport, Esq., County Hall, Oxford, on or before May 13.

Liverpool Royal Infirmary School of Medicine.—The Demonstratorship of Practical Anatomy and Histology is now vacant. Applications to Mr. R. Harrison, Registrar, on or before May 10.

London Fever Hospital.—Assistant-Physician; must be F. or M.R.C.P.L. Applications and testimonials to the Secretary, on or before May 9. Election on the 12th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Northleach Union.—Medical Officer for the district comprising the parishes of Aldsworth, Bibury, and Coln St. Aldwyns. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. H. Stiles, Clerk to the Guardians, on or before May 24. The duties will commence on June 24.

Ripon Dispensary.—House-Surgeon and Resident Dispenser. Applications and testimonials to the Honorary Secretary.

Royal Asylum of St. Ann's Society, Streatham-hill, Surrey.—Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, at the Office, 52, King William-street, E.C., on or before May 15.

Royal Kent Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and *copies* of testimonials to W. Bristow, Esq., 78, London-street, Greenwich, on or before May 20. Election on June 2.

St. Mary's Hospital, Paddington, W.—Physician Accoucheur; must be a Fellow or Member of one of the Colleges of Physicians of the United Kingdom. Applications and testimonials to Mr. G. Wilkinson, Secretary, on or before May 13.

St. Olave's Union.—Dispenser; must be L.S.A. Applications and testimonials to Mr. C. Wellborne, 17, Duke-street, London-bridge, on or before May 9. Election on the 11th.

St. Thomas's Hospital.—The staff of the Hospital is to be increased by the appointment of a Physician, two Assistant-Physicians, a Surgeon, and two Assistant-Surgeons. Full particulars may be obtained upon application to Francis Hicks, Esq., the Treasurer.

Seamen's Hospital Society, Greenwich.—Visiting Physician; must be a Fellow or Member of the Royal College of Physicians. Applications and testimonials to Kemball Cook, Esq., House Governor and Secretary, on or before May 20.

South Staffordshire General Hospital, Wolverhampton.—Physician; must be M.D. or M.B. of the University of Oxford, Cambridge, London, Edinburgh, or Dublin, or F. or M.R.C.P. London, Edinburgh, or Dublin, not practising midwifery or pharmacy. Applications and testimonials to the Secretary, on or before May 13.

Windsor Royal Infirmary.—House-Surgeon. Applications and testimonials to Mr. G. Cartland, Secretary, on or before May 10.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bicester Union.—The Heyford District is vacant; area, 3287; population, 1078; salary, £17 per annum.

Thingoe Union.—The Seventh District is vacant; area, 13,710; population, 1866; salary, £70 per annum.

Wellington (Somerset) Union.—Mr. Wm. Reynolds has resigned the First District; area, 7061; population, 6575; salary, £54 8s. per annum; and the Workhouse, salary, £30 per annum.

APPOINTMENTS.

East Ward Union.—Alexander Lindsay, L.R.C.P. Edin., to the Brough District.

Hoxne Union.—George Jones, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Saxtead District.

St. Pancras Parish.—John Hall, M.R.C.S.E., L.S.A., to the Third District; Joseph Mitchell, L.R.C.P. Edin., L.R.C.S. Edin., M.R.C.S.E., L.S.A., to the Fourth District.

Shaftesbury Union.—Edwin Wykes, M.R.C.S. Eng., L.S.A., to the Fontmell District.

The Pharmaceutical Society is to give a grand *conversazione* at the South Kensington Museum on the evening of May 17.

Inspector-General Lawson will read a paper at the Epidemiological Society on the 10th inst.; subject—"Cholera in Ships at Sea." The paper is one of very great interest as a contribution to scientific epidemiology.

Mr. George Moore, who has gained the Scholarship for the first year at King's College Hospital, and Mr. Charles Firth, who has carried off the same honour for the second year at St. Bartholomew's, were both educated at King Edward VI. School, Norwich, under the Rev. Dr. Jessopp.

Mr. G. Godson has resigned the office of Surgeon-Accoucheur to the City of London Lying-in Hospital, City-road.

Mr. T. Cole was last week appointed Vaccination Inspector for the Holborn and Clerkenwell divisions.

It is officially stated that in Scotland last year not above 150 persons died from small-pox, and this is ascribed to the efficient manner in which the Vaccination Act is carried out.

Mr. Hart Gimlett, a Staff Surgeon of 1868, has been appointed Surgeon to her Majesty's Dockyard at Sheerness.

The *Dreadnought* is, we believe, ready for the reception of small-pox patients. Provision has been made for 200 beds.

A Government Inspector has been sent down to Littlehampton in consequence of the drainage of the town being in a very unsatisfactory state, and the local board having declined to make the necessary improvements.

Dr. Guy has reported to the Hackney Board of Works that in his opinion the Small-pox Convalescent Hospital at Clapton could not justly be looked upon as a nuisance to the inhabitants of the neighbourhood.

The St. Pancras Vestry have at last given definite instructions to the Works Committee to erect a temporary Hospital for small-pox for the parish.

A movement has been commenced in Monmouthshire with the view of inducing the various coroners to discontinue holding inquests in public-houses wherever practicable.

The *Southland News* (Invercargill) of February last reports the outbreak of scarlet fever, a disease hitherto unknown in that part of New Zealand. The infection was believed to have been brought by a female from Dunedin, who was a passenger by the *Robert Henderson*. Other passengers by the same ship were in the province, but prompt measures were adopted to stop the spread of the disease, and it is hoped that the malady may not become acclimatised.

Vaccination.—During the past week, says the *Worcestershire Chronicle*, only five cases were presented for vaccination at the local stations. The births in Worcester average about forty per week; it is evident, therefore, that parents pay very little attention to the orders of the Vaccination Act. The question as to the efficacy of Jenner's discovery has—says *Galignani*—been for months an inexhaustible topic of discussion in the Medical journals, among which we select the following from the *Journal des Connaissances Médicales*:—"In January, 1870, the Rothschild Hospital, in the Rue de Picpus, received seventy-two cases of small-pox; none of these patients had ever been revaccinated. On the other hand, from that time all those who entered the same Hospital, labouring under other diseases, were compulsorily vaccinated whenever practicable, and none of these patients have since contracted the small-pox."

Royal Institution of Great Britain.—At the annual meeting, Monday, May 1, 1871, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, the Annual Report of the Committee of Visitors for the Year 1870 was read and adopted. Eighty-one new members were elected in 1870. Sixty-three lectures and nineteen evening discourses were delivered during the year 1870. The books and pamphlets presented in 1870 amounted to 118 volumes, making, with those purchased by the managers, a total of 307 volumes added to the library in the year, exclusive of periodicals. The following gentlemen were unanimously elected as officers for the ensuing year:—*President:* Sir Henry Holland, Bart., M.D., D.C.L., F.R.S. *Treasurer:* William Spottiswoode, Esq., M.A., F.R.S. *Secretary:* Henry Bence Jones, M.A., M.D., D.C.L., F.R.S. *Managers:* John J. Bigsby, M.D., F.R.S., F.G.S.; George Berkley, Esq., C.E.; William Bowman, Esq., F.R.C.S., F.R.S.; George Busk, Esq., F.R.C.S., F.R.S.; Warren De la Rue, Esq., D.C.L., F.R.S.; Capt. Douglas Galton, C.B., F.R.S., F.G.S.; John Hall Gladstone, Esq., Ph.D., F.R.S.; Wm. Robert Grove, Esq., M.A., Q.C., F.R.S.; the Lord Lindsay; George Macilwain, Esq., F.R.C.S.; the Duke of Northumberland, D.C.L.; William Pole, Esq., M.A., F.R.S.; Sir W. Frederick Pollock, Bart., M.A.; Robert P. Roupell, Esq., M.A., Q.C.; Col. Philip James Yorke, F.R.S. *Visitors:* John R. Andrews, Esq.; William Ernst Browning, Esq.; John Charles Burgoyne, Esq.; Rev. Charles J. Fynes Clinton, M.A.; Edward Frankland, Esq., D.C.L., F.R.S.; Thomas Williams Helps, Esq., M.A.; James Heywood, Esq., F.R.S.; Thomas Lee, Esq.; Robert Pilkington Linton, Esq., F.R.C.S.; Col. William Kirkman Loyd; James Dyce Nicol, Esq., M.P.: Rev. Cyril W. Page, M.A.; Arthur John Edward Russell, Esq., M.P.; Basil Woodd Smith, Esq.; Michael Wills, Esq.

A Bill brought in by Mr. Stansfeld and Mr. Hibbert to amend the Metropolitan Poor Act of 1867, proposes that all the provisions of that Act as amended by the subsequent Act of 1869, which relate to the procuring of any buildings for the purpose of an asylum under that Act, shall apply to any ship, vessel, hut, tent, or other temporary erection which may be used by the managers, with the approval of the Poor-law Board, for the reception of paupers or otherwise for the purposes of an asylum.

The Irish College.—The election of examiners in the Royal College of Surgeons in Ireland was held, as provided by the charter, on the first Tuesday in May. There was no contest against any of the outgoing examiners, and the following gentlemen were consequently re-elected:—Dr. Fleming, Consulting-Surgeon to Steevens's Hospital; Mr. Stapleton, Surgeon to Jervis-street Hospital; Dr. Richardson, Surgeon to the Adelaide Hospital; Dr. Tuffnell, Surgeon to the City of Dublin Hospital; Dr. O'Grady, Surgeon to Mercer's Hospital; Dr. Stokes, and Dr. John Barker. The method of election is peculiar. On the day specified the Councillors are required to attend, and, in the presence of the Fellows, seven of them are chosen by lot, and sworn under a most stringent oath to elect the most suitable candidate. They then retire and confer together, and on their return their decision is announced by the President.

The New Bathing Establishment, Spa.—Spa, a small town of 5000 inhabitants, fourteen hours by rail and steamer from London, three hours and a half by rail from Brussels, is charmingly situated in a mountainous district. It is pretty well known to Englishmen, being much frequented by them, especially during the races. It boasts of some purely English institutions, including the church. It is considered a very salubrious place by the inhabitants, where epidemics are rare and the number of the poor is small. Therefore no Hospitals are found, the only institution of the kind being the Hospice de St. Charles, where occasionally about half a dozen aged or invalid poor may be found. There is a *bureau de bienfaisance*, where out-patients are prescribed for, and which also attends to the visiting of the poor. The Spa water belongs to the chalybeate springs, far more agreeable and digestible than any in England: it is earthy, alkaline, but contains less carbonic acid than Schwalbach, Bruckenau, and Pyrmont. There is gr.ss. of carbonate of iron in ℥xvj. of the water. It is used especially in general debility and various nervous affections originated by anæmia. It is particularly recommended to people in advanced life, and some have assured the writer that they never left the place without being considerably invigorated. The new bathing establishment, only opened about a year ago, is very fine, was built by an engineer from Paris, and contains the recent and complete bathing fittings and hydrotherapeutic apparatus. It lies on elevated ground surrounded by gardens, and is a rectangular building with a small courtyard in the centre, two floors high, over a high basement, and has two fine halls in front and back respectfully. They have floors of stone and marble, marble facings, and columns painted white in imitation of marble. Most of the bath-rooms are on the ground-floor, gentlemen's to the right, ladies' to the left; all open into common corridors which can be warmed by hot pipes. The rooms are 8 feet by 10, and 15 feet high, have oil-painted walls and French windows (*croisées*). There are zinc and marble baths; the furniture is of more elegance in some of the rooms than the rest. In the Souterrain a fine plunge-bath is found, 8 feet by 12, various douches, elegant vapour- and sitz-baths. Four water tanks are under the roof, two for the male side and two for the female, the two hot ones being heated in the usual manner by hot-pipes. The recently discovered springs of Nirisch, which lie at some distance, are conducted into these tanks; they are strongly impregnated with iron. On the first floor there are offices, sitting, and reading rooms. Every part of the house can be warmed by hot air, and the attendance is facilitated by telegraphing. A list of the charges may be obtained by application to the "direction des bains," or the Medical superintendent, who lives in the house. There are electrical apparatuses used under his direction. The working classes are supplied with tickets at reduced prices, as is customary in Continental watering-places.

ARREST OF VARIOLA BY QUININE.—In a note addressed by ex-Professor Coze, of Strasburg, to Dr. Lacour, of Lyons, he makes known a mode of treatment which he has found very efficacious during the present epidemic, in cutting short variola. As soon as an individual experiences the precursory symptoms of variola (as headache, soreness of the limbs, lumbar or cervical pains), he should be sent to bed, and quinine should be given him every half-hour, until three or four doses, of twenty-five centigrammes each, have been taken. Next day, if the symptoms at all continue, the same procedure should be followed; and almost always the variola will be found to have abated, or if the eruption does appear it is extremely discrete. The patient's diet, meanwhile, should continue as usual. M. Coze adds that he was induced to employ this treatment from the fact that quinine exerts a most remarkable effect upon headache (a striking feature in the present epidemic), "opposing the expansion of the cerebral matter, and disposing it to concentration." He had already found it of astonishing utility in the headaches of students consequent on their application prior to the examinations; also, it is very efficacious at the commencement of *ramollissement* of the brain. The quinine acts as a poisonous agent on the "variolous vibriones" which are developed in the disease. When the disease has become developed, these vibriones, in their search for oxygen, especially in the nasal fossæ and entrance of the larynx, give rise to fatal asphyxia. Gargling these parts with quinine solutions is the best means of treatment.—*Presse Belge*, April 16.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The following are in type, and will be published as soon as possible:—"On the Routine Use of the Ophthalmoscope in cases of Cerebral Disease," by Dr. J. Hughlings-Jackson; "Cataract and its Treatment by the Semilunar Corneal Incision," by Mr. Jabez Hogg; "A Case of Myelitis," by Mr. R. W. Tibbits; "The Mortality from Small-pox in regard to Sex and Age," by Mr. C. A. Fox; Reviews of "The Geographical Distribution of Heart Disease and Dropsy in England and Wales," by Alfred Haviland, M.R.C.S.; "Notes and Recollections of an Ambulance Surgeon," by William MacCormac, M.A.; and "Wünderlich's Medical Thermometry."

Senex.—(1) Try Buckle's "cinchona fluida." Add, if you please, fifteen minims of aromatic sulphuric acid to each dose. (2) Add three minims of liq. arsenialis to each dose of quinine.

Inquirer.—Yes, but his name does not appear in the Medical Register of this year. In this particular instance we would rather not give more information than we need. Your fee has been given to the British Medical Benevolent Fund.

B. X. inquires what we know of a modern cure for cancer, said to be practised by a member of our Profession who has already invented wonderful cures for incurable maladies. We know nothing of it, and as our knowledge, so is our belief in it.

M.D. Dub. has done too much. The symptom is an effect of mental impressions upon a system in good health and vigour, but a little too susceptible. The continuance of local and other remedies does but perpetuate it. Our correspondent should forget it, and it will gradually disappear, without leaving a trace behind.

MACKINNELL'S HOSPITAL VENTILATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Would you kindly inform me of any Hospital where Mr. MacKinnell's invention for the ventilation of Hospitals, spoken so highly of in Holmes's "System of Surgery," vol. iv., pp. 1000-1001, is used. Apologising for troubling you, I am, &c., S. M. W. W.

King's Lynn, May 1.

A. B.—If the complaint be well founded, he should address a remonstrance to the Dean of the School to which he belongs.

F. R. H., Woolwich.—A very interesting paper on "Idiosyncrasy" will be found in Mr. Wadd's "Comments on Corpulency." The learned author has collected a series of cases of the most remarkable kind, and enters into the subject with that originality and vivacity which distinguished him. If we mistake not, our correspondent will find some facts bearing upon the question in Dr. Copland's "Dictionary of Practical Medicine."

T. B. C. is justified in assuming the title of "Doctor of Medicine."

R. S.—Serving in the manner of an apprentice is quite sufficient.

A Member of the Pharmaceutical Society.—A great deal of trash has been written with respect to the publication by Mr. Ince of the prescriptions of Medical Practitioners. Those prescriptions were given to the Alumni of the Pharmaceutical Society, with the laudable view of teaching them the duties which they will be called upon to perform. It is absurd to say that a "breach of confidence" is involved in such a publication. Beesley's "Book of Prescriptions" would be liable to the same objection. Anything and everything which would fetter, or attempt to fetter, the progress of knowledge, or to shroud the conduct of Medical Practitioners in mystery, should be urgently condemned. If we are to retain our position with the public, it must be by openness and candour in all our transactions with them; the "greatest good of the greatest number" should be, as it has been, emphatically our motto—it is for the charlatan to "pretend." The legitimate Practitioner should rely upon truth and reality; the greatest amongst us owed their fame to the simplicity of their treatment of disease. May it ever be so.

HYDROPHOBIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As there have of late been several cases of hydrophobia, and will in all probability be more as the season advances, I feel constrained to make known, through your valuable medium, a course of treatment which my father (the late Dr. Harland, of Scarborough) pursued with great success in sundry cases of tetanus, and thought might also prove beneficial in hydrophobia, which he was inclined to regard as a kindred disease of nervous centres, and principally seated at the base of the brain.

In three cases of tetanus arising from gunshot wounds in the leg below the knee, he avoided amputation, although considerable portions of bone were shot away—in one case, about two inches, with the muscles much lacerated.

Lock-jaw set in, however, after the lapse of a few days, which he subdued by the following treatment:—He introduced a seton in the back of the neck (rubbed with cantharides ointment to hasten its action), and applied a mustard plaster the whole length of the spine, and administered mild, but oft-repeated doses of chloroform (on a handkerchief), coupled with one-grain doses of cannabis indica every three hours during the paroxysms, which in one case were very frequent and obstinate.

Each patient recovered without recourse to amputation.

I am, &c., H. S. HARLAND.

Brompton, York, April 26.

P.S.—Should any Medical man have the chance and try the above remedies in a case of hydrophobia, I shall feel obliged if he will kindly let me know the result.

T. C. J.—The author of the papers which are published does not profess to be faultless; the impressions which he wishes to convey are his own. If *T. C. J.* would kindly forward to us any particulars with respect to the late Mr. Vincent, we should be much obliged to him. In whatever form the information which he can send us shall be given, we promise him "a fair field and no favour."

M.R.C.S.—Whatever may have been the shortcomings of the Society of Apothecaries, no one acquainted with the history of the Profession would be bold enough to assert that the Society has not been the best and most consistent friend of Surgeons in general practice. When, in the early hours of the morning in August, 1815, the Apothecaries' Act was carried, it must not be forgotten that the Colleges of Physicians and Surgeons had repudiated any sympathy or interest with the great body of Medical Practitioners of that period. We are inclined to the belief that that repudiation was beneficial to the interests not only of the Profession, but—what is of far more importance—of the public. The Society of Apothecaries was the first examining body that raised the education of Surgeons in general practice. The Society, in fact, was the pioneer of reform. It was the direct interest of "the Surgeons and Physicians" of that day to keep the general Practitioner as a member of an "inferior grade." Thanks to the Society, this attempt was frustrated. When the history of our Profession is to be written, the successful efforts made by the Society of Apothecaries to give to the public a class of Practitioners in every way worthy of their confidence and support will be fully recognised.

DARWINISM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your brief critical notices of three works on this much-canvassed topic it is satisfactory to know that a talented divine of the English Church, inclining to the views of Messrs. Darwin and Wallace, would not think their adoption on probation adverse to faith in Christianity—the progressive transmutation of a much lower animal than man into the fulness of human nature. Now, whether we are come up from the ape or gorilla from the Bosjesman, the red or black man—or all of these may be off shoots from the standard man—to the eye of common sense are speculations on a level with each other, and the missing links talked of are as likely to be found as a living sphynx or centaur. Nevertheless, Darwinism suggests many questions for investigation, such as—What differences of structure and functions of brain and other parts are to be discovered in animals nearest to man in intelligence, where the line in anatomy may be drawn between human mind and animal instinct? It would seem utterly vain to inquire into the anatomy of the ant, bee, or bird for such purposes, and yet the most learned professor of natural history cannot deny to all of these the accomplishment of productions belonging to high science and art, and proceeding from a thinking process ascribable to the creature or the Creator. There is every evidence to prove that the ant, the bee, and the bird are as much unconscious of the invention and carrying out of their designs as the acorn in becoming an oak, or a clock in keeping time—God constructs the one; man the other. Throughout all creation, organic or inorganic, I presume it will be acknowledged that all the mechanical, chemical, and vital actions are performed, and proceed *de facto* from a power we associate with our ideas of mind—the great mind of the great Supreme. The races of mankind, are they from one pair (may be asked) like the pigeons? Looking at this question, we believe the Scriptures, and that the Creator during long periods was preparing the world for the reception of a being to place at the head of His creation, who should have consciousness of his own being, of the being of a God and the creation around him, a consciousness of free-will and responsibility—in short, that consciousness possessed by no other creature. The standard type of man as given in Scripture recommends itself to our belief much more than the Darwinian; and questions concerning the immortality of the soul, as to when it commences—in the embryo fœtus, the infant born, the all-life-long idiot—whether these dying have not that immortality, leaves the question of the soul's immortality free. Free-will, responsibility, and (most forcibly) retributive justice all reasonably call for a future existence of man; and if the Supreme may or may not give this soul to the inert and abortive realities alluded to concerns not our faith. Asking a place in the *Medical Times and Gazette* for these few remarks, I am, &c.,

Nailsworth, May 1. Thos. Stokes.

COMMUNICATIONS have been received from—

Mr. J. Potter; Mr. H. S. Harland; Mr. Collette; Messrs. Hart and Co.; M.D.; Dr. Bakewell; Dr. F. R. Hogg; Mr. Stokes; The Rev. Dr. Jessop; Mr. Wilson; Mr. E. B. Roche; Mr. James Simson; Mr. J. Warren; Dr. S. Drew; Dr. B. W. Richardson; Mr. R. W. Tibbits; Mr. J. Chatto; Dr. H. S. Purdon; Dr. Richmond; Mr. J. C. Kear; Mr. H. Raynes; Dr. W. J. Williams; Dr. Barber; Dr. Kerr; Dr. J. Hughlings-Jackson.

BOOKS RECEIVED—

Cre-Fydd's Careful Counsel on Domestic Management—Spence's Lectures on Surgery, parts iii. and iv.—Report of the Royal Edinburgh Asylum for the Insane—Report of the Surrey Lunatic Asylum—Edinburgh Medical Journal, May—The Dark Blue, May—Smith's Dental Anatomy and Surgery—Analytical Tables for Students of Practical Chemistry, by J. Campbell Brown, D.Sc. (Lond.), F.C.S.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—Hardwicke's Science Gossip, May—New York Medical Gazette—Cope's Tobacco Plant, May—Medical Press and Circular—Practitioner, May—West London Observer—The Northwich and Winsford Guardian.

APPOINTMENTS FOR THE WEEK.

May 6. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

8. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 2 p.m. General Monthly Meeting.

9. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Adjourned Discussion on Mr. Hutchinson's "Cases of Vaccino-Syphilis." Dr. Elam, "On Partial Acute Idiopathic Cerebritis."

Royal Institution, 3 p.m. Charles Brooke, M.A., F.R.S., "On Force and Energy."

10. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Inspector-General Lawson, "On Cholera in Ships."

Society of Arts, 8 p.m. Meeting.

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

12. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Clinical Society, 8½ p.m. Mr. Cooper Foster, "On a Case of Naso-pharyngeal Polypus." Dr. Buzzard, "On a Case of Cervico-brachial Neuralgia treated by the Constant Current." Mr. J. Warrington Haward, "On Cases of Distension of the Antrum of Highmore." Dr. Anstie, "On a Case of Syphilitic Trigeminal Neuralgia, with Loss of Smell and Taste, and Paralysis of the Ocular Muscles."

Royal Institution, 9 p.m. Col. Jervois, R.E., C.B., "On the Defence of the United Kingdom."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 29, 1870.

BIRTHS.

Births of Boys, 1161; Girls, 1089; Total, 2250.
Average of 10 corresponding weeks, 1861-70, 2124·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	745	724	1469
Average of the ten years 1861-70	692·3	654·4	1346·7
Average corrected to increased population	...	...	1482
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	11	2	3	1	14	...	2	1	5
North ...	618210	107	...	8	2	12	5	5	3	4
Central ...	383321	15	2	1	1	3	1	1	...	1
East	571158	33	2	3	1	8	2	2	4	3
South	773175	95	6	15	2	8	2	3	6	1
Total	2803989	261	12	30	7	45	10	13	14	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·663 in.
Mean temperature	50·7°
Highest point of thermometer	64·9°
Lowest point of thermometer	42·7°
Mean dew-point temperature	46·2°
General direction of wind	Variable.
Whole amount of rain in the week	0·80 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 29, 1870, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending April 29.	Deaths Registered during the week ending April 29.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2250	1469	64·9	42·7	50·7	10·39	0·80	2·03
Portsmouth ...	125464	13·2	100	39	64·2	38·2	51·3	10·72	0·52	1·32
Norwich	81787	10·9	55	33	61·5	34·5	48·6	9·22	1·01	2·57
Bristol	173364	37·0	132	77	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	43	30	62·5	39·8	48·6	9·22	0·87	2·21
Birmingham ...	378574	48·3	242	159	61·0	41·0	49·3	9·61	0·85	2·16
Leicester	101367	31·7	75	37	66·5	39·0	49·9	9·94	0·66	1·68
Nottingham ...	90480	45·3	42	26	64·3	38·1	49·1	9·50	0·99	2·51
Liverpool	526225	103·0	354	335	60·4	41·3	48·8	9·33	0·36	0·91
Manchester ...	379140	84·5	262	192	62·0	41·2	47·9	8·83	1·10	2·79
Salford	123851	23·9	93	75	60·5	39·3	48·0	8·89	0·94	2·39
Bradford	148030	22·5	81	70	61·0	40·0	48·8	9·33	0·38	0·97
Leeds	266108	12·3	399	159	60·0	41·0	48·1	8·94	0·95	2·41
Sheffield	255247	11·2	198	111	62·0	40·2	48·6	9·22	0·65	1·65
Hull	135195	38·0	96	49	61·0	28·0	46·5	8·05	0·50	1·27
Sunderland ...	103037	31·2	79	32	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	91	80	57·0	38·0	45·6	7·55	0·56	1·42
Edinburgh	179944	40·6	150	111	53·7	30·0	42·8	6·00	0·70	1·78
Glasgow	477627	94·3	413	332	58·1	36·0	41·6	7·00	1·35	3·43
Dublin (City, etc.)	322321	33·1	176	157	62·1	31·8	50·8	10·44	0·57	1·45
Total of 20 Towns in United Kingd'm	7336961	34·4	5331	3573	66·5	28·0	48·2	9·00	0·76	1·93

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·66 in. The highest was 29·91 in. on Tuesday morning, and the lowest was 29·34 in. on Saturday at noon.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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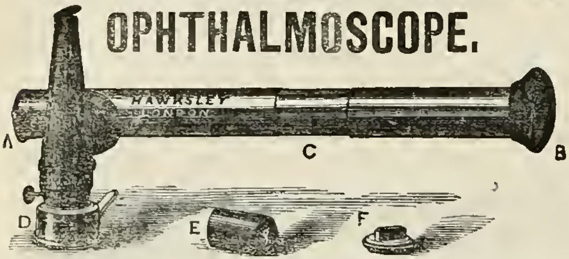
* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on the 3rd inst., will probably be available before the middle of the year, and will then be substituted for these estimates.

THE SELF-ILLUMINATING OPHTHALMOSCOPE.



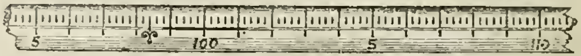
Arranged by Professor LIONEL BEALE, F.R.S. (King's College).

May be used to examine a patient in any position, in daylight, generally without atropine. Is held in the hand. No dexterity required in its management. Is adapted to form an Otoscope, Endoscope, Laryngoscope, &c. Descriptive Circular forwarded. *Vide* "British Medical Journal," April 2nd, 1870. Price, in case, 42s. Sole Maker, HAWKSLEY, Surgical Instrument Maker. Blenheim-street, Bond-street, London, W.

HAWKSLEY'S PATENT CLINICAL THERMOMETER.

HER MAJESTY'S LETTERS PATENT have been granted for this Thermometer, the index of which cannot be shaken into the bulb, or the black divisions rubbed out. Prices of the 6-inch patent instrument, in safety case, upon which are three engraved scales, 12s. 6d.; 5-inch ditto, in ivory case, 13s. 6d.; 3-inch ditto, in silver case, for waistcoat pocket (Prof. Beale's), 16s. Post free.

Hawksley's Improved Clinical Thermometer.



Section showing actual size, range 90 to 110.

Vide "Lancet" Report, July 3rd, 1869; Brit. Med. Association Reports, 1869.

At the last meeting of the British Medical Association, in a paper read by Dr. Cornelius Fox, on "Clinical Thermometers," it was announced that this instrument was far superior to that of any other maker. Prices of the Improved Clinical Thermometers, with indelible divisions, in similar cases to the patent instrument, 6-inch, 10s. 6d.; 5-inch, 12s. 6d.; 3-inch (Prof. Beale's), 15s. Post free. Temperature charts bound for the pocket. Descriptive circulars forwarded. Inventor, Patentee, and Sole Maker, **HAWKSLEY,** Surgical Instrument Maker, Blenheim-street, Bond-street, London, W.

THE NEW PATENT

AMERICAN ARTIFICIAL LEG.

SOLE LICENCEES:

F. WALTERS & CO.,

16, MOORGATE-STREET, LONDON.

CHLORODYNE.

SPECIAL NOTICE.

The absurd statements that have recently appeared in Medical and other Journals respecting the constituents of Chlorodyne (each analysis differing widely), J. T. Davenport is compelled to further CAUTION the Profession against using any Compound under the name of Chlorodyne but the genuine, which alone has gained such extraordinary celebrity.

J. T. Davenport appends Medical testimony in confirmation of the above.

The wonderful efficacy of Chlorodyne being universally acknowledged, it must be evident to all that the assumption of the name to any other Compound than the Genuine is not only improper, but unprincipled, as it is liable to injure the health of the Patient and cause discredit to the Physician. Even death has resulted from the use of spurious Chlorodyne when benefit had been previously experienced from the genuine; and this melancholy circumstance has no effect in restraining these heartless proceedings.

From Dr. J. WILSON, Castleton, Yorkshire.

"I require to use a considerable quantity of Chlorodyne in cases where no other medicine is of the least avail; and my object in wishing a supply from your own establishment is that I am frequently deceived by getting a *Spurious* article from other places, although I never order anything but the genuine Browne's Chlorodyne."

From JAS. ATKIN, M.D., Medical Officer, Fever Hospital, Oldcastle, Co. Meath.

"Having ordered from our Druggists "Chlorodyne," I was not only *disappointed in its effects*, but annoyed when I received a spurious compound. I have been in the habit of using your Chlorodyne with great advantage to my patients and satisfaction to myself."

From F. E. BARTON, Esq., Surgeon, Dover.

"I have now used your Chlorodyne in numerous cases, and have much pleasure in adding my testimony to its very great efficacy as an Antispasmodic and Anodyne, having found it especially valuable in those cases in which Opium does not agree well with the patient."

From Thomas F. Hale, Esq., Surgeon, Saundersfoot, Pembrokeshire.

"Sir,—I should be much obliged by your forwarding three bottles of Dr. J. Collis Browne's Chlorodyne, which I have found most useful in allaying pain. I have used twelve ounces of it, and, in nearly every case in which I have employed it, have every reason to be satisfied with the result; and although I object, as a rule, to use any preparation of a secret nature, and whose composition I am not fully acquainted with, still, having once tried the Chlorodyne, and found that it really did produce the effects stated, I do not think I should be justified in withholding such a preparation from my patients, when I see the value of the remedy."

From Lord FRANCIS CONYNGHAM, Mount Charles, Donegal, December 11th, 1868.

"Lord Francis Conyngham, who, this time last year, bought some of Dr. J. Collis Browne's Chlorodyne from Mr. Davenport, and has found it a most wonderful medicine, will be glad to have half a dozen bottles sent at once to the above address."

"Earl Russell communicated to the College of Physicians that he received a despatch from Her Majesty's Consul at Manilla, to the effect that Cholera has been raging fearfully, and that the ONLY remedy of any service was CHLORODYNE."—See "The Lancet," 1st December, 1864.

CAUTION.—Vice-Chancellor Sir W. Page Wood stated that Dr. J. Collis Browne was undoubtedly the Inventor of CHLORODYNE, that the whole story of the Defendant was deliberately untrue, which, he regretted to say, had been sworn to.—See "Times," 13th July, 1864.

The Sole Manufacturer of Dr. COLLIS BROWNE'S Chlorodyne is

J. T. DAVENPORT, 33, Great Russell-street, Bloomsbury-square,

Who alone received the Recipe, and who is the Only Authorised Maker.

ORIGINAL LECTURES.

ON THE INFLUENCE OF THE NERVOUS SYSTEM ON DISEASES OF THE ORGANS AND TISSUES.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture III.

THE DIAGNOSIS OF TROPHIC NERVOUS DEBILITY—CUTANEOUS TROPHESIES—METASTASIS—COUNTER-IRRITANTS.

I have said little of the clinical anatomy of the trophic nervous system, not because I do not think it of great practical importance, but because I wished you to have the whole subject more fully before you than it is usually presented in text-books. It is easy to gather, from what has been already stated, that such an anatomy will help us greatly to comprehend the *modus operandi* of general causes and remedies on the nervous system in both acute and chronic diseases. Of this class are heat and cold, exercise and rest (whether of body or of mind), pleasure and pain, antiphlogistics, tonics and stimulants, counter-irritants and sedatives, diuretics, cathartics, and alteratives, and all the drugs and things named from their most obvious and often contradictory effects, without any true knowledge—too often without even recognition—of the reciprocal relations of the nervous system to the organs and tissues involved. Upon these points much may be said. I shall first consider what trophic nervous debility is, and how it may be ascertained.

If we consider what is most common and general to all trophic nerves and nerve-centres when morbid, it is this—that nerve-energy (vis nervosa) is evolved either in excess or in defect, with corresponding results as to nutrition of tissues and functions of organs. In observation the whole order of events must be investigated, and we necessarily begin with the causes of trophic nervous debility, which are those of nervous debility in general. As to the results, we may remember that when the motor and sensory systems are also involved, there is usually either hyperæsthesia, or pain, or anæsthesia, and palsy or paresis, and that these changes may guide us to the nerve-centres affected. In purely trophic neuroses, however, morbid sensory or motor states may not be manifested, and the only means of discovering that there is a trophic neurosis at all is by observation of the known changes in nutrition and function which they cause, being the results of trophic nervous debility, or "loss of tone." But how shall we determine what special trophic nerves and nerve-centres are involved in this loss of tone, so as to determine causation and treatment? 1st, Having ascertained what tissue-changes have occurred, we might trace out the nerves and nerve-centres in anatomical relation with the organs and tissues affected; or, 2ndly, we might reverse the process, and, fixing upon the nerves and nerve-centres—as, for example, those of the sympathetic system—refer the local changes to these, and this might be done by more than one method; or, 3rdly, we might examine clinically into both the trophic and neurotic conditions locally. In all instances the sensory condition should be ascertained; for what we have to determine practically is, if there be trophic nervous debility and how it arises; and much may be done as to the first point by determining the state of sensibility of the skin in different regions of the body as a mere matter of fact, without reference to particular nerves and nerve-centres. For this purpose, the æsthesiometer should be used systematically, and the sensibilities compared with the normal. We may even go beyond this, and deduce the state of the regulative nerve-centres from the æsthesiometric conditions of their respective regions of distribution.

In making these observations, it will be necessary to bear in mind what I stated in a previous lecture, on the observation of diseases of the nervous system, as to the decussations of spinal sensory nerves, and as to the distinctness of the nerves of common sensibility or pain from tactile and thermal nerves, for there may be anæsthesiæ of one set and not of another.

Whatever method we adopt, however, we encounter a serious difficulty in this: that our knowledge of these trophic changes is as yet imperfect; and that, as to what is known, much is either not admitted or is controverted. I think, therefore, that clinical illustrations of these neurotic changes, easy to observe and to test, may be useful.

The glands of the skin and the products of the cutaneous tissues are constantly influenced by states of the nervous system differently induced, but with results very instructive as to like changes in other glands and tissues. Some of these can be traced to visceral "sympathies," or the diastaltic action of viscera on nerve-centres, others to functional or structural disease of the nerves and nerve-centres themselves; so that there is a large class of diseases of the skin which a clinical trophic anatomy of this kind helps to diagnose both etiologically and therapeutically. As to the anatomy, experiment helps less than close clinical observation, and the more especially because no motor or sensory neurosis is associated with them to suggest their origin.

An illustration of this kind stares you literally in the face when you study the pigmentation of the hair on the head and face (as greyness), and the varying growth of the hair on the scalp constituting baldness. Are the changes which occur due to loss of tone of the hair-bulbs solely, or are they intimately associated with trophic nervous debility of certain unknown nerve-centres? The facts are not far to seek. In the first place, that regional symmetry which is a chief characteristic of trophesies is very manifest, both as to the extent and order of recurrence of these changes. Look round in an assembly where heads of many bald men are visible (women are rarely bald), and you will find hardly one of them bald over the occiput, and many not grey there, although "silvered o'er" elsewhere. Classify your observations, and you will find that baldness extends from two points—the forehead and the vertex—and ends at a line which, if carried round the head, would touch the occipital ridge posteriorly and the eyebrows anteriorly. Look, again, at the beards of men, especially as to the order and degrees of development and of greyness, and you will find, on classification, that there are such signs of symmetry and order as plainly indicate correlative trophic centres of nutrition. The face-hair presents like indications. The region of the eyebrows is certainly a clinical region in brow-ague, herpes, and leprosy. You may subdivide the beard into trophic regions, whether you have regard to development of the cranium, to greyness, or to diseases of the follicles. The beard over the lower jaw is almost always grey earlier than that over the upper jaw—viz., the moustache and the anterior portion of the whiskers. Again, certain portions of the beard over the lower jaw—viz., those which are the most constant (the chin-tufts) are usually the first to grizzle. The connexion of greyness with defective innervation is proved by both clinical observation and experimental research. Brown-Séquard found that the hair of guineapigs, of which certain nerve-centres had been injured, turned white over corresponding parts of the body; a like fact has been observed in palsies. With this greyness, the protective properties of the tissues are diminished, for in the guineapigs just referred to the white hairs were infested exclusively with lice. I have recorded a case of sycosis restricted in like manner to the muzzle-beard.(a)

A man, lately in Ward 1, with aneurismal dilatation of the aorta and spasmodic nodding of the head, had the hairs over each side of the parietal region infested with the achorion Schönleinii, so that a yellow crust encrusted each hair. The skin of the same region was also pigmented, yet the vertex and coronal regions, thinly covered with hair, and the occipital region, thickly covered, were not affected. Some facts of this kind are so familiar that they lose their force; it is proverbial that care, as well as age, will turn a man grey, and it is certain (although denied by some) that painful emotions will effect this change very rapidly.

In these instances we have illustrations of those conditions of defective nutrient energy known as loss of "tone," loss of "vital energy," signs of "breaking up," of "decline of life," and the like, in which the nervous system is involved, and even indicating which centres are the first to give way, but which cannot be described either anatomically or nosologically, and for which I know no better name than trophic nervous debility. To investigate the causation would lead us far away into researches as to the operation of great laws of life and organisation, for which this is neither the time nor the place. All I would observe is, that, in the special instances just referred to, we should have to determine, in the first instance, why the head is covered with hair at all and the forehead bare; why the chin is bearded, and not the cheeks; why there are eyebrows, and why of varying size and shape; why the hairs on the head and face differ. These and other questions, when asked, *may* have some kind of an answer, but I will venture to say not one theory would be given worth more than those which Bacon terms "barren virgins," apart from a knowledge of the origin, development, and functions of a trophic nervous system. One will say that the eyebrows are for a pent to the eyes, another that the beard is to keep the throat warm, and the moustache to be a respirator; they might with equal validity say that the nose is bare to keep it cool. Such theories of final causes are worse than worthless scientifically; they are not only "barren," but are hindrances to fertile research. Even the notion that the hair is for warmth and ornament is too restricted, although it be true as far as it goes. Taking the law of evolution as a guide, together with the law of use, you will find that the hairs of the head and face follow the evolution and retrocession of the nervous system; men get first bald and grey on the top and the temples for the same reason that they decay mentally at the top, and that the animal instincts and appetites survive the memory and intellect.

(a) *Medical Times and Gazette*, December 17, 1868.

What I have said of the hair applies to the nails, epithelium, pigment cells, sebaceous glands, and other cutaneous tissues. The changes in nutrition of the nails, in attacks of gout and other constitutional diseases, are well known to close observers. The occurrence of these attacks is sometimes indicated by white lines in the nails, which are symmetrical. The symmetrical character of the bronzing in "Addison's disease" (a disease of trophic nervous debility) is also an illustration, and is probably due to diastaltic action of the supra-renal capsules, just as pigmentation of the mammary areolæ is due to a like action of uterus or ovaries.

All these facts must be considered in connexion with that other general law to which I have already directed your attention as a guide in clinical observation—viz., that organs and tissues precede nerves in the order of development. Hence we can mark out sectional regions of nutrition and of organs, which are regulated trophically by centric regions of innervation. The diastaltic action of viscera contained in such regions on the corresponding nerve-centres, and through these on other viscera, is an important and common cause of trophesies, and ought never to be lost sight of. The trophic and neurotic sympathies of the uterus, for example, may be classified according to their anatomical manifestation. Gastric ulcer, so common in women, is so often associated with uterine disorder as a cause of that condition of the gastric mucous membrane which predisposes to softening and ulceration, that inquiry into the condition of the uterus should always be made in these cases with a view to treatment. Of course, this is analogous to, but not identical with, the diastaltic vomiting of the early months of pregnancy. The glands, fat and pigment-cells, lymphatics, and vascular cells of the cutaneous system are markedly influenced in this way, as I have already shown as to the pigmentation of the nipple in pregnancy, and the symmetrical pigmentation of the skin in Addison's disease. It is interesting to observe that very limited regions are thus marked out by reflex neurotic changes or trophesies. Thus, the eyelids are modified neurotically in at least four different ways. Three of these—namely, venous lividity of the lower eyelids, œdema of both, but especially of the lower lids, and pigmentation marking out the orbicularis muscle, are due to a diastaltic action of the genito-urinary organs; but the fourth, a copious vascularity of the upper eyelids, arises, I think, from influences derived from the emotional centres. Experimental research affords no information as to the nerve-centres involved, yet the phenomena of the three first-named are so commonly associated with morbid states of the genito-urinary system that their relations are certainly etiological, and no other medium of connexion than the nervous system can be suggested.

Looking generally at the results of this trophic nervous debility, we can divide them into the actual and the conditional. It is a condition which not only induces disease, but predisposes organs and tissues everywhere to suffer from causes of diseases which would otherwise be harmless. Illustrations of this kind are the dangerous attacks of inflammation from cold of organs imperfectly innervated, the dropsical effusions which accompany a "breaking up," and the outbreaks of gout, rheumatism, and syphilis in persons predisposed from nervous exhaustion. A syphilitic taint which has been dormant for many years will thus become dangerously active. All forms of acute and chronic disease might be mentioned. In so far as merely medicinal treatment is indicated, we may do much without a knowledge of the special anatomical nerves and nerve-centres involved, but when we desire to use counter-irritants and other remedies of the class, something more than a vague general knowledge, such as the vaso-motor theories afford us, is needed practically.

Since the experimental researches of Stilling and Schiff, on the sympathetic as the vaso-motor system, confirmed by the equally valuable researches of Claude Bernard, Budge and Waller, Brown-Séquard, and others, pathological theories have became popular which attribute morbid heat, congestions, effusion, and exudation to a paresis or palsy of the sympathetic system, the consequence of which is that the small arteries and the capillaries lose their contractility and retentiveness. But, besides the fact that this view gives us no clue to those changes, which, being chemical, are independent of vaso-motor nerves proper, it is certain that the whole cerebro-spinal system contains both trophic and vaso-motor centres, so that the commonly current theories of vaso-motor activity, which ignore this fact, are of little value. Striking illustrations of this assertion may be seen on careful observation of patients. For example, we had (in Ward 1) a case of probable syphilitic paraplegia in a young man, aged 24, in which there was suddenly complete loss of sensation and motion from the lumbar region downwards. If the symptoms had not included more than this, the case would not have taught us much; but, in addition to retention of urine and fæces from palsy, there was a noteworthy absence of febrile vaso-motor phenomena in the palsied limbs, due to inhibitory influence induced by the spinal lesion, for, while in the upper half of the body there were rigors and goose-skin, followed by sweats, in the palsied half, none of these, only a sensation of cold, and this was illusive, for the thermometer marked 104° in the groin and 103° in the axilla. With this higher temperature in the palsied parts there was no power of resistance to cold, for an ice-bag which had been allowed to remain on the loins for four or five minutes caused redness and blisters where applied. Blisters and sloughing of the soles of the feet had also been caused by a hot-water bottle. This as to changes of temperature; but such is the diminished power of resistance to injurious agents that the lips of the urethra and the margins of the prepuce were excoriated by the urine, which was not abnormal in quality. Again, as too often happens in these cases, sloughing over the trochanter and sacrum from pressure came on in spite of the diligent use of a water-cushion. In short, as to remedial means we were helpless, because of the spinal lesion. It is of little avail to theorise on these cases; the practical point is, that with complete anæsthesia and motor palsy the conservative reaction of the tissues as regards heat and cold and other causes of local disease, and as to the cause of the fever manifested elsewhere, are alike wanting.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

A CASE OF MYELITIS.(a)

By ROBERT W. TIBBITS, M.B., M.R.C.S.,
Surgeon to the Bristol Royal Infirmary.

Samuel B., aged 22, Hansom cab driver, was admitted into No. 19 ward of the Bristol Royal Infirmary, on June 28. His relatives, he informed me, had all been healthy, the only point of interest in his family history being that his father had died in an asylum, having become insane directly after injuring his thumb. He himself had always enjoyed good health until the third week in April, when, whilst driving his cab between two carts, it came into collision with them, and he was thrown violently to the ground, striking his back when he fell. Was able to go on driving, but went to the Infirmary the same day, complaining principally of pain in his groins, for which he was under treatment for a week. After that he considered himself quite well, nor did he feel any pain or uneasiness or sense of weakness in his back or legs, even after a hard day's work.

On some day during the first week in June he got wet through, and sat for some time in his wet clothes; this, though, was no uncommon thing for him to do.

On June 8, or about six weeks after his former accident, he met with another one. The horse he was driving falling down, he was pitched forwards, striking his knees sharply against the back of his cab, but is certain that he did not strain his back at all on this occasion.

The following day his knees were very painful, and he continued to suffer from them up to June 18, but they were not sufficiently bad to prevent him following his employment. When he left off work on the 18th, with the exception of the pain in his knees he felt perfectly well, until after he had gone to bed, when his feet became numb; and he also had a sense of numbness round his bowels. He had no pain in his back or limbs.

(a) Read before the Bath and Bristol Branch of the British Medical Association.

June 19.—Was well enough to go out and walk about with difficulty, his feet and bowels still feeling numb. His bowels were opened regularly, and he passed his urine without difficulty. This condition continued for the next four days, when, on the morning of the 22nd, about two hours after he was dressed, he suddenly lost the use of his legs, and soon after he was put to bed his urine began to dribble away from him. The bowels were constipated; he had no pain either in his back or limbs; his appetite continued good.

28th (or ten days after the first symptom of paralysis), he came under my care at the Bristol Royal Infirmary. He looked a fresh-complexioned, healthy young man, and seemed to consider his illness rather a joke; his appetite was good, and he declared that he felt perfectly well in himself. From a line drawn round his body, about an inch below the umbilicus, he was completely paralysed, both as regards sensation and motion. His urine dribbled away from him, but the bladder was contracted, and not distended. The bowels were constipated; pulse 96; temperature not taken. Ordered a turpentine enema immediately, and a drop of croton oil in the morning if necessary.

29th.—Pulse 100; temperature 103°; bowels had been opened by the enema; the line of complete paralysis had risen to about an inch above the umbilicus; appetite continued good. He assured me that he felt in his usual health but for his legs. Ordered twenty drops of the tincture of perchloride of iron every three hours, and to be cupped over the loins to ten ounces.

31st.—1 p.m.: Pulse, 112; temperature, 102·4°; respiration, 32 per minute and catching; face flushed; tongue red and slightly dry; complains of great thirst; line of complete paralysis of body risen to an inch above the ensiform cartilage; arms nearly completely paralysed both as regards sensation and motion; cannot grasp anything, and, though conscious of it when pricked, cannot mention the point that is touched. On a lump of ice being drawn down the spine, complained that it burned him when opposite the two upper dorsal vertebræ. Ordered twenty minims of the liquid extract of ergot every four hours, and to be blistered on both sides of the spine from his neck to his sacrum. If there was no marked improvement by the morning, the spinal ice-bag was to be applied. 9 p.m.: Evidently worse. Pulse, 132; temperature, 103·6°; respiration, 40 per minute. He had great difficulty in speaking.

July 1.—9 a.m.: In much the same condition. Pulse, 130; temperature, 103·4°. At 10.30 the ice-bag was placed on the spine. At 1 p.m. a wonderful improvement had taken place since the ice had been applied. Pulse fallen to 100, respiration to 24, and temperature to 99·2°. Breathing easily instead of gasping, and said that he felt much better. Line of paralysis of trunk risen to fifth rib. Arms completely paralysed. 9 p.m: Pulse, 102; temperature, 101·2°; respiration, 25. Felt inclined to sleep. Ice to be continued.

2nd.—Has passed a good night. Pulse, 96; temperature, 99·8°; respiration, 24. Paralysis of trunk fallen to a level with the centre of the ensiform cartilage; at that point sensation is increased. Slight return of motor power in the arms. Sensation nearly normal in the left, but there is marked hyperæsthesia in the right one. Bowels constipated. Ordered a turpentine enema, and to continue ice to spine.

3rd.—1 p.m.: Pulse 92; temperature, 99·4°; respiration, 28. Has slept at intervals through the night. Power of movement in arms slightly improved. Hyperæsthesia present in both. Complained loudly of being pinched when only lightly touched. Increased sensibility also round body for about two inches above ensiform cartilage. Complete paralysis below this point. Bowels opened by enema. Appetite improving. Ice to be continued.

I need not tire you with a daily history of this case. The ice-bag was constantly kept to his spine, and up to a certain point he continued steadily to improve. The pulse and temperature remained below 100, and in about ten days he had nearly completely recovered the use of his arms. The line of paralysis of the trunk never fell below the ensiform cartilage, and for about two inches above this point marked hyperæsthesia remained present. At times he had violent involuntary jumping movements in both legs, and, although there was no return of sensation, on tickling the soles of his feet his legs were immediately drawn up. The bowels for some time required purgative medicine to open them. The urine continued to dribble away from him; the bladder remaining contracted. His appetite was good. The ice-bag was continued to the spine, and on one or two occasions, when it was omitted for a short time, the temperature immediately rose to over 103°. He remained in much the same condition until the end of August, large bedsores gradually forming over the sacrum and right trochanter; he then began to sink rapidly, and died on September 14, just three months from the occurrence of the first sign of paralysis.

Post-mortem Examination, Twelve Hours after Death.—Lungs at base congested; all the other viscera healthy. Bladder extremely contracted. Membranes of spinal cord healthy; cord itself, for about three inches in the middle dorsal region, extremely softened; the other parts of it to the naked eye seemed to be healthy. It was difficult to harden in chromic acid this softened part, and the sections I obtained from it showed no trace of nerve-structure. From the upper border of this completely softened part a spot of softening, with a distinct wall of connective tissue at its commencement, about one-tenth of an inch in diameter, passed up through the right anterior columns of the cord as far as the middle cervical region, where it gradually terminated. This spot of softening seemed to bulge out the cord and to press on the right anterior horn of the grey matter, the commissure, and also the anterior column of the opposite side. Passing downwards from the disintegrated part of the cord were two points of extremely circumscribed softening, the smallest of these being in the right anterior, the largest in the right lateral column; these terminated at the lumbar enlargement, which seemed to be perfectly healthy.

Now, I think this case presents several points of very great interest. First, What was the cause of his disease—was it caused by cold from sitting in wet clothes, or was it the result of injury? And, if it came on from injury, which of the two accidents that he met with had the principal share in the mischief? The first accident, when he was thrown violently on his back to the ground, was a likely one to cause spinal disease, but then this was six weeks before the first sign of paralysis appeared, and for a month his recovery had been complete—he felt no pain, no weakness, no uneasiness, even after a hard day's work. Could recovery be seemingly so perfect for so long a time, and yet spinal mischief afterwards arise? The patient, who was a very intelligent young man, was certain that he was in perfect health for a month previous to the occurrence of paralysis. Then as regards the second injury, it was a slight one—he simply knocked his knees against the back of his cab when his horse fell down. He did not throw himself backwards, attempting to hold his horse from falling, and never felt that he had wrenched or shook his back in the slightest degree; still his illness seemed to date from this time. My own opinion is that the first accident must have been to a great extent the cause of the disease. His occupation as a cab-driver would probably subject his spine to constant very slight concussions as he jolted over the stones of some of the roughly-paved streets, and so tend to perpetuate any mischief of the cord, however slight it might have been. Then the second accident put the finishing touch to an already weakened cord. Also, it is of interest to remember that his father died insane, having become so directly after injuring his thumb; so that he might have had an hereditary tendency to disease of the nervous centres. Against this view there is the fact that his recovery from the first accident seemed to have been perfect. And then, again, acute myelitis is not the form of spinal disease that is commonly caused by injury. On this point I should like to hear the opinion of the meeting, but I feel sure that if either injury had been received in a railway accident, and the case had come before a jury in the shape of an action for damages, it would have afforded a more than usually fine opportunity for Medical witnesses to give directly contradictory evidence.

The diagnosis of the disease during life was easy. The total absence of pain and the complete character of the paralysis, both of the extremities and bladder, showed that the cord, and not its membranes, was the part affected. It is of interest, too, to notice that, at a time when the patient stated that he felt well in himself and had a good appetite, the temperature ranged above 103°.

The progress of the case directly after the man's admission into the Infirmary was extremely rapid. In three days the paralysis had risen from just below the umbilicus to about the upper border of the fifth rib, the arms also had become completely paralysed, and the breathing was seriously affected; in fact, with a temperature of 103·4°, a pulse of 132, and catching respiration of 40 per minute, the patient seemed at the point of death. Then, when the spinal ice-bag was applied, the change was extraordinary. In three hours the temperature had fallen to 99·2°, the pulse to 100, and the respiration to 24 per minute: the patient's condition was changed from one of great anxiety to one of comparative comfort. For some few days it appeared as if there was considerable probability of the case terminating favourably. The patient recovered the use of his arm, and the paralysis receded for several inches; in fact, the part of the cord last affected recovered its functions, but, unfortunately, the mischief in the dorsal region had gone beyond repair, and the man at length, getting bedsores, died from exhaustion.

What would have been the result if the spinal ice-bag had been applied earlier in the case? As it was, I have no doubt that the man's life was prolonged by it for more than two months, for when it was had recourse to, to all appearance he had very few hours to live. Certainly, if I ever have a similar case to treat, I shall from the first apply ice to the spine.

THE MORTALITY FROM SMALL-POX IN REGARD TO SEX AND AGE.

By C. A. FOX.

THE valuable series of volumes of the Registrar-General's Reports furnish us not only with the sum totals of deaths, which I have used in my former paper (*Medical Times and Gazette*, February 11), but also classify the deaths according to sex and age. I propose, in this paper, to examine those from small-pox in these relations, and will endeavour to express, as clearly as possible, the results.

I will first briefly allude to one or two considerations arising out of the branches of the subject under review in the former paper.

1. I have been asked what is the average duration of small-pox epidemics. The general period of recurrence to which attention was drawn, and which is borne out by the present epidemic, was stated to extend from the point of maximum mortality of any epidemic to that of the next. It will be seen that any other mode of estimating the intervals of epidemics would be fallacious, as the duration of an epidemic depends upon the meaning which we attach to the term. "Epidemic" is an arbitrary term, relating to an arbitrary period with undefined limits. Hence the only certain and apparent estimate of intervening periods is that measured by the points of maximum. But if we assume by "epidemic" that the mortality of a quarter exceeds the average, the durations severally of these within thirty-one years will be as follows:—

1840 . . .	5 quarters.	1855 . . .	3 quarters.
1844 . . .	6 ,,	1860 . . .	5 ,,
1848 . . .	7 ,,	1863 . . .	4 ,,
1852 . . .	7 ,,	1867 . . .	6 ,,

in which an average duration of five and three-eighth quarters, or exactly one year and one-third, is exhibited. Whatever be the value of this proximate result, we may note that in this range of years forty-three quarters have exceeded the average quarterly mortality—*i.e.*, rather over one-third of the whole period might be looked upon as epidemic. The length of epidemics is also shown (for the standard is a fair one for comparison) to have decreased in later years. Thus, the present epidemic is, so far, remarkable for severity only. The mortality for the last quarter of 1870 (178 to the million), in the early part of the epidemic, had not been exceeded since the same quarter of 1848, with the exception of the second quarters of 1852 and 1863.

2. The seasonal maxima and minima must not be unduly considered, as they form the average of years of alternate extremes, and are wholly over-ridden by the wave of prevalence which, in epidemic times, involves different seasons in succession. Nor can we state any time of year which epidemics choose more than another. As the period between them is not an even multiple of years, it is indeed unlikely that they would always fall in similar quarters of the year.

3. The successive points of highest mortality in England and Wales are as follow: 1838, (probably 1844 or 1845), 1851, 1858, 1864, and the present time. I have not been able to find the records of annual deaths from 1843 to 1846 inclusive; but assuming that a rise took place in 1844 or 1845, it will be seen that the law for the country generally is that periods of six or seven years elapse between the epidemics of small-pox, thus indicating the cycles of recurrence throughout England to be nearly double what they are in the metropolis.

4. It should be remembered that the prevalence and the fatality of a disease are distinct classes of investigation; they may or may not harmonise in any class which we may review. Thus, a high mortality might coexist with a limited prevalence of any disease, and a low mortality may characterise an epidemic of very general extent. The facts relative to our present inquiries present the fallacy of being founded upon one only of these forms of data—the number who die—and proceed upon the very questionable assumption that in each year the ratio of deaths to cases is the same—that the mortality to a given number attacked is always uniform.

5. The total annual mortality from small-pox for the metropolis in the thirty-one years 1840 to 1870 was, as before mentioned, 333 per 1,000,000 of the population. The sex has been published for the twenty-seven years 1842 to 1868—a sufficiently long period on which to found conclusions. The number of deaths during this period was 11,238 males, 9943 females—that is, out of every 1000 deaths from small-pox, 531 were males and 469 females. But the population at the middle of the period consisted of 468 males and 532 females to every 1000. Thus, whilst the male sex has the most deaths, the female sex has the most living, making the excess of deaths still more marked in the males. To show the real relative mortality of the sexes, the two must be combined. On the principle of multiplying the mortality by the ratio of deaths, and dividing by that of the living, we find that the correct mortality of males is 377 in 1,000,000, of females 301. This is a wide difference, and is in the proportion of 128 to 100; in other words, the relative mortality is such that, if of a certain number of females 100 died in the year, of the same number of males 128 would die in the same time.

This is the average of a long course of years. The question may be asked, Does this great excess of male over female mortality remain the same in years of epidemic when the mortality is high and in years when it is low? In 1853 and 1861, when the mortality was at a minimum, we find that the ratio of male mortality to that of females was the same as the average; but taking two epidemic years, as 1848 and 1866, the excess of male mortality is much greater, and reaches 135½ (instead of 128). It is thus seen that the epidemic influence, whatever it be, does not merely exaggerate the usual relative mortality, but still more increases the general higher liability possessed by males to die of this disease.

6. For comparison of England and Wales with the foregoing, I have been able to obtain the deaths according to sex from 1847 to 1868, including twenty-two years. The total annual mortality throughout the land (from variola) was 289 per 1,000,000 on the average of twenty-seven years. The deaths (from 1847 to 1868) were distributed amongst 48,189 males and 43,124 females, being, out of every 1000, 528 males and 472 females. These numbers are very close to those we remarked in the metropolis, displaying the fact that males are 3 more in London to every 1000 deaths from variola than they are in the country generally. In England, the population, on the average of twenty years, consisted, to every 1000, of 488 males and 512 females. Employing the process used above, the mortality throughout the land, accounting for the unequal ratio of sexes in the population, is found to be—males 311, females 266 to the standard of 1,000,000. Males, therefore, have a greater mortality in the ratio of 117 to 100 deaths of females—a relative mortality, however, less striking than that found in the metropolis.

These figures give us the comparison of sex, and are based upon the longest series of years I could employ; but accurately to compare the deaths according to locality, we should use a mortality of the same series of years in both cases. On taking that for the years 1847-68 in each instance, the true mortalities obtained are as follows in terms of 1,000,000 of population:—

	Males.	Females.
Metropolis	354	275
England and Wales . . .	247	211

It will be remembered that these results are independent alike of the sex ratio of the living and of the actual amount of deaths either in London or the country at large, whilst they do away with the dissimilarity of population in the two divisions we have surveyed by the common standard of 100 which we have adopted.

On examining in the same way the true death-rates of minimum (1861 and 1868) and of maximum years (1851 and 1864) to compare them with the average, it is found, as in London, that the first corresponds with the average, and the second exceeds it, in regard to the excess of male mortality. It is thus interesting to observe the rule above stated confirmed by observation on a larger field, and with a greater and, therefore, more valuable extent of facts. In England, in epidemic years, males are to females as 120 to 100—a ratio less than any in the metropolis, though a little above the relative proportion general in England and Wales.

7. I have been able to obtain the deaths according to age in London from 1842 to 1868, of which I have not used those from 1842 to 1844, as they are recorded in decimal decades. Our inquiry thus embraces twenty-four years; and the conclusions to be drawn are not intended for comparison of sex, although they will admit of collation with others upon the same model drawn from other fields of fact.

The true mortality of all ages for males was 377 per annum, as above observed. We want to find that for different periods of life respectively. Taking the relation of the deaths of any epoch to the total number conceived as 100, and the relation also of the living at that time of life to the total number also brought to a percentage, I multiply the mortality for all ages by the former and divide by the latter. Thus the correct mortalities of different fractions of life are severally arrived at; but these it would be cumbrous to detail in this paper, where I shall rather attempt to generalise upon them. With regard to the results prior to the age of 5, the data are not free from the errors of infant mortality, being founded upon the census of 1861 alone, and being otherwise not wholly reliable. In the case of other ages, I have calculated the population for those ages severally as that of the middle of the series of years under review. One interesting point strikes one at once in examining the curve formed by the mortality—viz., that (as we noticed in the curve of average annual mortality irrespective of age), there are in small-pox two maxima. The number of males who die from it in London under 1 year of age is not less than 2439 to the 1,000,000 living at the same age, and the mortality under 5 is 1477. Thenceforth there is a gradual decline to a minimum of 105 in the quinquenniad 10—15. This is followed by a rise, culminating in a maximum of 299 in the period between 20 and 25. From this age a gentle decline is manifest, with a trifling augmentation between 65 and 70.

The female mortality presents a more even curve: 1475 die under 5 (to the 1,000,000), and 2285 under 1 year of age. As in the male instance, the mortality decreases for each year of infancy under 5, and diminishes from this age to the quinquenniad 10—15. This is the first minimum—103. The second maximum point is much less marked than in the male sex; it occurs in the same quinquenniad (20 to 25), and reaches a rate of 147. From this period there is a very regular decline, reaching 21 to the 1,000,000 in the decade of 55 to 65, and thereafter being practically *nil*.

8. For the country I have obtained the deaths by age from 1855 to 1868—a lapse of fourteen years. In England and Wales the mortality on the scale of age is analogous. Of the males, 2014 die before the end of the first year, and 986 before the completion of 5 (to the same standard of 1,000,000 of living at the respective ages). In the decade 5 to 15, the number is 252, and by the quinquenniad of 10—15, the remarkable minimum of 81 is met with. Then there comes a slow ascent, and the second maximum, between 20 and 25, stands at 249. A harmonious decline in the mortalities succeeds to the close of life.

On the female side, the infants under 1 have a mortality of 1820, and under 5 collectively of 915 per million. As in other cases, the fatality decreases for each year before 5. The first minimum and the second maximum are less striking than in the males—the former indicating a death-rate of 85 and the latter of 126, in the quinquenniads of 10—15 and 20—25 respectively. A regular diminution follows in each successive period.

9. Thus, we see that, after the large death-rate at the dawn of life, there is invariably an unusual degree of mortality from small-pox in the years of vigour and early manhood between 20 and 25. This is so in town and country, male and female, and, therefore, cannot be due entirely to increased exposure. There also seems to be a degree of immunity from the disease from 10 to 15 years of age, so that the same points (when only measured by quinquenniads) mark the periods of maximum and minimum in every case. In England, the mortality remains sensible to the very end of life, while in London it practically ceases after 65 or 70, which is what we might have apprehended. In the same way, the infantile mortality by far exceeds in the metropolis, so that the curve, which is highest at one extremity, is always lowest at the other. We see, also, how little the numbers, male or female, vary in infants, and how the greater part of those who die, die under 1 year of age.

10. The preceding conclusions are true for periods the longest I could select, and unbiassed, of course, by the different scale of facts which London and England respectively afford. The metropolitan numbers, as they are the more important, are also the more valuable, as embracing a greater range of years, although they have not the advantage of the country statistics in commanding such extensive basis for deductions on any given age.

Choosing three periods of life, I have compared the correct mortalities in epidemic years and in years preternaturally mild in variola with that of the periods above employed, to see whether any particular approximation or divergence from the average at any age marks either of the extremes. In each case I have used two years, to avoid the error of accepting the accidental relation which any of these years might show, as characteristic of the class.

In the metropolis, the true mortality at any of the three periods made use of in the years of maximum mortality exceeds that of an average of years in both sexes. The mortality in years of minimum is in both uniformly below the average, and very much farther from it than the preceding.

In England and Wales, also, the mortality at either period, and in either sex, exceeds in years of maximum, and in years of minimum fails to reach the average of the fourteen years selected, the divergence being greatest in the minimum years.

In London (to be more minute), the widest distance from the average rate of mortality occurs in the interval between the ages of 5 and 25 in years of maximum, and previous to 5 years old in those selected for minimum mortality. Both in high and in low years the rate of death approaches most the average in the period from 25 to the decline of life. In every comparison an average is employed corresponding to the portion of life which we desire to compare, and the conclusions thus drawn in regard to age are such as are true alike of males and females.

In the country, as a whole, the same rule holds good, the ages 5 to 25 presenting the greatest difference from, and those following 25 the greatest similarity to, the average.

It may be remarked that in both London and throughout the land the relations to the average mortality exhibited by the sexes most agree with one another in the first quinquenniad of life—a rule both with maximum and minimum years, as we observed it also to be with any series of years whose mortality we surveyed.

It is perhaps worthy of mention that the number of deaths under 5 years of age in minimum years is greater in the female sex than amongst males, as is especially indicated in the returns for England and Wales.

We may also adduce from the foregoing comparisons in the metropolis and in England and Wales the following general conclusion:—That it is in years apparently most free from the presence of the disease that the usual rate of mortality is most widely departed from, this departure being most marked previous to the age of 5, and least evident subsequent to 25.

London Hospital.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

DOUBLE AORTIC MURMUR—BULGING OF AXILLA FROM HYPERTROPHOUS ELONGATION OF HEART —ABSENCE OF REGURGITANT PULSE; ITS EXPLANATION, ETC.

(Under the care of Dr. SALTER.)

Frederic S., aged 17, a tall, very thin, strumous-looking youth, of fair complexion and light hair, by occupation a grocer's assistant, always having had good health up to a year ago, except the complaints of childhood, was admitted into the Hospital on May 11, with the symptoms and signs of heart disease. Both parents are living—the father well, the mother a martyr to rheumatism for the last eighteen years, and now confined to her bed by it; one sister and five brothers are all healthy.

Twelve months ago he was attacked with "rheumatics," affecting principally his legs, and making them stiff. He had no fever, and was not confined to his bed, but got up about ten or eleven o'clock every morning, and was able to hobble about with a stick. His knees seemed the joints principally affected.

Under these circumstances, he was seized with "difficulty in fetching his breath," and pain in his chest, at mid-sternum, as well as palpitation; no cough or spitting. He consulted a Doctor at West Drayton, who examined him with the stethoscope, and told him his heart was affected; he gave him some medicine, which seemed to do him good, and in three weeks he was able to resume his work, all the symptoms having disappeared. But from that time he has always suffered from shortness of breath and palpitation if he has taken any violent exertion, such as lifting a heavy weight, or running. He never suffered from any such symptoms before. They seemed, however, to be gradually getting less till about three weeks ago, when they suddenly became worse, without any apparent cause, and without any association with rheumatic symptoms. Appetite extremely good—craving; bowels regular; pulse 82; respirations 22, when sitting tranquilly.

Physical Examination.—On stripping the patient, the first thing that strikes the eye is the displacement of the apex-beat to the left; instead of the impulse being seen in its normal position, it is conspicuously visible so far to the left that we may fairly say it is in the axilla—a good two inches to the left of a line dropped vertically from the nipple, and six inches from mid-sternum opposite the fourth cartilages. Not only is the impulse movement greatly exaggerated in this situation, both to the eye and touch, but it is diffused over too wide an area, being visible in the fourth, fifth, and sixth interspaces. Moreover, there is corresponding to this area a distinct bulging in front of a line dropped vertically from the centre of the axilla: the fourth, fifth, and (I think) the sixth ribs are arched outwards for a distance of about two inches (and the interspaces correspondingly full), in a way that there is nothing to correspond with on the opposite side. It is so conspicuous that it cannot escape the eye for a moment; it looks like the mammary fulness transferred to the axilla, and it exactly corresponds to the area of unduly visible heart's movements. The heart appears to be immediately beneath the surface, but, on listening with the stethoscope, the respiratory sounds are heard (at least, at the posterior margin of the seat of fulness), showing that lung is there. The coincidence of the bulging with the heaving, thrusting movements of the heart makes it impossible to resist the impression that the chest wall is here driven out *by* the heart. In the normal situation, the cardiac movements are not perceptible to the eye, and only feebly to the hand. At the seat of the apex-beat in the axilla, the hand recognises nothing but the heaving and too widely-diffused impulse; but at the base not only is the aortic impulse felt to be too strong, but is accompanied by a distinct thrill. On listening at the base, a double murmur is heard—first, a rough, short one at the systole, with a slight sense of thrill; and, secondly, a long, soft, blowing murmur, prolonged throughout the whole of the diastole, and only ceasing just before the next systole. The first of these murmurs is propagated in the direction of the arch of the aorta and its branches, the second down in the direction of the left costal cartilages. On listening at the apex, the only abnormal sound is the distant aortic regurgitant murmur; the sounds are otherwise natural, barring their excess. No visible regurgitant character of pulse. Pulmonary sounds everywhere healthy on both sides.

On May 31 Dr. Salter thought he found a trace of mitral systolic grind at the apex. The aortic systolic murmur was quite lost before the apex was reached, so it could not be that, and it was at a different time from the aortic diastolic. There was certainly a systolic thrill perceptible by the hand at the apex, a thing Dr. Salter did not think he had ever noticed as due to an aortic systolic mumur—(*i.e.*, at the apex). The apex-beat he found a good three inches, measured, below and to the left of the left nipple.

In his clinical observations Dr. Salter remarked that there were two or three points in the case that were worthy of note—1. That he did not remember ever to have seen the seat of apex-beat transferred so completely to the axilla. 2. That he certainly had never seen a circumscribed and limited bulging of the chest wall, corresponding with the heart's apex, such as seen here. 3. That there existed here well-marked, prolonged diastolic murmur without regurgitant pulse. How was that? Simply because the murmur *was* prolonged—because the regurgitation through the aortic orifice was slow and sustained. It is in cases of sudden and short diastolic murmur, where the blood "flops" back at once from the aorta into the ventricle through a wide orifice, that the regurgitant pulse is the most marked; but these are exactly the cases where the murmur is the *least* marked. The squirting of a slender thread of blood through a narrow chink by an aorta of undiminished tension will give much more sound than the immediate transfer back again to the ventricle of the contents of the aorta through an orifice so patulous that hardly any opposition is offered to its reflux. In no case is there greater disparity between the amount of murmur and the amount of derangement of the heart's mechanism than in aortic regurgitation.

THE LONDON HOSPITAL.

NOTES OF CASES UNDER THE CARE OF MR. HUTCHINSON.

Excision of Elbow-joint for Abscess after Chronic Rheumatic Arthritis—Examination of the Joint.

On Wednesday, April 12, we were present when Mr. Hutchinson excised the elbow-joint of an old woman, aged 67, on account of suppurative inflammation, in connexion with chronic rheumatic arthritis. The disease had followed a sprain, which occurred fifteen months before. Abscesses formed about the joint about four months before admission. They gave rise to sinuses, which were still discharging at the date of the operation. The joint admitted of considerable movement without any great pain, and Mr. Hutchinson remarked on the comparative slightness of this symptom in cases of the above kind, as compared with other forms of suppurating joint-disease. The excised ends of the bones were, as had been predicated, quite devoid of cartilage, the articular lamella being thickened and highly polished, although not grooved. The joint-surface showed, in one or two places, commencing ulceration, and the same process was found to have advanced to a considerable extent at some parts of the margins, which were in consequence eaten away and rough. There were only slight traces of the outgrowth of lips from the bones of this elbow-joint. It may, however, be mentioned that well-marked lips could be felt on the condyles of the femora. The synovial membrane was considerably thickened in some parts, and very vascular, and there were several large pedunculated growths on its inner surface, but no loose bodies. An operation was deemed advisable in this case, notwithstanding the patient's advanced age, on account of the unhealthy and inflamed state of the parts around the joint. The arm, although not very painful, was rendered quite useless by the state of the joint and its surroundings, and there seemed but little prospect of the inflammation subsiding within a reasonable time.

Excision of the Joint of the Great-toe for Abscess after Chronic Rheumatic Arthritis.

A somewhat similar case was operated on by Mr. Hutchinson about five weeks ago, the part excised being, however, the metatarso-phalangeal joint of the great-toe. The man had been aware of grating in the joint for two years, and the same grating could be detected in the opposite great-toe. The joint in question had inflamed and suppurated. It is now almost healed, and the toe is in every respect much better than it was before. The patient himself considered his recent attack to have been "rheumatic gout." The ends of the bones were in a condition very similar to those of the elbow-joint, but there was more of marginal ulceration, and a smaller area of eburnation.

Excision of Knee-joint for Chronic Synovitis with Pulpy Thickening of Synovial Membrane.

On the same day, Mr. Hutchinson performed excision of the knee on a woman, aged 33, for strumous disease of the joint. It was in a chronic condition, the knee having been swollen for three years, and there had been no suppuration; but there was very great thickening of synovial membrane, and the joint, after having had every opportunity for improvement afforded by a long rest in bed, generous diet, etc., had continued to get worse. No displacement of the tibia had yet occurred. The joint presented a very well-marked example of the gelatinous degeneration of synovial membrane, the articular surfaces of the bones being almost covered by the thickened, soft, vascular tissue, and the cartilage softened and more or less removed at the parts covered by the encroaching synovial membrane. This patient was also suffering from angular curvature, of about the same duration as the disease of the knee. A week or two before admission she noticed a swelling about two inches above the right iliac crest. This was opened. It had almost healed at the time of operation.

Immense Number of Melon-seed-like Bodies in a Mæcal Cyst (Ganglion) in front of Ankle-joint.

There is at present under Mr. Hutchinson's care, in Mellish Ward, an interesting and somewhat unusual case of ganglion in front of the ankle-joint. The patient is a young man, aged 20. He gave a history of several slight sprains, and stated that the swelling had been coming on for eighteen months. It had been blistered and subsequently punctured by a Surgeon before his admission, but he said that it had not diminished perceptibly afterwards. On admission, there was a large soft swelling in front of the ankle. It was slightly constricted about its centre, and bulged above and below. Fluctuation was readily detected between the upper and lower parts. To its inner side was a much smaller swelling, also fluctuating, but apparently not communicating with the large one. Mr. Hutchinson considered it to be ganglion of the sheath of one or more of the tendons passing beneath the annular ligament, although the diagnosis was at first rather complicated by the swelling at the inner side. A free incision was made into the large swelling. A little fluid escaped, but the bulk of the tumour was caused by a great number of "melon-seed" bodies, closely packed together. Most of them were loose, but a few still adhered to the thickened synovial sheath. There were enough of them to almost fill a tablespoon.

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Medical Times and Gazette.

SATURDAY, MAY 13, 1871.

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VACCINATION AND SYPHILIS.

Regarding the Royal Medical and Chirurgical Society as a kind of Upper House in the Medical Parliament, no one can say that its time was not most fitly occupied last Tuesday evening by the renewed discussion upon Mr. Jonathan Hutchinson's paper. Whether we look at the questions raised by it in their scientific aspect or in their probable bearing upon the future of vaccination in this country, their gravity is beyond dispute. And the gravity of the occasion was suitably recognised by every speaker, the debate being conspicuous for its sobriety of tone, and for the absence of all that angry declamation which threw a distressing shade over the discussions upon a similar subject, in the corresponding assembly across the channel, a few years ago. When the President, before the business of the evening commenced, announced that the Council of the Society had determined upon appointing a committee of investigation into the facts alleged by Mr. Hutchinson, the propriety of the course adopted was at once recognised, and the announcement itself produced an universal feeling of relief. For, however valuable the criticisms of the Fellows present might be, it was evident that the mere statement of the impressions made upon individual minds could not carry the weight of a collective opinion, expressed after close investigation and mature, quiet deliberation, by a limited number of scientific experts. Probably the Council will also see fit to call upon this committee to report upon the best means of avoiding for the future the occurrence of a similar disaster, and to lay down such authoritative rules of practice in vaccination as may serve to protect the public on the one hand, and, on the other, the members of the Profession, who, by adhering to them, may show that they have exercised every precaution which modern science can propose. A motion to this effect, made by Mr. Simon, was rejected by the President as out of order; but he promised that its recommendation should be brought under the notice of the Council.

The business of the evening commenced with the reading of a second paper by Mr. Hutchinson, in which he continued the history of the cases previously detailed, and put forward some further alleged recent instances of syphilitic inoculation, which had within the last fortnight been brought under his notice. We shall not occupy our space here with an analysis of this communication (it will be found in the columns devoted to the reports of societies), but shall proceed to the expression of a few thoughts originating out of the contemplation of Mr. Hutchinson's cases. If they have no other value, they may serve as hints for the committee of inquiry.

The two most recent writers upon vaccination who have discussed at any length the subject of vaccino-syphilitic inoculation, are Dr. Seaton and Dr. Edward Ballard. The former devotes a chapter of his hand-book to the subject, the latter has given, in his essay on vaccination, the fullest analysis of all the facts known about it that has yet been presented in an English dress. Up to the date of these works all the alleged cases of the accident referred to had happened upon the Continent, and it is curious to notice the very opposite impressions they produced upon these two minds. Dr. Seaton says (p. 336):—

> "None of the alleged cases have established, in my opinion, that syphilis has ever been imparted in the due and proper performance of vaccination—*i.e.*, with the unmixed lymph of a genuine vaccine vesicle. They are not even, in my opinion, at all conclusive as to this having been done by the inoculation along with the lymph of a small quantity of syphilitic blood."

Dr. Ballard (p. 355) sums up his elaborate disquisition thus:—

> "1. There are numerous cases on record to prove that the vaccine virus and the syphilitic virus may be introduced at the same spot by the same puncture of the vaccinating lancet. 2. From several instances on record, there can remain no reasonable doubt that the vaccine virus and the syphilitic virus may both be drawn at the same time, upon the same instrument, from one and the same vesicle. 3. The vesicle which is thus capable of furnishing both vaccine and syphilitic virus may present, prior to being opened, all the normal and fully developed characters of a true Jennerian vesicle, as ordinarily met with. 4. It is *not* satisfactorily established that in *all* the instances recorded in which the vaccine and syphilitic viruses have both been introduced at the seat of puncture, and produced their specific effects, the syphilitic virus was derived from the interior of the vaccine vesicle. 5. There is reason to believe that the admixture of blood from the vessels of the syphilitic vaccinifer is a circumstance which increases very materially the chances of imparting syphilis to the child vaccinated with its lymph. I cannot go so far as to say that the admixture of such blood is the *only* condition under which infection can be imparted. I do not think that this is yet proved."

It is unnecessary to follow the line of argument adopted by these two writers. Now that the subject has come home to us, and its consideration is, as it were, forced upon the minds of all vaccinators, the portions of these two works devoted to it will, doubtless, be studied anew and with an interest which might previously have been wanting. We refer to them in order to say that the opposing views adopted represent, as we think, very fairly the conflicting opinions of thoughtful British Practitioners up to the present time.

The grand argument as against the fear of a syphilitic inoculation in the performance of an operation for protection against small-pox, has been the fact that no instance of such a disaster has been hitherto proved as occurring in this country, where few infants escape vaccination, where revaccination is largely practised, and where, had the thing been possible, our military and naval services at any rate would probably have furnished examples of it. The curious thing is that, within the space of a very few months, Professional and public attention have been roused by the announcement of an unquestionable instance recorded by Mr. Thomas Smith, and now by a more extensive catastrophe, the subject of Mr. Hutchinson's communications. Here are clinical facts which we hold to be undeniable. The possibility of a vaccino-syphilitic inoculation can be no longer a matter of dispute. Theoretical and *à priori* considerations can have no longer any place in the general discussion of the matter at issue. The facts alleged must stand or fall upon their own merits, and upon their standing or falling will depend the determination of some of the most momentous questions that a practical Profession like ours can be called upon to decide. We will go no further at present than to indicate briefly what these questions are, reserving a fuller elucidation of them for a future occasion.

Admitting, then, as we now must, that syphilis and vaccinia are both communicable together by the same puncture of the vaccinating lancet, the grand practical questions are—first, whether the danger is such as reasonably to throw discredit upon vaccination as a popular practice; and, secondly, whether it is possible by any reasonable precaution to guard effectually against the chance of the danger of inoculating syphilis with the vaccine virus. There are various collateral questions, the previous determination of which is essential to a reply to these inquiries. We may enumerate a few of them to show the extent to which the investigation may ramify :—1. May a really healthy child, whose antecedents are beyond suspicion, become in any way the medium for conveying the virus of syphilis in conjunction with that of the vaccine disease? Dr. Ballard, in discussing the Italian series of cases, suggests one mode in which this may occur, without any blame reasonably attaching to the vaccinator. 2. Supposing the vaccinifer to be latently syphilitic, is it always possible to distinguish him from others who are not contaminated by hereditary syphilitic taint? 3. Is it a fact that, in the cases that are now on record, the vaccine and syphilitic viruses were in any instance both taken from the *interior* of the vaccine vesicle? and, if so—4. Is it true, as maintained by the Lyons school of syphilographers, that the inoculation of the blood of the syphilitic vaccinifer, together with the true secretion of the vaccine vesicle, is essential to the communication of syphilis in the act of vaccination? 5. Supposing the last question answered in the affirmative, what is the explanation of the difficulty experienced in imparting syphilis (experimentally) by the inoculation of the blood of an infected individual, and the readiness with which a minute particle of blood, just sufficient to tinge the lymph from a vaccine vesicle, imparts syphilis to the vaccinated individual? 6. Apart from the mere question of blood-inoculation, is there any condition or stage of the vaccine vesicle upon a syphilitic vaccinifer, in which the danger of a syphilitic inoculation is greater than in other stages or conditions? 7. What is the explanation of the admitted *rarity* of the accident under consideration, keeping in mind the truth, as stated by Dr. Ballard the other evening, that notwithstanding the abundance of syphilitic vaccinifers, to all appearance healthy, and such as, at first sight, no one would decline to vaccinate from, and notwithstanding the frequency with which a little blood becomes accidentally mingled with the lymph obtained by puncture of a vesicle, millions of persons, infants and adults, have been vaccinated in this country without a chancre ever becoming developed at the vaccinated spot, so far as the experience of British practice has been recorded up to a few months ago?

All these questions, and probably others arising out of Mr. Hutchinson's and Mr. Thos. Smith's cases, must be boldly faced. A deep responsibility rests upon the Royal Medical and Chirurgical Society when undertaking to solve them. Happily, there are to be found among its Fellows the most acute and experienced observers that the Profession can furnish, and also the most logical intellects. The Council may be fully trusted to make a selection satisfactory to the Profession, and such as shall command the full confidence of the public at large.

THE SMALL-POX EPIDEMIC.

Last week the largest number of deaths from small-pox recorded in London during the present outbreak was registered at Somerset House—namely, 288. Of these, more than a third—viz., 108—were persons residing in, or removed to, the Hospitals from the Southern districts, an excess of 11 over the previous week; the North districts furnished 81 deaths, an excess of 3 over the previous week; the East furnished 51, an excess of 5 over the previous week; the West 30, an excess of 12 over the previous week; while the deaths in the Central districts alone exhibited a decline, from 22 to 18. The highest death-rate, we learn, was observed in Somer's Town, Bethnal-green, Mile-end Old Town, Southwark, Newington, Clapham, and Battersea; in the latter sub-district, of 31 deaths, 14 were referred to small-pox. The total number of deaths was almost three times as high as the largest number returned in London in any week of the several epidemics or outbreaks that occurred during the thirty-one years 1840-70.

Have we now reached the climax of the epidemic? May we begin soon to anticipate its decline? It has now lasted a good six months. It may be regarded as assuming a distinctly epidemic form in November, shortly after the mean temperature of the air had fallen decidedly below 50°. In the progress of the seasons we have now arrived at a time when this mean temperature is again reached. The mean temperature of the last three weeks, as recorded at Greenwich, has been 50°, 50·7°, and 49·7°. It is customary, about the second or third week in May, for some check in the consecutive weekly rises of temperature to take place, but after this, in the ordinary or average progress of events, the steady rise towards the summer temperature may be expected to set in, and with it there is at least a hope that the epidemic will begin to fade. The observations made at Islington, and published in one of Mr. Simon's late reports, seem to indicate May as the month of maximum small-pox, and the mean temperature of 50° or 52° as that below which the disease is in the habit of beginning to spread, and above which it is in the habit of beginning to decline. The largest number of fresh cases there was, on the average, observed in the twenty-first week of the year, immediately after which the number of cases fell suddenly and remarkably. We would not lay too much stress upon this observation, as it relates only to a limited number of recent years. Still, so far as the returns of fresh cases have come in to the Association of Health Officers, a decided decline was observed in nearly all the metropolitan parishes furnishing them last week. When the decline does set in, it will not be altogether contrary to experience to find it more sudden and rapid, at first, than the previous increase. But with a disease about the conditions of the epidemic spread and decline of which we know so very little even now, in these days of accurate observation, hopes and anticipations such as it may be pardonable to indulge in may after all be doomed to the most utter disappointment. In the years 1844, 1848, 1863, and 1866, the mortality from the epidemic commencing the previous year continued unabated, or but little abated, throughout the summer.

FEMALE PHYSIC.

We published a letter last week on the subject of "Female Physic" in Edinburgh, which is remarkable as an example of grotesque violence of vituperation and of the bitterness which the attempt to introduce women into Medical schools appropriated to male students is sure to induce. We think the female students in the wrong, but should be exceedingly sorry to see them assailed by that kind of argument which is supposed peculiar to the irate female tongue. It must be confessed that the female students are in some respects entitled to our respect and—if we may say so without offence—to our pity. They are endowed with greater capacity and energy than most of their sex, and some of them deserve high commendation for the industry with which they have, when long past their teens, superadded the classics and mathematics to the flimsier kind of education which they had acquired as girls. Then they cannot but be respected for wishing to lead useful lives, whether it be in order to earn fair remuneration or simply from hatred of doing nothing.

As for the Medical Profession, the notion is absurd that there is any jealous rivalry or fear lest pecuniary interests should suffer. What we object to is, in the first place, that women should take any course calculated to bring themselves into a false position—to lose that modest reticence which at present banishes the impure and the disgusting from the tongues of mixed companies of the sexes. In the next place, we have a right to demand that the Medical schools in which our sons are educated shall be free from an intrusion which is, to say the least, distasteful. He must be a bold man who should affirm that worse evils may not follow, if, in course of time, a large and coarser stratum of women were brought into the existing Medical schools. If women want a Medical school, let them imitate their American sisters, and have one of their own. No young men with good feeling would force themselves into the "Women's Medical College of Pennsylvania;" and although the pupils of this College are allowed to attend clinical lectures at the Pennsylvania Hospital, we are told, with some emphasis, in the report of the "Women's Medical College," that these lectures are separate from those given to the male students.

THE WEEK.

TOPICS OF THE DAY.

Her Majesty the Queen has been pleased to announce her intention to open the new buildings of St. Thomas's Hospital in the latter end of June.

The Council of the Royal Society have recommended fifteen candidates for admission to the Fellowship. Of these, four only are members of the Medical Profession—viz., Dr. W. Budd, Mr. G. W. Callender, Dr. Richard Quain, and Mr. John Wood. The recommendation of the Council is, we believe, tantamount to election, and we therefore offer our best congratulations to these gentlemen on their approaching honour. Amongst the names passed over by the Council there are some of deservedly high and wide reputation as scientific workers.

The convocation of the University of London met on Tuesday to choose the names of three gentlemen from whom Her Majesty is to select one to serve as Senator of the University. The name of Dr. Parkes was returned first, Mr. Waley second, and Dr. Weymouth, Doc. Lit., third. We are glad to say that Dr. Parkes had a large majority of votes in his favour.

The attack on Dr. Rutherford for the practice of vivisection in the *Pall-mall Gazette* was a very unfair and undeserved one. The writer, whoever he may be, is either guilty of wilful misrepresentation or is exceedingly ignorant of the first facts of physiology. We supposed that no educated person now believed that a decapitated animal could feel, but it would seem that the editor of the *Pall-mall Gazette* requires to be convinced that sensation has its seat alone in the brain. In the lack of absolute proof, the Medical Profession can only tell him that there is just as much, and no more, evidence that a decapitated animal feels, as there is that a choleraic corpse which twitches after death does so. The editor would probably allow that the corpse of a decapitated human being can have no feeling, but it is quite possible to set up movements of the same kind as those observed in the frog, in the muscles of a man who has been beheaded, by appropriate stimuli. All evidence, whether experimental or pathological, proves that sensation resides in the brain. Decapitated animals may move, but they do not feel. The decapitated frog or eel may be cut into segments, each of which will answer stimuli with lively movements; the decapitated bird will run or fly; but there is just as much reason for believing these movements to be accompanied by sensation as for believing that the editor of the *Pall-Mall Gazette* could have written the (to say the least) very foolish article on Dr. Rutherford in a state of somnambulism or under the influence of an anæsthetic vapour.

We cannot but regret the fate of Mr. Goschen's Local Rating and Government Bills. They, with that portion of Mr. Bruce's Licensing Bill which was to regulate the granting of licences, have been withdrawn by the Government. Mr. Bruce hopes to save so much of his measure as will impose a stricter control by the police on public-houses. Mr. Goschen's Bills seem at least to have been the result of much painstaking inquiry, and although there was no chance of their becoming law in the form in which they were introduced, they might have been so altered and modified in committee as to have been the basis of a really useful and much-needed measure of social and sanitary reform. The compact organisation of brewers and publicans will very likely succeed in defeating all Mr. Bruce's attempts to remove some of the facilities and temptations to tipple. It seems, therefore, that the present Parliament will accomplish next to nothing to improve the hygienic condition of the people.

It seems, from the report of the recent meeting convened by the High Bailiff of Westminster at St. James's-hall, that the resistance to the impolitic attempts made by the present Ministry to filch from the ratepayers of London the land reclaimed by the Thames Embankment—which has cost them two millions of money—under the pretence that it is the property of the Crown, gathers strength, and is very likely to prove successful. It is curious that the chief opponents of schemes for giving the population health-resorts and pleasure-grounds should be found in the ranks of a Liberal Government.

Dr. J. Burney Yeo, of King's College Hospital, has been elected Assistant-Physician to the Hospital for Consumption at Brompton. The election was, we are informed, warmly contested.

In the case of Conduitt *v.* Soane, lately heard before Vice-Chancellor Wickens, two ladies, the grandchildren of Sir John Soane, of museum celebrity, applied for a portion of his property, which was devised to great grandchildren, on the ground that their respective ages, 52 and 57, were beyond the age of child-bearing. The law deals with possibilities, not probabilities, and the Vice-Chancellor, refusing to make an order, said that he had heard a case mentioned by the Master of the Rolls in which a child had been born when the mother was six years older than the younger applicant.

It is rumoured that the advertised vacancies on the staff of St. Thomas's Hospital will not be filled up until after the Hospital has been formally opened.

SMALL-POX IN HOLLAND.

Our Rotterdam correspondent sends us the following as the weekly returns of deaths from small-pox in the chief towns in the Netherlands during the weeks of the second quarter of 1871 :—

	April 1.	April 8.	April 15.	April 22.	April 29.	May 6.
Rotterdam .	116	108	88	100	87	80
Utrecht . .	36	33	38	9	—	—
The Hague .	26	31	31	36	—	—
Amsterdam .	47	50	74	60	—	—

THE ASCIDIANS AS REMOTE ANCESTORS OF MAN.

Dr. Spencer Cobbold, in one of the "Swiney" Lectures lately delivered at the Museum in Jermyn-street, discussed the supposed discovery by Kowalewsky of a vertebrate structure in the tail of the young ascidian—a point of interest at the present day, on account of the importance assigned to it by the evolutionists as evidence of a connecting-link between the fishes and the molluscs, and of the development of vertebrate animals from invertebrate. Only that day, however, a number of Du Bois-Reymond's *Archiv* had been placed in his hands, containing a paper by Dönitz, in which the author undertakes to prove that all the notions of Kowalewsky and Kupffer are wrong, and that, in point of fact, there is no structural resemblance whatever between the tail of the larval ascidian and the notochord of the vertebrate animal. That there is a structural microscopic resemblance he is prepared to admit; but the whole history of development shows, he says, a complete and profound antagonism, and it is quite unjustifiable to assume from this that there is any genetic relation between the vertebrates and the invertebrates.

ANNUAL DINNER OF THE MEDICAL SERVICES.

It will be observed, from our advertising columns, that the annual dinner of the officers of the Army, Navy, and Indian Medical Services takes place on Friday, the 26th inst., at 7 p.m., in Willis's Rooms. The chair on this occasion will be taken by the Director-General of the Medical Department of the Navy, who has, we are informed, invited the Presidents of the Royal Colleges of Physicians and Surgeons to meet the officers of the three departments. It is hoped that next year Sir J. Ranald Martin, as representative of the Indian Medical Service, will preside.

PARLIAMENTARY.—THE BUDGET—LUNATICS (SCOTLAND) BILL—METROPOLITAN POOR ACT (1867) AMENDMENT BILL—DR. LIVINGSTONE—THE METROPOLITAN POOR—BABY-FARMING—INCOME-TAX BILL.

On Thursday, May 4, in the House of Commons,

The discussion of the Budget was renewed by Mr. McCullagh Torrens, who, on the income-tax resolutions being reported, moved to fix the rate at 5d. instead of 6d. After a brilliant debate the House divided, when the motion was negatived by a majority of forty-six—294 to 248.

The Lunatics (Scotland) Bill was read a second time.

The Metropolitan Poor Act (1867) Amendment Bill was read a third time and passed.

On Friday, in the House of Lords,

Earl Granville said that dispatches had been received that day at the Foreign Office from Dr. Kirk, the Acting British Consul at Zanzibar, containing information of the safety of Dr. Livingstone in October last. The Doctor was then at Manakoso, awaiting the supplies that have been despatched to him; his immediate wants appear to have been met by the Arabs.

In the House of Commons, on the order for going into committee of supply,

Mr. W. H. Smith rose to call attention to the operation of the poor-law within the metropolis, and to move an address for a Royal Commission to inquire into the policy and administration of the law. In support of his motion, Mr. Smith expressed a strong conviction that by shutting our eyes to the working and effects of the present system, and by mistaken kindness and charity, we had demoralised the poor, and had permitted an evil to grow up which was sapping the foundation of our prosperity. He described, under its different heads, the administration of the poor-law in London, dwelling on its want of uniformity, the facilities it gave for imposture, its cost, and the increase of pauperism which had occurred under it. With regard to Medical relief, he said that there was scarcely any part of the administration of the poor-law so unsatisfactory as the system of sick relief. At present it pauperised the applicant, who, though able and willing to provide himself with everything except Medical advice and assistance, was unable to get assistance without either becoming a pauper or burdening himself with a long Doctor's bill. Some amendment of the system of Medical relief was needed which would enable the labouring poor to obtain Medical relief as far as possible at some small cost to themselves, so that their spirit of self-dependence should not be destroyed even in the time of sickness. The system which had been successfully carried out in Ireland embodied this principle, and an inquiry into the metropolitan system would show the absolute necessity for its amendment, so that it did not result in pauperising the people.

The motion was seconded by Mr. Rathbone.

Mr. Stansfeld promised to consider Mr. Smith's suggestion, but he did not consider a Royal Commission necessary, as the Poor-law Board was competent to collect facts and evidence.

After a debate the motion was withdrawn.

Mr. Charley obtained a select committee to consider the best means of putting down baby-farming.

On Monday, in the House of Commons,

The various clauses of the Income-tax Bill were agreed to without a discussion.

The Lunatic (Scotland) Bill passed through committee.

On Wednesday,

On the motion of Mr. Charley, the following gentlemen were appointed members of the Select Committee on Baby-farming:—Mr. Sclater-Booth, Dr. Brewer, Mr. Jacob Bright, Mr. Charley, Sir T. Hesketh, Mr. Illingworth, Mr. Keown, Mr. Kinnaird, Mr. W. Johnston, Viscount Mahon, Mr. Melly, Dr. L. Playfair, Mr. Raikes, Mr. R. Shaw, Mr. W. M. Torrens, Mr. Walpole, and Mr. Winterbotham.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	April 1.	April 8.	April 15.	April 22.	April 29.	May 6.	May 6. Sent to Hospital.
West—							
Chelsea	6	4	9	9	9	—	—
St. George, Hanover-square	11	12	16	19	23	14	7
St. James, Westminster	4	8	8	6	2	3	2
Paddington	?	?	?	24	12	20	14
North—							
St. Pancras	44	122	102	121	89*	104	?
Islington	26	54	69	67	59	64	37
Hackney	29	31	?	46	30	—	—
Central—							
City of London	13	7	16	14	13	5	5
St. Giles-in-the-Fields	8	?	11	2	14	—	—
Holborn	3	4	8	8	9	5	4
St. Luke's	25	20	20	17	25	—	—
East—							
Whitechapel	15	19	14	17	23	7	?
Poplar	11	?	?	?	?	—	—
South—							
St. Mary, Newington	23	27	34	37	47	25*	29
St. Olave, Southwark	5	3	3	3	5	3	2
St. George-the-Martyr, Southwark	9	19	30	31	26	—	—
Lambeth	17	32	24	?	32	—	—
Clapham	13	40	28	23	32	29	5
Wandsworth	10	13	6	6	8	4	1
Putney	?	?	1	?	?	—	—
Streatham	3	4	7	2	?	—	—
Camberwell	4	?	?	?	?	—	—
Greenwich	—	—	?	?	—	?	—
Lewisham	2	4	?	?	?	—	—
Plumstead	4	19	5	3	3	—	—

* Return imperfect.

By the last advices from Buenos Ayres, yellow fever was raging there fearfully, the death-rate being 700 per day. At Valparaiso the foot and mouth disease was rapidly disappearing.

AT THE ROYAL ACADEMY.

Of all the cants which are canted in this canting world—though the cant of hypocrites may be the worst—the cant of criticism is the most tormenting.—*L. Sterne.*

Laurence Sterne is unusually severe on the mere *dilletante* critic, particularly if he criticises works of art. Though no competent judge of the true merits of a picture, I could not refrain from criticising, whilst strolling through the rooms of the Royal Academy some few pictures which have reference directly or indirectly to our Profession. We have no reason to complain that we have not received sufficient attention from artists in this year's exhibition. Taking the pictures in the order in which they are numbered, the first (81), entitled "Dr. Harvey and the Children of Charles I," painted by F. W. Yeames, represents the great discoverer of the circulation seated in a quiet, sheltered nook, while the battle of Edgehill is raging in the distance. He is absorbed in the perusal of a black-letter book, and is in the sitting position. The young princes taking advantage of his abstraction, have climbed up the side of the bank to obtain a view of the fight, with which they are evidently delighted. Harvey does not discover the danger of their position until the balls come whistling over his head. The picture is admirably painted, and, of course, the chief object of attraction is the great physiologist himself. He is dressed simply, with a light hat with a broad brim. Observers will fail to detect in the face before them those deeply marked lines of anxiety and thought which characterise the portrait in the College of Physicians. He has a healthy and not care-worn countenance. He had not then been subjected to that merciless persecution of which he was the victim in after life, and which so embittered his last years. Covered by his hat, we lose sight of that splendid forehead which is pourtrayed with so much life-like vigour in his portrait in the College library and in that interesting picture by Robert Hannah, of "Harvey Demonstrating the Circulation of the Blood to Charles I." The picture in the Academy, however, is one of great interest, and will arrest the attention of every member of our Profession who visits the exhibition.

The next in rotation (159) is thus described in the catalogue:—"The late Joseph Henry Green, Esq., D.C.L., F.R.S., Professor of Anatomy to the Royal Academy of Arts, Senior Surgeon of St. Thomas's Hospital, President of the General Medical Council. To be presented by his widow to the new St. Thomas's Hospital, Lambeth. By J. P. Knight, R.A." There is no face in the whole collection, whether as regards its manly beauty or its expression of intellectual superiority, to be compared with that of Joseph Henry Green, though there are statesmen, great soldiers, and philosophers around. The high and expanded forehead, the clear, intelligent, blue eye, the nose of matchless proportions, the mouth and chin, form a face which those who have seen in life will admit to be truthful to nature. If we were inclined to be hypercritical—and we are not—we might take exception to the expression of the mouth, which appears to us too small—too much, as it were, "pursed up." On the whole, however, it is a most pleasing performance. Mr. Green is in the sitting posture, with a closed book in his right hand—a volume, doubtless, of the works of his tutor and friend, Samuel Taylor Coleridge. It may be questioned by some whether Green was happy in the choice of his profession. No one can doubt he was a great philosophical Surgeon, that he was one we must all regard with admiration and affection, but his tastes were not for Surgery; he was a philologist, an abstruse thinker, and in every way Coleridgean. Those who recollect his wonderful lectures at the Royal Academy, when Professor of Anatomy to that institution, the graphic power which he evinced in describing the symmetry of form, the anatomy of expression, the physical poetry of painting, might think that he would have been, had he followed the pursuit, one of the greatest painters of the age. Others, again, who could call to mind his Hunterian oration, classic, learned, and eloquent, though somewhat obscure, might suggest that had he been a divine, his sermons, particularly on doctrinal points, might have placed him in the category of the Bossuets, the Massillons, and Jeremy Taylors of the Church. We rejoice, however, in numbering him amongst ourselves; we could not afford to have given him to either of the other professions.

No. 209 is thus described:—"Mr. Guy conferring with Dr. Mead and the architect, Mr. Stear, upon the plan of the Hospital which he founded, and which has since borne his name. By C. W. Cope, R.A." The scene is laid in the shop of Guy, then a bookseller, at the corner of Lombard-street. The window is open; St. Paul's Cathedral is seen in the distance; Mead's carriage, with his coachman in rich livery and cocked hat, are in the street; an earnest-looking youth is conning over the books for sale at the open casement. The shop in which the group are seated is simply a bookshop. Guy is the centre of the three figures. His face is shrewd, thoughtful, with no great intellectual development, but evidently earnest in a great cause. On his right stands Mr. Stear, the architect of the Hospital, a good, plain, not unintellectual face. To the left, and in the foreground, sits Richard Mead, the most learned, the most accomplished, and the most munificent Physician of his time. His fine manly face and form are depicted with admirable power. The artist has evidently studied with minute accuracy the portrait of this remarkable man. The gold cane, which Mead inherited from Radcliffe as well as his practice, Mead holds in his hand with the air of a courtier. That cane, descended from Mead to others who occupied the foremost positions in the Profession, is the text on which Dr. McMichael founded one of the most interesting biographical works ever published, entitled "The Gold-headed Cane." Is this cane still to be seen in the College of Physicians? We hope so; for it is one of the most interesting memorials of men who were an honour to their Profession. Mead seems somewhat amused at a waiting-maid, who completes the group, handing in what may be regarded as the dinner of the penurious, but munificent, founder of Guy's Hospital. "The meal" consists of half a red-herring, a piece of bread, and half a pint of (possibly) "Thrale's entire"; yet at this very time the self-denying bookseller was giving in the cause of suffering humanity a sum equal to half a million of the present value of money to found a charitable institution.

We come now to 260 in the catalogue, and this picture is thus described:—"Doctor Goldsmith (E. M. Ward, R.A.).—'The only instance remembered of his practice was in the case of a Mrs. Sidebotham, described as one of his acquaintances of the better sort, whose waiting-woman was often afterwards known to retail with what a ludicrous assumption of dignity he would show off his cloak and his cane as he strutted, with his queer little figure stuck through as with a huge pin by his wandering sword, in the sick-room of her mistress. At last it one day happened that, his opinion differing somewhat from the apothecary in attendance, the lady thought her apothecary the safer counsellor, and Goldsmith quitted the house in high indignation.'—*Vide* Forster's 'Life of Goldsmith.'" Upon looking at this picture one is almost inclined to regret that the costumes of that day are now obsolete. "Poor Goldie," as Dr. Johnson used to call him, appears to disadvantage in the controversy. But he is dressed in a superb cloak, and coat and breeches of gorgeous purple. Even the "apothecary" is attired in what appears to be a black velvet suit, with a magnificent tie-wig, and holds up a draught in his hand which might tempt a homœopathic patient to take physic. We fail to perceive in this remarkable picture that ugliness which is said to have characterised the countenance of poor "Goldie." If he were so ugly as his biographers have stated, that even as an usher of a school the mistress dismissed him "as a pock-marked specimen of humanity," the picture before us fails to give us any evidence of such a fact. Indeed, the artist has pourtrayed Goldsmith as really a "good-looking fellow." Why did not Goldsmith succeed in the practice of the Profession which he had chosen—he had learning and, to some extent, ability as a Doctor? "Poor Goldie" wanted "tact." The author of the "Vicar of Wakefield," of "She Stoops to Conquer," and the "Chinese Letters" was "nowhere" amongst women who were not of the chamber-maid or courtezan class; eloquent with them, but silent, abashed, and subdued before modest women. It is marvellous that a man who could pourtray human nature with such fidelity as he did should have failed in his intercourse with the very men and women that he so successfully depicted. He is only one of a number of able and learned men that have succumbed to the same cause.

Two members of the Profession who are still amongst us have their portraits in the Royal Academy. Charles Murchison, M.D., F.R.S., etc., painted by S. Pearce, figures 1109 in the catalogue.

The other portrait to which we have referred is that of Robert Lee, M.D., F.R.S., painted by the same artist.

Both these portraits are very able productions. If any fault is to be found, it is in the somewhat overshadowing of the nose of Dr. Murchison, and the absence of some of the lines of thought in the countenance of the great "obstetriarch."

No. 1186 is a marble bust of Professor Owen, faithfully and happily pourtraying his features and expression.

We had almost forgotten 312—a deputation to Faraday, to request him to become President of the Royal Society. This picture is a disappointment. Faraday we should not have known but for the description in the catalogue; the face and form have no one characteristic of the original. J. F. C.

THE ANNUAL ORATION

DELIVERED BEFORE THE

MEDICAL SOCIETY OF LONDON,

MONDAY, MAY 1.

By WM. CHOLMELEY, M.D., F.R.C.P.

(*Concluded from page 524.*)

"In one of these cases nine pints of fluid had been evacuated at once—a practice which he did not recommend. The other eight fatal cases all had air as well as fluid in the chest. The greater proportion of the cases that did well were children." Dr. Davies did not advocate operating early. After April in that year this subject drops out of the Society's records, and we know that more recent authorities opposed the operation; but when Trousseau revived its use in France, he mentioned that "the support given by Dr. Thos. Davies, in 1830, to an operation then so little in favour was not without good effect."

In May, 1817, Dr. Clutterbuck stated that "he had once witnessed the operation of bronchotomy performed on an infant in croup. The difficulty attendant upon the performance of it was sufficient to his mind to deter anyone from again attempting it." In November, 1819, it is noted that "Dr. Blicke had performed the operation on a child 4 years of age, and had inflated the lungs by means of a syringe. The patient died of convulsions some hours after." But he had also operated, with success, on a child with croup. Mr. Andree asserted "that, some years before, he had performed tho operation of tracheotomy for the first time in this country." I need not recall to your minds the recent valuable papers we have had from eminent living Fellows of the Society on this operation. It is still a frequent subject of discussion in our societies and our journals, and we may claim to have made marked advance in the mode and time of operation, and in our knowledge of when it is likely to be successful.

Now and then, of course, in looking through the records of the clinical evenings and the discussions of your Society, which reach so far back as the fourth quarter of the eighteenth century, one meets with theories and modes of treatment that in us excite amused wonder. The ironing treatment of bronchocele I have already mentioned. Another example was mentioned by your Orator of last year, who told you that, in 1796, a London Physician related a case of dropsy "in which, as he had every reason to believe it would prove fatal, he proposed to make trial of varnishing the belly," and he gave as his reason for adopting that treatment, that "it would prevent absorption, which he conceived a great means of repletion." I find no further record of the case, however. In 1803 a curious bit of scientific therapeutics was reported from Paris. Dr. Marcet, the Secretary for Foreign Correspondence, read to the Society "part of a letter from Professor Pictet at Paris, stating that M. Seguin had employed a solution of common glue, in the dose of about two drachms, given thrice a day, as a cure for intermittent fevers;" and that a "Committee of the National Institute had tried the same remedy in four cases with success." He added that "the inventor considered the cause of fever to be a quantity of tannin present in the circulating system, to which the glue (or gelatine) would unite, as in the usual process of tanning animal skins."

But more often one meets with records of successful modes of treatment, which, after a while, dropped out of favour or knowledge, and have been brought forward again more lately. Thus, in 1815, Dr. Lettsom reported that during a Professional visit to Hertford, he found "that in that neighbourhood carbonate of ammonia was considered quite as a sovereign remedy in scarlatina. Physicians there were astonished at its success; it was given in five-grain doses every four or six hours." And again, in 1816, Mr. Edwards stated that he had "always given the carbonate of ammonia in scarlet fever, and never knew it fail. He gave five grains every four hours; to an infant or child, two grains. It generally subdued the fever in forty-eight hours; after which he gave bark." At the same meeting, however, it was reported that Mr. Houghton, of Huddersfield, in all forms of the disease bled once or twice to six ounces, and gave salines; and that *he*, too, was uniformly successful. Take another instance: in 1812, Mr. Bateman stated that "he had seen Dr. Pearson, at St. George's Hospital, use large doses of *opium*, with diluents, and doses of salts, with good effect in acute rheumatism;" and in 1814 Dr. Lettsom reported that "he had lately given *opium* very freely in cases of acute rheumatism, after having well cleared out the bowels, with infinite advantage." In the same year decoction of bark with turpentine was strongly recommended in acute rheumatism, and it was also "mentioned that some of the common people resorted in cases of rheumatism, lumbago, and sciatica to cod-liver oil, one tablespoonful every night, with great effect." Of both these instances—of the treatment of scarlet fever by carbonate of ammonia, and the treatment of acute rheumatism by opium—it may be said, I think, that, after an interval of oblivion and neglect, they have of late years been brought forward as highly successful and novel, if not as absolutely new, modes of treatment. Again, in January, 1797, Mr. Balmain, chief Surgeon to the Territory of New South Wales, contributed "An Account of the Effects of Ipecacoanha in the Cure of Dysentery at Norfolk Island," which was a method of using that drug that is now again in great repute. Mr. Balmain says that in 1795 dysentery was prevalent in a highly aggravated and very fatal form; that he had found the ipecacuanha, given in small doses, always useful, but that he was informed by a Mr. Wentworth that, "while he was serving his apprenticeship, a man who lived in the same town where he did was frequently called upon to administer relief in cases of the flux, and, from being uncommonly successful in the cure of it, his nostrum was eagerly sought after by all persons in the neighbourhood. At last it was discovered that the man's father (who had been a soldier in the wars in Germany, and often dangerously afflicted with the dysentery) used the powder of ipecacoanha in doses of a drachm and a half to two drachms, with the addition of some drops of the tincture opii, and never found it fail in curing him." Mr. Wentworth had given ninety grains, with forty drops of tinct. opii, in an apparently hopeless case of the disease, and with complete success. Mr. Balmain followed this mode of practice, and "gave the ipecacoanha frequently to the quantity of two drachms, with the addition of sixty drops of tinct. opii, and, in many cases, found that a dose or two was sufficient to remove every dangerous appearance, and that afterwards, by a due attention to the proper use of restoratives, the cure in a number of instances was completed."(a)

But there is one means of combating disease, the history of which, as read in the records of your Society, is still more remarkable. I thought before I looked through the minutes of the meetings of the Medical Society of London that I had a tolerably good idea of the frequency with which bloodletting was used by our Professional forefathers in the treatment of disease; but I must confess that I was astonished at what I think I may not unfairly call the universality of its employment, and at the extent to which it was in some cases carried. At one time it seems to have been had recourse to in almost every disease, and in every form of every disease. One thing is, however, still more surprising than this, and that is the absolute—I had almost said the abject—abandonment of the employment of the same remedy of late years. And I venture to say that no theories of change of type of disease or of deterioration of constitution in our patients suffice to explain or justify this abandonment. But bloodletting was greatly overused. It was felt to be a very powerful remedy; it was prompt of action and striking of effect; and it was always ready at hand and of easy application; and so it was extravagantly used and misused. And this was almost inevitable; for, paradoxical as it may sound, may it not be said with truth that a crowning and most clenching proof of the usefulness and power for good of a thing is that it comes to be misused, and perverted into a power for evil? And then comes a reaction against its use, and the good it has done, and may again do, is apt to be forgotten or denied in face of the vivid appreciation of the evil it had been made to work. Thus it happened with regard to bloodletting, and especially with regard to venesection; and the recoil has been so great that, partly in consequence of reaction in the Professional mind, and partly from subservience to popular prejudice and outcry, it has come to pass that we hardly dare to relieve a labouring heart, congestion of lungs, or of other viscera, by the abstraction of an amount of blood which we over and over again see lost by epistaxis or some other form of accidental hæmorrhage, without the loss raising a thought of danger or mischief; and I fear we now and then allow a patient to die whom the lancet might have saved. There have not been wanting lately, however, signs of a return to a more guarded, intelligent, and scientific employment of bloodletting; and with the help of such guides and teachers as Dr. Richardson and some others, this new reaction will, I think, gradually spread and gain force. I am tempted to gather from the Society's Minutes three examples of the former employment of venesection—the first on account of the large amount of blood taken with apparent benefit.

(a) *Vide* "Memoirs of the Medical Society of London," vol. i., p. 210.

In November, 1819, "Mr. Morley related a case of hæmoptysis, attended by Dr. Cholmeley, of Guy's Hospital (a relative of mine own), Mr. Chevalier, and himself. The patient was a gentleman, 60 years of age. Within the space of twenty-two days, eighty-seven ounces of blood were lost by expectoration, 254 by venesection, and sixteen ounces by cupping; and this treatment was aided by the strictest antiphlogistic regimen. Yet, when the case was reported, the patient was *perfectly well*, with the exception of some degree of ptyalism, caused by the administration of calomel towards the termination of the attack."

The two other cases I quote, not so much to show the free use of venesection, as because they appear to somewhat resemble what we now call "railway shock," and the success that attended their treatment seems very suggestive.

"In February, 1825, Dr. Clutterbuck related the case of a military gentleman, who, while hunting, about twelve weeks before, being thrown from his horse, fell flat upon his back. Having recovered from the shock, he remounted, and experienced no inconvenience; but three weeks after this event he experienced a numbness in the lower extremities, and some stiffness about the head and neck. The muscles concerned in deglutition and mastication were affected to that degree that the patient swallowed and masticated with difficulty; the iris was somewhat contracted, and but little impressed by light; the pulse was slow and weak; the tongue furred. The patient felt much difficulty in turning in bed, and could not grasp anything with effect. Respiration and digestion were well performed, and the bowels acted as well as usual. He was treated by stimulating remedies, without advantage. Dr. Clutterbuck advised small and repeated bleedings, and aperients, and with apparent benefit." Dr. Haslam then related the case of a gentleman "who, in riding, fell from his horse. For a few seconds he was unconscious, then vomited, and was somewhat relieved. For a fortnight afterwards he seemed in excellent health; then began to be unusually vivacious, sleepless, and had numbness of the left arm. Was bled copiously. A state something like delirium occurring, was combated by venesection, and always with success. He was bled copiously eighteen or nineteen times, and at length perfectly recovered."

I must not further extend these therapeutical notes, or I might show how eager the Society has always been to notice any addition to our weapons against disease. I might quote early notices of the employment of pareira brava, lobelia inflata, nux vomica, strychnia, and other medicines, and show how the Society's attention to therapeutics has continued down to our own days, when Dr. Sansom has brought before us his carbolates, and Dr. Richardson has introduced to the notice of the Profession, through the Society, the bromides of quinine, of morphia, and of strychnia.

The first Fothergillian gold medal was founded by Dr. Lettsom, in 1784, and the subject selected for the first competition was, "What diseases may be mitigated or cured by exciting particular affections or passions of the mind?" for the best essay on which the medal was adjudged in 1787 to Dr. William Falconer, of Bath, a Corresponding, and very diligent, Member of the Society. In 1790 it was awarded to Dr. Robert Willan, for the best dissertation on "Cutaneous Diseases;" and the original manuscript of this essay—the foundation of Willan's work on diseases of the skin—now forms one of the treasures of your library. In 1791 the medal was carried off by Dr. Lettsom himself for the best dissertation in answer to the question, "What are the principal diseases of great towns, and what are the best methods of preventing or curing the same?" to which was required to be added, "The history of the epidemic constitution and diseases of some great towns for one whole year at least." After that date I do not find that any of the essays sent in on the various Fothergillian prize subjects were considered worthy of the medal till the year 1801, when it was awarded to Dr. Bowttatz, for his paper "On the Medicinal Effects of Phosphorus." The present Fothergillian medal was founded by Dr. Anthony Fothergill, who died in 1815; but the moneys that he left for the purpose were invested in America, and the "law's delay" so effectually intervened, that not any of it was received by the Society till the end of 1821; nor the remainder till May, 1822. The first subject selected was "Dropsy," but no essay was found deserving of the prize; and it was first awarded, in 1824, to Mr. R. W. Bampfield for the best essay "On Diseases of the Spine"—a beginning of orthopædic Surgery. It is unnecessary to give you here the names of the Fothergillian gold medallists since that date. A list of them is published with the annual list of the officers and Fellows of the Society, and you will find that it contains the names of men well known and highly distinguished in the Profession at large, as well as in the Society. Besides the Fothergillian and the silver medals, the Society now and then awarded extra and special medals. I have already mentioned that in 1804 a gold medal was presented to Dr. Jenner; and in 1793 Dr. Lettsom offered, through the Society, to give twenty guineas, or a gold medal of that value, for the best essay in answer to the question, "What diseases are most frequent in workshops, poorhouses, and similar institutions; and what are the best means of preventing or curing them?" In 1795 the prize was awarded to Mr. John Mason Good, Surgeon, then a Fellow of the Society, and so well known since, as Dr. Mason Good, for his valuable work on Medicine.

This is one of the many proofs that these records contain of the interest taken by your Society, even in its earliest days, in questions of public Medicine. Dr. Lettsom's Fothergillian Essay, in 1791, on the "Principal Diseases of Great Towns," is another; and about 1793 or 1794 he contributed a valuable paper on the diet, exercises, bedding, etc., of the prisoners in Newgate. He was led to write it by the observations and inquiries he had made while attending Lord George Gordon, who died of typhus fever in Newgate in 1793. His paper, which is entitled "Hints respecting the Prison of Newgate," and contains a ground plan of the prison, was published in the fourth volume of the Society's Memoirs.

In 1796 and 1797, Dr. James Johnstone, of Worcester, and Dr. Anthony Fothergill, of Bath, directed the attention of the Fellows of the Society to "the pernicious effects of dry-grinding in the needle manufactory." Dr. Johnstone's paper, published in vol. v. of the Society's Memoirs, is called, "Some account of a Species of Phthisis Pulmonalis peculiar to Persons employed in Pointing Needles, in the Needle Manufacture," and gives a clear description of the disease and its causes; describing how the minute particles of iron and stone are by inspiration drawn into the lungs, and excite continued and increasing irritation, "by which the suppurative irritation is gradually produced, which at length ends in ulceration." He tells us how deadly the dry-grinding was, the operatives rarely reaching the age of 40, and that its dangers were so well known that "parents, in binding their children to the needle trade, for the most part condition that they shall not be employed in this pernicious branch of the manufactory—the grinding or pointing of the needles;" and he advises the use of crape or gauze hoods to prevent or lessen the inhalation of the dust, and the use of water to moisten the hands and the overheated needles. Do some very modern papers on the diseases caused by dry-grinding contain much more information than this? May we speak of this, and of some other instances already mentioned, of what I may perhaps call modern rediscoveries or rehabilitations, as—

"——Winds
Of memory murmuring the past"?

or of the older papers as examples of—

"——Presentiments,
And such refraction of events
As sometimes rises ere they rise"?

In 1803, the then prevailing epidemic of influenza very largely occupied the attention of the Society, and, wishing "to collect for publication a complete history of the disease, and desirous to ascertain whether the epidemic be contagious or not, and to collect such meteorological observations as will throw light on the natural as well as the Medical history" of it, they addressed a circular letter, containing thirty queries to their Corresponding Members in the country. This letter, with fifty-eight answers to it, "published without alteration or comment," may be read in vol. vi. of the Society's Memoirs. It is interesting to be told that "their lordships, the Postmasters-General, in answer to an application made to them, considering it as a matter interesting to the community, and in the hope of the information obtained proving eventually of benefit to the human race, have with the utmost liberality consented that the correspondence upon the specified objects of these queries shall be carried on free of expense, provided that the replies to them be sent, addressed to the Medical Society of London, in letters not sealed, under cover to Francis Freeling, Esq., London." In those days of heavy postage, this was no slight boon, and it may be looked on as a testimonial to the status and repute of the Society.

In 1807 I find an instance of the evil of what nowadays we call "baby-farming." During a conversation on the various mischiefs arising from intemperance, "Dr. Sims mentioned that a woman in the country had been in the habit of taking in children to nurse, who generally in about a month died. On inquiry being instituted, it was discovered that she gave them a teaspoonful of brandy whenever they cried." On one evening in May, in the same year (1807), the Society amused itself with discussing what seems a very curious habit, if it was a habit, of the day: "Dr. Sims called the attention of the Society to some observations in the *Times* newspaper on the impropriety of putting brandy into the shoes when wet; and the evening was devoted to a discussion on the subject. The President and some of the Fellows thought that much advantage might arise from the stimulant property of the spirit. Dr. Clutterbuck opined that cold would be produced by the evaporation, and the water that was left would keep up the cold. Dr. Pinckard suggested that the greater "degree of cold which the spirit caused would excite greater reaction; and hence the benefit." Mr. Lewis said that the spirit applied to the skin rendered it a non-conductor; and the President further remarked that he thought, "while the water would be absorbed by the system, the spirit would not be." It does not appear from the minutes that any of the ingenious debaters spoke from a practical knowledge of the matter they discussed.

The subject of contagion was frequently before the Society, and in March, 1811, in the course of a debate on "Scarlet Fever, and its Contagiousness," Dr. Hamilton observed "that he thought contagious diseases were often spread by washing the linen of infected persons promiscuously with that of others." I need not remind you that this source of the spread of disease has excited much attention lately. Of course, pulmonary consumption and its treatment are frequently mentioned in these minutes of the Society's *Proceedings*, and digitalis is strongly recommended for its effect in lowering the pulse and lessening fever and cough. And I must notice a remarkable communication, in 1812, from Dr. Walker, of Leeds, "On the Varieties of Pulmonary Phthisis." He says—"I have for many years been led to make a material distinction in classing phthisis pulmonalis and in distinguishing the truly *inflammatory* from the *scrofulous* consumption. When, in florid habits, the disease arises from obvious causes—such as a preceding hæmoptysis, pneumonia, or catarrh—the case is in general attended with inflammatory diathesis, and requires a treatment suited to the cause. But in scrofulous habits, in whom the disease creeps on insidiously and slowly, without any violent symptoms of any kind, the debilitating plan of cure, under the idea of inflammatory tubercle, seldom succeeds, and I have in such cases found a moderate allowance of bland preparations of animal food once a day, and mild restorative tonics, agree well."

In the minutes of the meeting on February 21, 1814, a case is noted which may be regarded as essentially one of right hemiplegia with aphasia. "Dr. Pinckard mentioned the case of a young lady, 18 years of age, who suddenly lost all power of motion and speech. She remained eight weeks without recovering the loss of speech, and regaining very little use of the left side. The case was extremely distressing, inasmuch as she had not the power of expressing her wishes through any medium of communication. She died, and on examination of the head a very large abscess was found extending along nearly the whole surface of the *left* hemisphere."

In 1807 mention is first made of rheumatic pericarditis. Dr. Sutton "mentioned several cases of the heart being covered with coagulable lymph in persons who had died, some of fevers and one of rheumatism." And in 1814 Mr. Powell related a case of disease of the heart from rheumatism. "There had been hæmorrhage from the lungs, dyspnœa, and palpitation. The heart was found to be three times the ordinary size, and there was much water in the chest."

In May, 1820, "Dr. Uwins briefly adverted to the new method of Diagnosis in Thoracic Diseases recommended by M. Laennec."

And in December, 1823, a paper was read from Dr. Forbes, of Chichester, "On a Case of Diseased Heart, with the Appearances on Dissection, and Remarks tending to show the advantages to be derived from the use of the Stethoscope."

It would be impossible for me, without completely exhausting your patience, to enter at all fully into the numerous discussions held by your Society on the "Vitality of the Blood," on the question of the circulation within the cranium, on fever, inflammation, pertussis, erysipelas, ovarian dropsy, puerperal fever, epilepsy, mania, delirium tremens, and so on. I must be content with little more than the bare mention of them. Naturally, in a Society of which Dr. Clutterbuck was for so many years a very active and eminent member, the cause of fever and the treatment of disease by venesection were very frequently topics of conversation. Thus, in 1818, there were repeated debates on the "prevailing epidemic of fever" and its treatment, and Dr. Clutterbuck and some of the Fellows insisted on the necessity of free venesection; but others recommended modes of treatment much more akin to that followed in the present day. One gentleman mentioned "the case of a young lady with delirium, dry brown tongue, subsultus tendinum, etc., who took a bottle of port wine every twenty-four hours, for some days, and got quite well." Mr. Leese "relied on nitro-muriatic acid, topical bleedings, if the head was much affected, and occasional purgatives, and found this treatment very successful." And another of the Fellows followed the same practice, "with sometimes porter and an opiate at night."

Dr. Clutterbuck was ever ready as the champion of the lancet. In 1836 he read to the Society a paper to prove that delirium tremens is a disease of the character of slow inflammation, and requires bleeding and other antiphlogistic treatment, and not opium. He met, however, with general opposition and dissent. He insisted, also, that hydrophobia is essentially an inflammation of the brain, and must be treated by venesection, digitalis, etc. And so late as the year 1840 he declared "that in most cases, in 99 per cent., spasmodic asthma depends on an excited action of the mucous membrane, and that the greatest advantage is to be derived in its treatment by repeated small bleedings of from five to eight ounces." And "he mentioned the case of a young lady with pure asthma, who had vainly tried all kinds of sedatives and anti-spasmodics, but was completely cured by small and repeated bleedings." He was supported by some of the Fellows, but Drs. Bennett, Theophilus Thompson, and Marshall Hall insisted on the existence of a purely spasmodic form of asthma, to be treated by belladonna, conium, inhalation of vapours, etc. In the same session Dr. Clutterbuck read an ingenious paper on "Counter-irritation as a Remedial Agent," written to show that a very large proportion of our remedies—purgatives, emetics, and even bleedings, acted as counter-irritants.

In 1832 and 1833 cholera, of course, claimed a large share of the Society's time, and in the latter year Dr. Tyttler, by special invitation, expounded his theory that the undoubted cause of cholera was the use of deteriorated rice.

In 1843 I met with the first suggestion of the change of type hypothesis. Mr. Proctor, one evening, "inquired whether diseases generally had not changed their type during the last two or three years. He had observed that scarlatina had changed its character, and required a different treatment. Mr. Dendy observed that he had been led to think that an asthenic diathesis prevailed, as during the occurrence of cholera."

Nor may I venture to occupy any more time in showing, as so easily could be shown, how there is not a department in the whole wide field of Medicine which has not been often brought before the Society, and that by the most eminent workers in it, and how the successive communications on the subjects treated of, and the discussions on them, have marked or foreshadowed the improvements and the progress our science and art have made. The few notes I have made of the Society's work in its early years must suffice to show the character and value of its labours in those days, and I must trust to your memories for an appreciation of its busy and fruitful sessions in recent years.

The perusal of these volumes of records of the proceedings of your Society gives rise at first, I think, to feelings of depression and disappointment. Finding that during the latter part of last century and the beginning of this the Fellows of the Society were occupied with questions which occupy us still, discussing problems in the science of Medicine which remain unsolved problems still, and are to this day discussed in our societies and our journals, and perplexed by doubts and difficulties which are doubts and difficulties still, and still perplex us, the reader gets depressed and despondent; he doubts whether Medicine has made any progress, or, at the best, feels sadly that indeed

> "Science moves but slowly, slowly, creeping on from point to point"

but, on reading steadfastly on, the reward comes in a growing and ever-strengthening conviction that

"The thoughts of men *are* widened with the process of the suns,"

and that real and great progress has been made. It may be too true that we cannot yet tell what fever is, but, at any rate, you will not now hear it said, as was said by a Physician in your Society, in 1817, that "whether there is such a disease as typhus, as a specific form of disease, is not yet determined"; nor will you find an eminent Physician ready at all times to prove that "all fevers have their cause in inflammation of the brain." You will not, as in 1834, hear one Physician declaim against morbid anatomy and the stethoscope, and a second declare that he too "cannot see what light has been thrown on the treatment of disease either by the study of pathology or the use of the stethoscope." Nor will you hear, as in 1841 your Society heard, a paper written by one Physician to prove that "most diseases either consist in inflammation, or are consequences of it, more or less remote"; and another, so eminent as was Dr. Jas. Johnson in his day, state that, "although long anxious to discover an universal cause of disease, he had hitherto failed, but that the longer he lived, the more convinced he became of the truth of the opinions maintained in that paper." He believed that ninety-nine cases of disease in the hundred depended, more or less directly, on inflammatory action, "that pulmonary phthisis, neuralgias, etc., all originated in inflammatory action, that gastrodynia is an inflammatory affection of the nerves of the stomach," and that to say, as Dr. Theophilus Thompson had just said, that it might be cured by such drugs as stramonium, was simply absurd. And an opponent of this doctrine could scarcely now be found to support his opposition by the statement that "he could not regard hydrothorax as the result of inflammatory action, because effusion did not take place in children who suffered pleuritis." Need I go on? Did time permit me to draw upon the records of your meetings in recent years, it would be easy to adduce proof upon proof of our gains in knowledge, of our advance in science, and to show how diagnosis has become more clear and precise, prognosis more confident and trustworthy, and treatment more scientific, more based on and guided by knowledge of the nature and causes of disease, as well as on the empirical knowledge of the effects of remedies. But I need not regret that want of time forbids my doing this, for a knowledge of the more recent proceedings of your Society, and knowledge of the progress of Medicine are the common property of you all. And I do not doubt of your concurrence when I affirm that the Medical Society of London has had no small share in stimulating and fostering that progress. Of all the impressions derived from the perusal of the minute books, so often referred to, the most vivid, the deepest, the most lasting, is the impression of the great value of this Society, and of the great work it has done. Established when Medical societies were so few that it stood almost alone, when Medical works were—compared to our times—rare and expensive, and Medical journals scarcely existed, and when modes of communication were few and slow, it must have been of incalculable value as a means of diffusion of knowledge, a medium of interchange of thought, experience, and criticism. Established as a great catholic Medical society in days when the branches of the Profession were marked out by hard-and-fast lines of separation, and the Physician, the Surgeon, and the general Practitioner were parted off in practice to a degree that we can hardly comprehend, it would be difficult to over-estimate the service this Society rendered by providing a common ground of meeting, where each branch of the Profession might learn from the knowledge and experience of the others, and be taught to feel its own deficiencies of education; and yet were all bound together by mutual respect and good fellowship. In this way your Society has been prominent and powerful among the influences which have gradually, by a levelling-up process, welded the Profession into a more combined and equalised whole; so raised the education and status of the general Practitioner, and widened and deepened the Professional learning of the Surgeon and the Physician. The recognition of part of this change may perhaps be well illustrated by a rather amusing note from the Society's records. At the end of 1834 a paper was read by Mr. Dendy, on "The Internal Causes of External Diseases," and during the discussion which followed, Dr. Shearman contended that the doctrines set forth were not novel. "Much," he said, "of what is called present pathology has been anticipated. These matters formerly came under the consideration of the Physician alone, while the Surgeon was merely employed in making local applications; but the Surgeon had gradually learned the art of the Physician, and then wanted to promulgate it as a science of his own discovery."

But, Mr. President and gentlemen, if this estimate of what this Society has been and has done is at all true, a great trust has been handed down to us who are now its Fellows, a weighty responsibility lies upon us; and the Profession at large, and the public, so deeply interested in all that concerns the advance of Medical knowledge, have a right to require an account of our stewardship, and to ask us what we are doing with the honour, the fame, and the power of this Society.

I believe that we can face any such inquiry with clear conscience and good courage. There have been, undoubtedly, periods of lessened vitality, of stagnation, of partial decay even, in our Society—what society has not suffered such periods?—but I venture fearlessly to assert that, as it was in its early days, so now, the Medical Society of London is a great catholic Society of Medicine. As earnest workers in the various departments of Medical science have multiplied they have longed for more room and consideration for their special fields of work than this Society could afford them, and hence other and special societies—Medico-Chirurgical, Pathological, Epidemiological, Obstetrical, Clinical—have gradually risen around us; an inevitable result, and the strongest proof of the enlargement and increase of knowledge. But still to us come workers in each and all of these departments. This Society still receives communications from all, and gives them the best and truest of welcomes—the welcome of earnest, informed attention, and frank, skilled criticism. Is proof of this needed? The great variety and large scope of the communications brought before the Society, and the discussions on them during the last few years, or even the work of the session just ended. Take but a very short and imperfect list of the subjects brought before the Society of late years, and of the men who have brought and discussed them:—

Snow on the Inhalation of Medicines; Snow, Richardson, and Sansom on Anæsthetics, their Uses and Dangers; Forbes Winslow, Maudsley, Harrington Tuke, on Mental Affections; Radcliffe, Russell Reynolds, Anstie, on Epilepsy, on Diseases of the Brain and Nervous Disorders; Risdon Bennett, Sibson, on Pericarditis; Hassall on Sarcina Ventriculi and the Sulphites; Garrod and Fuller on Gout and Rheumatism; Hyde Salter on Asthma, Dyspnœa, Tracheal Dysphagia, and on the Nature and Cause of the Respiratory Murmur; Edward Smith on Alcohol; Hare on the Diagnosis of Tumours and Enlargements of the Kidney; Cockle and Leared on the Sounds of the Heart; Richardson on Fibrinous Concretions in the Heart, the Synthesis of Disease, Uræmia, the Peroxide of Hydrogen, the Nitrate of Amyl, etc., etc.; Druitt on the Philosophy of Cancer; Druitt, Barnes, Tilt, Marion Sims, on Uterine Affections; Hancock and Gay on Internal Strangulation; Hancock, and Bryant, and Gant, on Excision of Joints; H. Smith on Tracheotomy; Gay on a New Method of Treating Ulcers, on Varicose Veins, on Intestinal Obstruction by Bands; Canton on Arcus Senilis; Hunt, Tilbury Fox, on Diseases of the Skin; George Johnson, Sir Duncan Gibb, M. Mackenzie, and Francis Mason on the Laryngoscope; Sansom on the Ophthalmoscope; Anstie on the Sphygmograph; Murchison on Hydatids of the Liver; Handfield Jones, Althaus, Habershon, Thudichum, Broadbent, yourself (Mr. President), Thorowgood, Symes Thompson, all have taken part in the work done, and I might swell the list to almost any extent.

Or consider the variety and character of the subjects brought before us in the session just closed. You, Mr. President, have pre-eminently among others, as before, helped to enlarge and render more precise our knowledge of the different forms of Pulmonary Phthisis, and given us most valuable papers on Perityphlitis, and Peribronchial Fibrosis. Thudichum, Sansom, Richardson, have brought the Germ Theory fully before the Society. We have had Surgical papers from Mr. J. D. Hill, Mr. Teevan, and Mr. Maunder; and "Clinical Experiences at the Seat of War" from Thudichum; Ophthalmic papers from Mr. Spencer Watson and Mr. Jabez Hogg; Therapeutics from Richardson and Dr. Prosser James; Aural Surgery by Dr. P. Allen. Orthopædic Surgery has been represented by Mr. Adams and Mr. Brodhurst; Treatment of Skin Disease by Erasmus Wilson; Midwifery by Dr. Brunton; Medical Chemistry by Dr. Meymott Tidy; and various Medical questions have been treated of by Drs. Althaus, Macpherson, Brunton, Sansom, Carpenter (of Croydon), Semple, Crisp, and Douglas Powell. Add to this the Lettsomian Lectures and the work of our Clinical Half-hours.

Surely this is enough to justify the assertion that the Medical Society is κατ' ἐξοχήν, *the* Society of Medicine of London; and we who have now the honour to be Fellows of it, while we look back with just pride on its past career, feel bold to hope that our successors will allow that we have not suffered its honour to be tarnished, its fame to be diminished, or its strength and usefulness to wane and lessen; and looking onwards to its future we feel a confident assurance of the fulfilment of our loyal wish, *Floreat semper.*

REVIEWS.

Affections of the Throat and Larynx. By Arthur Trehern Norton, F.R.C.S., Assistant-Surgeon and Surgeon in charge of the Throat Department at St. Mary's Hospital; Lecturer on Anatomy in the Medical School. 8vo, p. 39. London: Robert Hardwicke, 192, Piccadilly.

Although in the vast majority of instances it may be true that a great book is a great evil, the converse proposition that a small book is little good can hardly be maintained with respect to the *brochure* now before us. In 150 consecutive cases of affections of the throat and larynx which came under the care of Dr. Sieveking and Mr. Norton in the throat department of St. Mary's Hospital, nearly every disease was exemplified. Mr. Norton contributed to the *Lancet* in 1870 a series of short papers, of which the present volume, with some few alterations and additions, is a reprint, describing the several symptoms which characterised each disease, together with the treatment adopted and the results obtained. He has also given short reports of cases which, from complications or from some deviation from the ordinary course of symptoms or treatment, have a special interest. Those Practitioners who have hitherto been deterred from employing the laryngoscope, on account of the anticipated difficulties of its application, may acquire by compliance with Mr. Norton's short, simple, and thoroughly practical instructions, in a very few efforts, such an amount of manipulative skill as will place the laryngoscope as a means of physical diagnosis quite on a level in their estimation with the stethoscope, of which, indeed, it has already become the almost indispensable adjunct, in cases in which the existence of an intra-thoracic tumour is suspected. On such cases, however, Mr. Norton, of course, does not touch, as his subject limits him to those in which actual disease of the throat or larynx has been detected, either with or without the aid of the laryngoscope. It is an interesting fact that, of the 150 cases recorded by Mr. Norton, thirty-eight, or more than 25 per cent. were complicated with, and probably due to, syphilis. The general principles of treatment are indicated in a few practical words in the abstracts of cases, and we have no doubt that Mr. Norton's little book will, if for this reason alone, be useful not only to students but to Practitioners. Mr. Norton, by giving the details of chronic cases in which persevering treatment for several months was necessary, shows that he honestly desires to tell the truth, and not to give the *couleur de rose* view, which too often deceives both Surgeon and patient.

Rheumatism and Rheumatic Gout, treated on Antiseptic Principles. By James Dewar, M.D., Kirkcaldy. Edmiston and Douglas, Edinburgh. (Pamphlet.)

Dr. Dewar for some time past has directed his attention to the antiseptic properties of sulphurous acid as a disinfectant. "It has long been resorted to," says Dr. Dewar, "as a remedy of unquestionable ability. It is used as a domestic cure for simple ailments in all parts of the world, and with marvellous uniformity as to result; but its more definite employment in really pronounced affections is not less interesting, while it is followed by no less tangible benefit."

The object of this *brochure* is to prove the good effects of the acid in cases of rheumatism and rheumatic gout, and the author narrates eight cases, selected from a great number, in which the acid appears to have been of very remarkable and decided benefit. The cases comprise instances of the disease in all stages, and of various degrees of severity. The dose administered varies from forty minims to a dessert-spoonful, and is given every two, three, or four hours.

Some cases are recorded of boys who presented themselves to the author with symptoms of rheumatic fever. In these cases, in addition to the internal administration of the remedy, the joints were swathed in lint soaked in sulphurous acid, and covered with guttapercha. The cases are told simply, plainly, and without unnecessary detail; but they are of such a character as to convince us that the acid is deserving of a more extended trial. We strongly recommend our readers to make use of it in one of the most troublesome and difficult complaints which present themselves to us. Dr. Dewar says, in a private note to us, that he believes the careful use of sulphurous acid will "preserve vegetable substances in the original natural state, and that unchanged, in spite of the season of the year. Potatoes, for instance, are but a transient provision, and it is only the coarser qualities which keep after the month of May; but by my plan all attempt at sprouting is prevented, while the tubers are effectively preserved, and that without injury to their flavour. I simply immerse them, jackets and all, in sulphurous acid and water. I have had some thus for a month, and they are very nice, only requiring a little longer boiling. The point to be ascertained evidently is, how far the solution can bear to be diluted without the risk of the water becoming decomposed, and this can only be done by observation; but once settled, I believe that many other articles of food could be successfully subjected to its action."

Annuario delle Scienze Mediche, riassunto delle più importanti Pubblicazioni dell' Anno. Per i Dottori P. Schivardi e G. Pini. Anno I.—II., 1870. Published 1871. Milano, Roma, Napoli, Palermo.

Yearbook of Medical Sciences, culled from the most important Publications of the Year 1870. By Drs. P. Schivardi and G. Pini. 1871. Milan, Rome, Naples, Palermo. 12mo. Pp. 260.

We welcome with pleasure quite unfeigned the appearance of this handy and useful little book. The tenuity of its proportions does not allow it to give full effect to the amount of talent distributed in Italy, but it will serve, it may be hoped, to draw attention to much that would otherwise be overlooked and might chance to be misprized. We are tempted to wish it were wholly devoted to Italian Medicine. This, however, is not the case. It is compiled with spirit and with judgment, and is truly a charming little volume.

NEW BOOKS, WITH SHORT CRITIQUES.

Analytical Tables for Students of Practical Chemistry. By J. Campbell Brown, D.Sc. Lond., F.C.S., Professor of Chemistry and Toxicology at the Liverpool Royal Infirmary School of Medicine, and Lecturer to the Liverpool School of Science. London: J. and A. Churchill. Liverpool: Adam Holden.

⁂ A set of trustworthy chemical tables is a desideratum. Those drawn up by Professor Abel for the use of the officers of the Royal Artillery and Engineers and the cadets of Woolwich, were admirable so far as they went; but, being arranged for the exclusive use of a special class, they did not go far enough. For simplicity and clearness they could be hardly excelled, and any set of tables arranged on a similar scheme, but carried further, and modified to suit changes in nomenclature and new discoveries made since their last issue, would scarcely fail to be extensively useful. Such a set we have before us. They have much of the clearness of Abel's, with much greater fulness. Thus, in addition to the rules for the examination and separation of solutions of the ordinary metals and their compounds, there are the fullest details for preliminary examinations that we have anywhere seen; a table for the examination of gases, and detailed instructions for the recognition of organic acids and bases, with methods for the separation of the latter from each other. Taking them for what they profess to be—viz., tables; or, in the modest words of the very brief preface, "notes by which to follow and recall to mind the demonstrations"—we think they are decidedly the best yet issued, and recommend them to Medical students especially, as likely to be of great service.

School Epidemics: especially Scarlet Fever. By a Practical Nurse. St. Leonard's-on-Sea: Published by E. Winscom, 18, Grand-parade. Price Fourpence; 3s. 6d. per dozen. Post free.

⁂ This little pamphlet may be useful in impressing on the general public the fact that the various secretions may be vehicles of contagion, and in urging them to take the precautions necessary for dealing with each secretion. In this the author shows much feminine acuteness, but some of her precautionary measures, such as burning green wood, to fill the sick-room with vapours of pyroligneous acid, are inferior to others in general use, and are likely to be delusive. Carbolic acid and brimstone fumigation seem to find no place in her system.

Clinical Report of the Lying-in Hospital, Dublin.

⁂ This important report is a reprint from the *Dublin Quarterly Journal of Medical Science*, which has already been noticed in this journal.

Investigacoes estatisticas sobre as Doenças e Mortalidade do Exercito Portuguez no periodo de seis annos e meio, descorridos do 1º *de Jullio de* 1861 *até* 31 *de Dezembro de* 1867. Pelo J. A. Marques, cirurgião de brigada, chef e che então era do 6ª Repartição da 1ª Direcção do Ministerio da Guerra. Lisboa. 1870.

Statistical Investigations upon the Diseases and Mortality of the Portuguese Army in the period of Six Years and a Half from July 1, 1861, *to December* 31, 1867, *inclusive.* By Dr. J. A. Marques, Surgeon of Brigade, late Head of the 6th Repartition of the 1st Direction of the War Ministry. Lisbon. 1870. Pp. 125.

⁂ This statistical work has been thrown back a whole year. It seems to have lain ready for publication at hands of Government a twelvemonth earlier. A sudden fit of retrenchment, extinguishing among its various reforms the army statistical department, led, as is sufficiently notorious, to a political convulsion of no ordinary character in Portugal. It would appear, then, that the excellent work we are here considering would have lapsed altogether but for the public spirit of Dr. Marques, who has at his own cost and expense undertaken the issue. We draw attention to a few data that may serve to stimulate curiosity. In the effective force the general mortality is 12·2 per 1000. With an army of 21,000 men, the loss by death and invaliding through phthisis is 6·25 per 1000 effective annually; and this is probably not the whole truth from various sources of error quoted. The deaths occurring from phthisis, or rather from tubercles, pulmonary, and mesenteric, are exactly estimated at 3·2 of effective force. Of cases of pulmonary tubercles diagnosed in military Hospitals, these amount to 7·4 of 1000 effective, or 166·9 cases per annum. Of these, out of a garrison of 1500 men, Oporto sends one-sixth, or a medium proportion of 15·6 per 1000 effective annually; and Lisbon, with 5000 in garrison, sends one-third, or 11 per 1000 effective, while the country garrisons show only 5·2 per 1000 annually. The same disproportion between town and country districts formerly noticed, as regards the disease, has been maintained, and phthisis does not seem to be on the decline within the ranks.

FOREIGN CORRESPONDENCE.

HOLLAND.

Rotterdam, May 9.

The Small-pox Epidemic in Holland.

In the *Medical Times and Gazette* of February 25 last I gave some figures of the deaths from small-pox. The official returns for the first quarter of the year are now published; I have based my table on them. The first column contains the principal cities of Holland, and London, to which our mortality is to be compared; the second column, their population; the third, fourth, and fifth, the mortality from small-pox of each month; the sixth, the total and the small-pox mortality of London till March 31; the seventh column states the small-pox mortality in 10,000 inhabitants; the eighth, the mortality from all causes (including still-born) in 10,000 inhabitants; and the ninth, the mortality in 10,000 inhabitants after the deductions of the small-pox mortality.

	Population Jan. 1 1871, and London estimated population in middle of 1871.	Mortality from Small-pox.				Mortality from Small-pox in 10,000.	Mortality from all causes in 10,000.	Mortality, without Small-pox mortality, in 10,000.
		Jan.	Feb.	Mar.	Total.			
Rotterdam	123,097	205	314	470	989	80	180	100
The Hague	93,083	392	350	201	943	101	180	78
Utrecht	60,587	162	197	183	542	89	188	98
Amsterdam	281,805	42	112	170	324	11	83	72
London	3,258,469	...	...	...	2370*	7·2	67	59

* The small-pox mortality on April 1 was 2396; the mortality from all causes, 22,089, which numbers, reduced to March 31, are 2370 and 21,867.

This table gives us several causes for meditation. 1. The enormous mortality from small-pox. Now, already the ciphers for Rotterdam are greater than any of those in my review of the last ninety years,(a) and although the increased population is to be considered, it is already evident that the greatest mortality will be surpassed, even in consideration of the increased population, and that in a city where vaccination was first practised in Holland, and where the most arduous vaccinators dwell, but whose endeavours are partly made powerless by bigotry and *nonchalance*. The difference between the small-pox mortality of the cities of Holland and London is very great (from eleven to fourteen times greater); and though Amsterdam makes an exception, the epidemic is yet steadily increasing there. 2. The mortality from all causes of death is very great; but (3) also, after deduction of the deaths from small-pox, there remains for the cities with great small-pox mortality a much greater quantity of the other causes of death than in London, where the small-pox mortality was not so great. Now, it is probable that, under the different causes of death, there are many which are the consequences of small-pox; but, in general, we see here a confirmation of what I would almost call a law—that, wherever an epidemic rages, there are several other diseases in its rear. Just the contrary is observed here of what generally is believed—that one epidemic excludes all others, or for the greatest part other diseases. I stated the same in my paper on the influence of the drinking water on cholera,(b) where those provinces which had suffered the least from cholera had also a smaller mortality from other causes of death. The smaller mortality from the other causes of death in London is an argument against those who, in favour of their opinions against vaccination, are wont to say that, where there had not been small-pox mortality, there would have been an equal mortality from other causes of death.

GENERAL CORRESPONDENCE.

MERCURIAL TREATMENT OF LEPROSY.

Letter from Dr. F. Porter Smith.

[To the Editor of the Medical Times and Gazette.]

Sir,—For some years I have been treating the tubercular and mixed cases of leprosy, so common in China, in much the same way as Dr. Beauperthuy, and with some decided success.

Small doses of blue pill, combined with a little opium, and continued for some weeks, have led to the healing of those sores upon the feet so offensive and embarrassing to the patient. The use of a lotion of sulphate of copper has generally been combined with the mercury, and nitrate of silver has also been rubbed upon the ulcers which occur upon those points which are subject to pressure or injury. It is very important to distinguish between the *accidental* sores, blisters, etc., produced by incautious contact with external objects, fire, boiling water, etc., and the *peculiar* sores met with upon the limbs. I am, &c., F. Porter Smith, M.B. Lond.

May 6, 1871. (formerly of Hankow, China).

VACCINO-SYPHILIS.

Letter from Mr. W. B. Kesteven.

[To the Editor of the Medical Times and Gazette.]

Sir,—The lamentable catastrophe announced by Mr. Jonathan Hutchinson, at a recent meeting of the Medico-Chirurgical Society, cannot fail to excite the alarm of all who are in the practice of vaccinating from the ordinary sources of supply of lymph.

I confess to being one of those whom you stigmatise as having exercised "a perverse ingenuity in explaining away not merely the mass of foreign testimony, but that afforded by the few and isolated cases on English soil, especially that lately brought before the Clinical Society." Allow me, however, to observe that what you have called "perverse ingenuity" I am still disposed to maintain was nothing more than legitimate caution against the admission of insufficiently supported cases, declaring a danger that had not been seen by those in England who have been most largely engaged in vaccinating. The alleged "cases on English soil" are not on record.(a) After the frightful narrative now published, the most scrupulous—or, if you please, obstinate—caution must own itself more than satisfied. Such fact, while it removes incredulity as to the possible conveyance of syphilis in vaccine lymph, must effect a revolution in the practice of vaccination; for who, after such an occurrence, will dare to trust to any vaccinifer the whole history of whose antecedents he does not possess? And who can confidently affirm that he can attain to the whole antecedents of any individual vaccinifer? There is every probability that, where the parents of an infant are well known to the vaccinator, he may seem to be quite safe; but after the facts that have now been adduced, some fear or misgiving must be felt in every instance.

(a) *Medical Times and Gazette*, May 6.

(b) "Nederlandisch Tydschrift von Geneeskunde." 1868. Part 2, p. 269.

(a) See Dr. Ballard on "Vaccination," p. 359.

If to have recourse to calf vaccination be our only safeguard there should be no hesitation about it. No amount of trouble or inconvenience should be allowed the slightest weight against the fearful risk of contamination for a life by a disease scarcely less destructive than that against which protection is sought.

Who can tell, for instance, the end of the cases of vaccino-syphilis now under consideration?

I protest, however, against the misuse of their warning. All that has happened gives no additional weapons to the opponents of vaccination, it only proclaims the care that should be taken in operating.

Under all circumstances, considering the countless multitudes who have received the benefits of Jenner's discovery, the wonder is that this lamentable catastrophe has not been more often known to have occurred. The more marvellous and inexcusable the oversight if it be ever allowed to occur again. I am, &c., W. B. Kesteven.

Holloway, May 9.

THE UNCERTAIN ACTION OF VAPOROUS ANÆSTHETICS.

Letter from Mr. Lewis Thompson.

[To the Editor of the Medical Times and Gazette.]

Sir,—It is now well known that vaporous anæsthetics produce upon human beings very uncertain effects, and that these effects sometimes lead to fatal results from unexplained causes. Permit me, then, to point out to the Medical Profession a source of variation, and even of danger, which has hitherto been overlooked in the employment of these anæsthetics.

What chemists call the "tension of vapour" is merely a name by which they express the disposition of any particular fluid to take on the form of gas; and this tension, or disposition, varies with the temperature of the liquid and the height of the barometer.

But vaporous anæsthetics all depend for their activity upon this disposition to become gas, or, in chemical language, upon "the tension of their vapours," which, as I have stated, varies with the temperature and pressure of the atmosphere, so that the inhalation of any given anæsthetic might be perfectly safe with the thermometer at 60° Fahr. and the barometer at thirty-one inches, but inevitably fatal with the thermometer at 80° and the barometer at twenty-nine inches. Nevertheless, this important circumstance has not yet been taken into account in the administration of vaporous anæsthetics.

It would be no way difficult to construct a table giving the elastic force or tension of any definite fluid or fluids, if the Profession at large would once fix upon the kind or kinds of anæsthetics to be employed generally.

Thus, sulphuric ether at 60° Fahr. and thirty inches of the barometer expands two parts of air into three, and forms, therefore, at that temperature and pressure one-third of the air inhaled into the lungs of a patient.

Under the same circumstances, chloroform expands fourteen parts of air into fifteen, and, consequently, the vapour of chloroform constitutes one-fifteenth part of the air inhaled; and, from data of this kind, tables might be constructed giving the amount of atmospheric expansion for every degree of Fahrenheit between 32° and 100°, and in tenths of an inch for every variation of the barometer between twenty-eight and thirty-two inches; or the same thing might be arrived at by what is called the "wet and dry thermometer bulb," now used to indicate the hygroscopic state of the air. By pouring upon the wet or covered bulb of this instrument a little of the anæsthetic in question, and noticing the reduction of temperature, we ascertain at once the amount of danger connected with the administration of the anæsthetic, or, in other words, the quantity of air required to be mixed with it to insure safety.

As a general rule, the more volatile the fluid the greater will be the variation in its effects from changes in the atmospheric temperature and pressure, and, consequently, the greater the caution required to produce and maintain any given condition in the patient operated upon.

It certainly would be an advantage to the public if the Medical Profession would fix upon any given instrument and anæsthetic, and use these alone. That there is at present much confusion and discord cannot be denied, and in proof of this I myself confess that I do not exactly comprehend what is meant by the term "bichloride of methylene," though I presume it means bichloride of methylic ether, and not the bichloride of the hydrochlorate of methylene, which would be in effect the same thing as chloroform.

I am, &c., Lewis Thompson, M.R.C.S.

FEMALE PHYSIC AT EDINBURGH.

[To the Editor of the Medical Times and Gazette.]

Sir,—The *Scotsman* of the 8th inst. quotes a letter signed "M.D.," which appeared in the *Medical Times and Gazette* of the 6th, as "helping to show what manner of men in sense and taste are some of those who resist the study of Medicine by women."

I have no desire to defend the tone of the letter in question —defensible, indeed, if at all, only on the plea that one would hardly think of cutting blocks of wood with a razor.

With all due respect, then, for an "enlightened public," I would bid them remember what the promoters of the Medical education of women keep, and have throughout this discussion purposely kept, in the background, viz.—that the Medical Profession, as such, does not oppose the Medical education of women *per se*, but only in mixed classes. It resists, as their legitimate trustees, the breaking up of all old educational institutions by the introduction of a new, an untried, and probably deteriorating influence. It would have new wine put in new bottles. It would have women educated, in the first place, for the Profession in separate schools of their own, and, these succeeding, it would then, in its opinion, be time enough to consider if their amalgamation might tend to the mutual advantage of both, as well as to that of the public. These female Medical schools must owe their organisation, however, to those who have faith in their future; it is too much to expect help from the Medical Profession, who, though perhaps best qualified to form an opinion on the subject, have, as a body, no such faith. The Medical Profession in Edinburgh, moreover, resents—and this probably explains, though not excuses, the tone of "M.D.'s" letter—the attempt to turn their position by a flank movement more adroit than honest. The University School of Medicine, with the due amount of knowledge, wisdom, discretion, and (let me add) gentlemanly honesty and fairness, was the proper court to appeal to and, if necessary, by all legitimate means, to influence towards a favourable decision. The appeal there being, after mature deliberation, rejected, a sensational one was thereupon made to an institution with a large and miscellaneous constituency, possessing none of those qualifications requisite in a special jury, before which alone such a case can obtain a fair and impartial trial. Let the promoters of the Medical education of women treat alike the question and the public fairly and honestly, and I shall guarantee the Profession doing not only the same, but doing it with a sense and delicacy satisfactory even to the fastidious taste of the *Scotsman*, who will, perhaps, kindly transcribe also this letter. I am, &c., M.R.C.S.L.

THERAPEUTICS.

[To the Editor of the Medical Times and Gazette.]

Sir,—In Guiana, as soon as her child is born, the Indian mother washes the baby, rolls it in the cradle, and goes about her business as usual. But the husband is pleased to consider himself very ill, straightway taking to his bed, where he is waited upon by the women with the most solicitous attention. In some districts the sick husband has to take nauseous drinks and undergo a course of unpleasant medicine.

This anecdote from "Wood's Natural History" was recalled to recollection recently, when a woman stated that in two pregnancies, although she escaped, her husband up to quickening suffered from morning sickness.

Curious it is to read that candidates for the Army Medical Department in certain tribes, instead of a Professional examination, have to undergo, without flinching, a series of frightful tortures, such as hanging from hooks inserted in the small of the back, or having a finger chopped off without winking; and as there are no parochial appointments, the unsuccessful, sad to relate, are sometimes eaten. The uniform, merely a skin and a hideous mask, appears chiefly worn at the bedside, and the general principles of treatment mainly consist in beating a big drum and howling, the noble savage somewhat inclining to the opinion of Voltaire (and, I am afraid, of Dr.

Wilks), that occasionally Physicians pour drugs of which they know little into a body of which they know less.

I am, &c., BANGALORE.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 9.

MR. CURLING, F.R.C.S., President, in the Chair.

RENEWED DISCUSSION ON VACCINO-SYPHILIS.

THE discussion on cases of Chancre following Vaccination, which had been adjourned at the last meeting of the Society when Mr. Hutchinson's paper had been read, was resumed by

The PRESIDENT announcing that the Council had determined on appointing a committee, and that Mr. Hutchinson had provided a supplement to his paper.

Mr. HUTCHINSON said since last meeting certain important facts had been brought under his notice. Of the former cases reported, where nine persons were affected, all except one took mercury on the ninth week; all did so on the twelfth week; in all instances the sores were then healing. No skin rash had then occurred. On the fourteenth week all the sores were healed; some cicatrices were hard, but the size of the axillary glands had diminished. None had sore throats. No well-characterised syphilitic rash had occurred. Dr. Lamprey, Surgeon of the 67th Regt., had sent him certain drawings of superficial ulcers in two infants. Local inoculation of pus had probably taken place in these cases, but the sores were non-syphilitic. Others had also come under his notice. Dr. H. Fagge had sent a drawing of ulcers open nine months after vaccination. Other ulcers had, in this case, formed on other parts of the body. The case was suspicious, the ulcers having undermined edges, etc. Mr. Hutchinson did not, however, think it syphilitic, as two others of the same family had similar ulcers from falls. This probably arose from struma. There was in these cases no regular rash. A woman, aged 30, came to Blackfriars with a syphilitic rash coming out a fortnight after vaccination. There was, however, in her case a suppurating ulcer on os uteri. Another group of cases had come under his notice since the last report. They were made out by Mr. W. Tay. Two children had been vaccinated, and the sores did not heal. In both there were enlarged glands. One had sore-throat and papular eruption. The younger had a similar eruption, with roseolar marks. There was no hereditary taint. The vaccinator gave name and address of vaccinifer; also of other cases vaccinated from the same subject. The vaccinifer was a boy aged 7 months (at the date of vaccination, 4.) His spots were good, and he still looked healthy. He has had no eruption. He had snuffled a great deal, and a single small condylomatous patch about the anus, which had not been noticed, had just healed. All the children vaccinated had not yet been seen. Mr. Nettleship had seen some. Several of them had suspicious sores after being vaccinated, and spots of doubtful character followed; two had done well. From one of Mr. Tay's patients lymph had been taken, but it was not possible to trace this.

Mr. HENRY LEE, in resuming the discussion adjourned from the previous meeting, drew the attention of the Society to a case that had that day fallen under his care. He said he had the satisfaction of presenting the case to the Society:—A. B., aged 2 years and 3 months, was vaccinated two months ago. The vaccination was followed by ulcers on the arm, which healed in six weeks. The father and mother, and the child itself, were previously, as far as could be ascertained, free from any specific disease. The father had, however, died of consumption within the last few months. He had had gonorrhœa, but no syphilis. The child now was emaciated, had copper-coloured eruption on its nates, sores on the angles of the mouth, and scaly eruption on the head. The glands in the axilla, on the side on which the vaccination had taken place, were enlarged and indurated. On the opposite side there was no enlargement of the axillary glands. Having seen the case to-day for the first time, he (Mr. Lee) would not undertake to give a decided opinion with regard to it; but as far as he had ascertained, the evidence was complete of some poison besides the vaccine having been introduced into the child's system when it was vaccinated. He had seen three suspicious cases altogether—one in 1863, nine weeks after vaccination; the sore was indurated, but no secondaries followed. Another, not long ago, occurred after revaccination; it had every appearance of an indurated chancre. The induration went away without specific treatment. The third case was Mr. T. Smith's, reported to another society. It was not a necessity that the axillary glands should be enlarged, as had been proved in the Rivalta cases. He had no sympathy with the sentiment that the gentleman in whose practice the cases occurred was to be pitied. He had acted most honourably, for henceforth no one would dare say syphilis has been given if no chancre has been formed on the spot. The danger of mistakes must be allowed for and provided against. Inflamed arms were not very uncommon after revaccination, and corpuscles might be taken from them, and so introduce inflammatory action to the person vaccinated. Two great rules arise—the lymph *only* should be taken; the base should never be interfered with. He narrated a case where lymph was taken from one having small-pox—cow-pox alone was produced.

Mr. HULKE: At the last meeting Dr. Drysdale made a statement as to the vaccination of a syphilitic child, and that lymph had been taken from it. The exact facts ought to known.

Dr. DRYSDALE said a woman, deaf and dumb, brought a syphilitic child. He wrote that it should be vaccinated, but that no lymph should be taken from it. She informed him that others had been vaccinated from it. The Hospital to which it was sent was St. Bartholomew's.

Mr. T. SMITH said there was no vaccination carried on at St. Bartholomew's. The whole facts were unworthy of credence.

In reply to Dr. O'Connor, Mr. LEE said he could not state how long the gonorrhœa had lasted in the instance he referred to.

Mr. COOPER FORSTER usually required the presence of secondaries to prove syphilis; but in the cases he had seen the sores on the arms were hard; the glands were enlarged, and in none had time elapsed for well-marked secondaries to appear. Most likely they would be masked. Nevertheless, these people had syphilis; he had seen no more unmistakable sores.

Dr. ANSTIE had arrived at the conclusion that there was no sore characteristic of syphilis, and that there was no evidence to make these out to be syphilitic. The sore was not the only thing. There was no kind of gland-hardening which might not be simulated by non-specific lesions. Secondaries were different. The plan of appointing a committee was satisfactory; it ought to watch these cases for a long time.

Dr. ALTHAUS did not see why secondaries should not be as plentiful as in ordinary cases. Waller, of Prague, investigated the matter as far as inoculation of blood was concerned. He showed that the cases went quite as ordinary ones; the secondaries were unmistakable.

Mr. BERKELEY HILL did not think the transference of syphilis had been clearly proved; nor did he think there was any distinctive syphilitic sore. He hoped that certain non-believers in vaccinal syphilis would be added to the committee. He did not think the secondary symptoms would be light. Medical men inoculated did not suffer so. Was one of those vaccinated the source of the syphilis?

Mr. MAUNDER thought there must be many men who could tell whether a sore would be followed by secondaries. Two varieties of hard sores were recognised, and these now discussed were the most characteristic. He asked whether the glands had been painless or were inflamed.

Mr. BARWELL thought they were wandering; the question was—Can syphilis be communicated by vaccination? Pure lymph is probably innocuous, even when the vaccinifer is syphilitic. Turbid lymph and blood might introduce many diseases. We ran a danger in all cases, except the vaccinifer was distinctly pronounced free from syphilis. He thought some means might be used to prevent entrance of white blood corpuscles into tubes.

Mr. SIMON brought forward a suggestion that the whole subject should be referred to a special committee of this Society, and moved that it be referred to such a committee to pronounce on the best means of securing safety in vaccination.

Dr. BALLARD seconded.

This was found to be against the rules of the Society, and was referred to the Council.

Mr. WEEDEN COOKE asked if there might not be something in the child itself to give rise to those symptoms.

Dr. EDWARD BALLARD thought the paper could be looked at both scientifically and practically. Scientifically, it confirmed what had been done on the Continent, and reflected credibility upon these researches and accounts. Some had tried to account for these Continental cases by ordinary causes and accidents, such as foul tubes and general filth. Now, our insularity will be satisfied by this heap of cases, and we shall, perhaps, believe that there is something in the view that syphilis and vaccinia can be given together. Mr. Hutchinson had hinted that the syphilis had been communicated to the eleven infected through the blood, but there was no evidence as to when the blood of the vaccinifer began to flow; in fact, it was not known. Nor did the paper state the condition of the vesicle, for on the eighth day the vesicle, not always the same, may be clear or opaque. The latter should never be used. An inflamed vesicle may be more dangerous *quoad* the communication of syphilis than one not inflamed. Looking over the history of vaccinal syphilis, it seemed most capricious. It was impossible to believe that bloody lymph from syphilitic children had not been used millions of times in England, and yet Mr. Smith's was the first case proved in this country. In Pelizarri's experiments made with syphilitic blood, out of three only one succeeded; there the blood was warm, in the others cold. In Sebastian's cases two children were vaccinated from a syphilitic child. A chancre appeared in one spot only; and at that spot alone blood had been inoculated with the lymph. In Pelizarri's successful blood-inoculation a large quantity of blood was used; and yet in that under discussion only a little could have been taken. Perhaps the local irritation might favour its propagation. This was the case with ordinary chancres, which irritation renders auto-inoculable. Perhaps, too, the hereditary taint might render the virus more contagious than that contracted by an adult in the ordinary way.

Mr. Startin, during thirty years, had seen many cases of contagious prurigo propagated by vaccination. He had seen scabies also. With regard to syphilis, he had seen about one case a year. Certain he had most closely investigated, and he had satisfied himself of their genuine character.

Mr. Hutchinson, in reply, said he hoped the first series of cases were not chancrous, but feared they were, especially if all things had been taken into consideration. Here were thirty spots, all alike, all chancrous, in all enlarged glands, and in all the influence of mercury was so clear, there really could be no doubt in his mind. As to a committee, he was not quite his own master. In the second series of two there was a rash, undoubtedly syphilitic. These children were past the date of inherited secondary rashes, yet these followed the vaccination in due course. There was the further corroboration from the vaccinifer itself. Must always be fairly well-nourished before being vaccinifers; still, this was undoubtedly syphilitic, with condyloma, snuffles, and tendency to hydrocephalus. The vaccinifer was selected from a public station, and the lymph was quite clear. In the second series, the use of bloody lymph was not quite certain.

In reply to Mr. Simon, he stated that he understood the public vaccinator had selected the child.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 18, 1871.

J. Cooper Forster, F.R.S., Vice-President, in the Chair.

Mr. Arnott exhibited a specimen of Soft Cancer of the Breast, with a drawing of its microscopic structure. The patient from whom the breast had been removed by Mr. Nunn, in the Middlesex Hospital, had noticed the tumour for ten months, and latterly it had been growing rapidly. It occupied the whole of the breast, and from its smoothly lobulated shape, with a fluctuating prominence in the centre, the slight glandular affection, and the absence of anything like severe constitutional derangement, the disease was thought by nearly all to be cystic sarcoma rather than true cancer. Even after the removal of the mass this impression was at first confirmed by the naked-eye characters. A subsequent microscopic examination, however, convinced Mr. Arnott that it was really an instance of so-called "firm medullary cancer." Such parts of the tumour as were not spoiled by degenerative changes and blood extravasation were made up of closely crowded, large, irregular cells, of varied shape, containing one or more large oval nuclei and bright nucleoli. These cells were contained in the wide meshes of a fine fibroid stroma which pervaded the mass, and mapped it out into irregular loculi. Apart from the interest attaching to the diagnostic difficulties of the case, Mr. Arnott was anxious to draw attention to the fact that it was one of those examples of cancer which, occupying a mid-position between scirrhus and medullary, serve to prove the real identity of these two forms of the disease. He thought that English pathologists generally laid too great stress upon the distinctive characters of these varieties, even where they were careful to separate the medullary sarcomata from the latter class. Seeing that occasionally in the hardest scirrhous cancers nodules of very soft structure were met with, and that the secondary growths of both scirrhus and medullary were apparently quite identical, it seemed more fit that in using the terms scirrhus and medullary nothing more than a difference in consistence should be understood, the only real distinction between the histological structure of the two tumours consisting in the proportion of fibrous stroma present. This was in the hardest cancers abundant, and was proportionately less as the firmness of the tumour diminished, this distinction being probably mainly dependant upon rapidity of growth.

Dr. Murchison brought forward a specimen showing a Fistulous Communication between the Gall-bladder and Colon, taken from the body of an old woman who died with epithelioma uteri. The cystic duct was not patent, and there was chronic thickening of the gall-bladder. A gall-stone had, he believed, at some previous time passed. In answer to Dr. Crisp, he replied that, although almost all fistulous openings were between the fundus of the gall-bladder and the bowel, still he had seen cases between the common duct and the bowel.

Dr. Duckworth exhibited a Gall-stone which had passed by the Umbilicus. There was no previous history of gall-stone. The stone was composed mainly of cholesterine.

Dr. Murchison exhibited a specimen of Incipient Acute Atrophy of the Liver, which had supervened upon the passage of a gall-stone from the body of a male, aged 66, who was admitted into the Middlesex Hospital on October 11, after seven weeks' illness from acute biliary symptoms, all of which had now disappeared, with the exception of the jaundice. The urine was found to contain tyrosine, and the cerebral symptoms which had supervened steadily increased. There was still a considerable quantity of urea present in the urine. Albumen appeared latterly in the urine. For several days before death the temperature was normal. Many of the symptoms rendered it difficult at first to decide whether the case was one of pyæmia or acute atrophy of the liver. After death, the bile-ducts were found greatly dilated, and the liver in the early stage of acute atrophy. Crystals were found in the liver after steeping in spirit. Pus was also scattered in the liver and cortical substance of both kidneys.

Dr. Pye-Smith alluded to a case at Guy's Hospital in which there was no albumen, and the temperature fell two days before death.

Dr. Dickinson said that, in so-called spontaneous pyæmia there has generally been some internal cause—as biliary calculus, many cases of which had been related by Dr. Murchison himself. He had, however, also seen pyæmia result from renal calculus, and related a case in illustration.

Dr. Murchison remarked that, in addition to cases of pyæmia resulting from gall-stone, he had seen two cases following simple ulcer of the stomach.

Dr. Crisp brought forward a specimen of Aneurism of the Coronary Artery, affecting the first branch given off between the aorta and auricle, which ruptured into the pericardium, causing sudden death. The man brought up a large quantity of blood, but the source could not be discovered. Dr. Crisp replied to Dr. Powell that the heart's action during life was very feeble and irregular when excited. He replied to a question of Dr. Wiltshire's, respecting the cause of the bringing up of blood, that there was no liver disease present.

Dr. Church referred to a case of a child, 11 years of age, who died of aneurism, in whom there was no history of violence.

Mr. George Lawson exhibited a Hand, which he had amputated at the Middlesex Hospital, on account of the following extraordinary injury which it had received from machinery. The boy was engaged feeding a paper-machine, when his hand was caught between the rollers, which were sufficiently close to grip the skin without seizing fast hold of the hand. Instead of the hand and arm being drawn in between the rollers and crushed, the skin was torn as if by a clean cut just above the wrist, and drawn from the hand and fingers as far as the last phalanges, to which it remained attached, and from which it hung like an inverted glove. Several of the phalanges were considerably crushed.

Dr. Edis asked if the skin could not have been again engrafted.

Mr. Lawson replied, that as the phalanges were crushed and all vitality probably gone, he thought not.

Mr. Hulke, who had seen the hand before operation, agreed in this opinion.

The President thought it judicious to operate at once on children with such injury as was present in this case.

Mr. Thomas Smith exhibited a remarkable specimen of Cystic Disease of the Breast in connexion with Calcareous Degeneration of Scirrhous Cancer, taken from an old woman of a thoroughly cancerous family.

Mr. Smith, in reply to Mr. Hulke, stated that the microscopic characters were those of cancer. (Referred to committee.)

Mr. Henry Morris exhibited a Medullary Sarcoma of the Fibula of three months' duration, which entirely surrounded the fibula, and infected all the tissues of the leg. It was limited to the shaft of the bone, and was separated from the epiphysis of the cartilage. The microscopic characters were more those of sarcoma, while the naked-eye appearances were more those of medullary cancer. (Referred.)

Mr. Morris exhibited a Venous Tumour of the Cerebrum, taken from the body of a man, aged 38, who, with a marked personal and family history of drunkenness, had been knocked down when 19 years of age, and had, off and on, since suffered from epilepsy. He had also been insane for several months. He ultimately died of bronchitis and pneumonia. The disease was situated at the left side of the posterior angle of the right cerebral hemisphere, and was composed apparently of dilated veins containing yellow-coloured material. There was no brain-tissue between the vessels.

Mr. Morris, in answer to the President, replied that it was nævoidal, but of large veins.

Dr. Murchison brought forward a specimen of Diphtheritic Inflammation of the Trachea from a man, aged 24, in whom there were no laryngeal symptoms for a month, and no albumen in the urine until the disease was far advanced. The membrane was entirely cellular, as had been previously demonstrated often at the Pathological Society.

CLINICAL SOCIETY OF LONDON.

Friday, April 28, 1871.

Dr. W. W. Gull, President, in the Chair.

Dr. Greenhow read a case of Diphtherial Paralysis treated with Faradism. The patient, a female, aged 26, one week after subsidence of diphtheria, showed symptoms of paralysis, which took the following order:—Palsy of velum palati; vision troubles; numbness of the left, and afterwards of the right lower extremity; deadness and loss of power in fingers; incontinence of urine; vomiting; occasional vertigo; palpitation and dyspnœa, with constriction feeling in the chest and abdomen; then loss of power in lower extremities, and partial deafness. On admission, her legs were emaciated, and she was only able to stand imperfectly. She could use her hands but little. There was some tenderness on pressure over the left sciatic notch. There was anæsthesia of the legs, and the electro-muscular contractility was impaired. She was treated by the application of faradism alone, and in twelve days she could dress herself. In twenty-one days the normal electrical reaction was established in the legs, and she could walk a little. On March 14, two months after admission, she left the Hospital well. Dr. Greenhow, whilst acknowledging that the large majority of cases of this kind get well under any kind of tonic treatment, entertained no doubt that the treatment here adopted expedited the recovery. He did not attempt to determine the precise pathological cause of the disease, but suggested the occasional existence of neuritis as worthy of attentive consideration in this relation.

Dr. Althaus would have liked to hear an opinion as to the nature of the disease; the symptoms were well known, and the treatment satisfactory. He thought there was often neuritis. He asked if the cervical sympathetic had been pressed. He had often found it very tender on both sides, especially on the hemiplegic one. If the constant current be applied to it, there are certain indications of local lesion. Sometimes similar symptoms are found to accompany simple swelling of the glands of the neck. It was better to localise the electricity on the superior cervical ganglion, rather than employ general faradisation.

Dr. Hughlings-Jackson asked Dr. Greenhow if he had been able to determine anything as to the kind of defect of hearing in his patient, and if he had grounds for inferring that the ear affection was a symptom of the same order as the eye affection—if it could be attributed to palsy of small muscles within the tympanum. He (Dr. Jackson) had heard of defect of hearing in but one case of diphtheritic paralysis; the patient, a well educated Medical man, said that the defect was very trivial, but that it was enough to "render music unintelligible." There was seemingly in this case a loss of accommodation, so to speak, for successions of sounds. Dr. Jackson particularly wished to ask Dr. Greenhow if his very large experience enabled him to say that a slight degree of deafness occasionally occurred as one symptom of the series in diphtheritic paralysis, and, if so, in what order it occurred.

Dr. Buzzard asked if anyone had seen paralysis of this kind, following diphtheria, of any other part than the throat. If so, this would tell against Remak's view, that it was the site and not the disease which caused the palsy.

Dr. Anstie asked, with regard to the hypothesis of neuritis, if it was a migrating inflammation passing from the throat to the cord, and thence to the nerves.

Dr. Wilks held the idea that the paralysis was not connected with the affection of the throat. He had often seen the throat hardly affected. Paralysis often followed slight attacks; he, therefore, imagined it arose from some general cause. The remarkable depression of the pulse favoured the same view.

Dr. Gull thought the post-mortem appearances would be interesting. He had examined one such case. He did not examine the sympathetic, but found the cord anæmic merely, with no trace of inflammation. He considered the examination of fresh cord important, as appearances might be destroyed or produced by reagents. They had no idea of the path pursued by the irritation. He would like to hear something about the loss of hearing; as for the eyesight, that was impaired, on account of loss of accommodation.

Dr. Greenhow had no idea of the path pursued, nor had he examined the sympathetic. He did not think the loss of hearing a nervous affection, but considered it connected with inflammation of the Eustachian tube. He had no experience of diphtheria where the throat was not affected. One great peculiarity was, that a period of convalescence intervenes between the illness and the paralysis. The paralysis, as a rule, crept downwards.

Dr. Gull brought before the Society a case of Accumulation of Hair in the Human Stomach, occurring in the practice of Dr. Godfrey, of Enfield, the circumstances of which were similar to those of one reported by Dr. Best, of Louth, in the *British Medical Journal*, December, 1869. In the present case the patient was a married woman, aged 32, mother of three living children, aged respectively 11, 9, and 4 years. Her children and friends had never noticed her to swallow hair, or to be strange in her mind or manners. She was affected with constant vomiting for about seven months before her death. The final circumstances were these:—She was pregnant with her fourth child. On January 27, 1871, labour began, and a seventh-month fœtus was born. The birth of the child was followed by peritonitis, and death after two days. On a post-mortem examination there was perforation of the duodenum, and the stomach contained a large mass of human hair and string, which extended through the pylorus into the duodenum. The hair was of three colours, corresponding with that of her own head and of her children. Dr. Gull drew attention to the similarity of these cases, as showing that there was some common cause for them, and suggested that they might probably depend upon some all-but extinct instinct which shows itself in some of the lower animals. It appears that certain breeds of cats are apt to commit involuntary suicide by swallowing the hair of their coats, and most museums contain hair-bezoars of different kinds, from horses and cows.

Dr. Habershon had brought a somewhat similar case before the Pathological Society. The patient was a young woman, aged 19, who from childhood had eaten hair and string. She died of peritonitis. Plum-stones and cherry-stones were sometimes retained for years without injury.

Dr. Langdon Down related the case of an imbecile boy engaged in mattress making, who had been accustomed to take a hair occasionally. He died of obstruction and peritonitis. A mass of hair and coir in the jejunum had caused his illness. Dr. Crisp had mentioned several cases.

Dr. Thorowgood remembered many years ago seeing such a mass in the Berkshire County Hospital at Reading. It constituted a complete cast of the stomach in black hair.

Mr. Cooper Forster asked what the motive could be to induce such an act.

Dr. Wilks thought there was no particular reason. The action was instinctive. Perhaps it was a relic of the feline descent of females.

Dr. Wiltshire referred to the old case of the man that swallowed knives.

Mr. De Morgan remembered an instance where he was warned that he might at any moment be called upon to perform gastrotomy, but the girl passed a bezoar the size of an egg and got well.

Dr. Church referred to a case where a female swallowed pins, bending them beforehand. This caused her death.

The President, in reply, thought no *rationale* could be given of an irrational act. It was to be distinguished from an insane act, or that of swallowing knives for profit, or bravado.

Dr. Greenhow then read for Dr. Henry Thompson notes of a case of Diabetes treated with opium. The patient, aged 35, exhibited well-marked symptoms of diabetes. Eighteen months before admission into the Middlesex Hospital he began to pass large quantities of urine, and, during the last six months, his lips and teeth stuck together in the morning, and a viscid secretion exuded from the roof of his mouth. His tongue began to darken, and eventually became black. Seven or eight weeks before admission he perceived a peculiar saccharine taste in his mouth, and his sight grew dim. When admitted, he had a densely-coated blackish tongue, feeble gait, and desponding aspect. Passed eight pints and a half of urine in the twenty-four hours, of specific gravity 1042·5, the total amount of sugar being 6·095 grains. He had persistent headache, pains in the loins, intense thirst, ravenous appetite, occasional hæmoptysis, night-sweats, sponginess of the gums, and looseness of the teeth. The patient was treated with large and repeated doses of opium for six weeks, given in the compound soap pill, the solution of morphia, and Battley's solution, until the daily quantity amounted to twelve or fourteen grains, when it was discontinued on account of intense headache. The opium treatment resulted in a diminution of the flow of urine and the amount of sugar, but no change in the specific gravity or in the general symptoms until a fortnight after the opium was abandoned. He then improved, and lost the distinctive diabetic expression. Dr. Thompson hence concluded that the opium treatment was not beneficial, and ascribed the improvement to other remedies, to a well-regulated diet, and to favourable sanitary conditions.

Dr. Pavy regretted the want of fuller details. It was known how much the kind of diet modified the quantity of urine—indeed, by its increase alone he had been able to discover transgressions of diet. No very large dose of opium had been given here, yet there was a peculiar tolerance of the drug in diabetes. The treatment was not new; it had been used at the beginning of the century. Some cases were from the first incurable, and at all times a good deal depended on the stage of the disease. At the beginning, a simple restriction of diet will cure the patient; after a time opium becomes necessary, and in the later stages nothing does good. Codeia suited better than either opium or morphia.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, April 5.

Dr. Braxton Hicks, F.R.S., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—Eli J. Barrick, M.D. (Toronto), Thomas S. Bulmer, M.D. (Woolwich), Alan Reeve Manby, M.R.C.S. (East Rudham), Cnittathore B. Modelly, Esq. (Madras), and Lawson Tait, F.R.C.S. (Birmingham).

Dr. Graily Hewitt exhibited a child whose forearm had probably undergone Amputation in Utero.

Dr. Wiltshire said it would be interesting to know what became of the parts amputated. Sir James Simpson and others had figured cases in which nearly complete absorption had taken place.

Dr. Barnes observed that it was not often strangulation by the umbilical cord, but by a string of false membrane, that caused amputation. He had a drawing of a case in which amputation was in progress. In the case exhibited there was, as in most instances, a budding of a new limb from the stump, analogous to what was observed in some of the lower animals which had lost a limb. He regarded this budding with the sign of cicatrix as proof of amputation in the early stage of development.

Mr. Scott thought that if such cases occurred they were the exception. He knew a family in which the grandfather and the grandson had both forearms wanting. As the deficiency existed in both arms symmetrically it would be impossible to conceive that it could have occurred from any accidental constriction in utero.

Dr. Brunton showed a wax model of a Successful Vaccination performed with the lymph from a secondary vaccination.

Mr. Eastes considered the most obvious criticism upon the case to be that, although occasionally lymph from a secondary vaccination might produce a good vesicle, still it could in general be by no means depended upon for that purpose.

Mr. Wilkinson stated that he had on several occasions vaccinated with the lymph from a revaccination.

Dr. Wynn Williams hoped none of the Fellows would be tempted by the apparent success to follow the practice. It would be interesting to know whether vaccination performed from a secondary vaccination was any protection against small-pox.

The President thought that if anyone was exposed to the contagion suddenly and only secondary lymph could be obtained, it should be used, but he held that the person should, as soon as convenient, be revaccinated with primary lymph.

Mr. Scott had from necessity vaccinated a gentleman with secondary lymph, producing perfect vesicles. As he was much exposed to contagion Mr. Scott revaccinated him in three weeks with primary lymph, and again vesication took place, but less perfectly.

Dr. Wynn Williams exhibited a Mole or Blighted Ovum, passed by a lady supposed to have been three months pregnant. It had the appearance of a fleshy ball, and, when cut into, was hollow, with veins or sinuses in its interior filled with blood, not unlike so many distended leeches.

Dr. Phillips thought such an appearance was not uncommon in an apoplectic ovum in which the blood was effused between the decidua and the chorion, the latter and the amnion being raised by it, and forming distinct masses on the fœtal surface.

Dr. Westmacott related the history of a case of Miscarriage with triplets at the third month, and exhibited the embryos.

Dr. Barnes exhibited two Instruments which he had found of great service. The first was a modification of Lallemande's *porte caustique*, designed to carry into the uterus a stick of sulphate of zinc. The second was a speculum for the purpose of facilitating the introduction of pledgets of cotton-wool carrying any indicated medicament into the vagina.

Dr. Wynn Williams showed a patient, nearly the whole of whose lower lip had been removed for Epithelioma eighteen months previously. The disease shortly appearing in the cicatrix, the growth was successfully treated by two injections of bromine, twenty drops to a drachm of spirit. There was no appearance of disease at present. The patient was exhibited to exemplify the effects produced in similar diseases when situated in the neck of the womb.

Dr. Protheroe Smith exhibited an Ovarian Tumour which he had removed on the preceding Saturday. The cyst was practically unilocular, but on its right side were three hard nodules, the microscopical examination of which led to the belief that they were of a malignant nature. The patient was doing well.

A resolution was then proposed by Dr. Barnes, seconded by Dr. Murray, and carried unanimously, expressing the regret felt by the Society at the loss of Professor Pietro Lazzati, a foreign Honorary Fellow, and its sympathy with the late Professor's relatives and friends in the great loss which they had sustained.

Dr. Edis read the history and post-mortem appearances of a case of Abscess of the Ovary and Tubercular Disease of the Fallopian tubes.

Dr. Meadows communicated for Mr. Cradock, of Shepton Mallet, the particulars of a case of Occluded Vagina after delivery, with subsequent retention of menses, cured by operation.

A paper by Dr. Graily Hewitt, of which the following is an abstract, was then read:—

THE SICKNESS OF PREGNANCY: ITS CAUSE AND TREATMENT.

The sickness observed in pregnancy has generally been accepted as an inevitable circumstance; the causes of its occasional inveteracy and even danger have never been satisfactorily made out. The treatment of these latter cases has not been conducted on any one principle; yet it must be evident that an analogous cause must be in operation in the slight cases and in the more severe forms. The present state of Professional opinion may be represented in the statement that it is due to the distending effect of the increasing contents of the uterus, exciting thereby in a reflex manner the act of vomiting. The author, accepting this view, proceeds to propound the theory that the existence of flexions of the uterus in various degrees of intensity is the prime factor in giving rise to the vomiting of pregnancy in by far the majority of instances, inasmuch as it offers an additional hindrance to the proper expansion of the uterus, and gives rise mechanically to such pressure on the sensitive uterine tissue at the seat of flexion as results, in most cases, in this particular reflex irritation. This theory, as to the cause of the vomiting of pregnancy, will account for the mild and severe forms of the symptoms. The author was led to this conclusion by observation of the close connexion between obstinate nausea and vomiting, and flexion associated with distension of the uterus in the non-gravid state, as in cases of dysmenorrhœa produced by flexion. Latterly he has found himself applying this explanation to the gravid cases, and, having tested the matter by observation for some little time past, the clinical facts which he has accumulated appear very completely to bear out the general truth of the theory now enunciated. An anteflexed gravid uterus is most commonly the condition found to be present, the anteflexion existing before the pregnancy supervenes; retroflexion of the gravid uterus much less commonly, because the retroflexed uterus is less liable to become impregnated than the anteflexed organ. The very obstinate cases of sickness are observed generally at the second to the fourth month, when the uterus is sometimes found tightly fixed in the pelvis, and unable to escape from it. How far the explanation will apply to cases where the uterus is more advanced in pregnancy the author does not say, not having had cases to test the matter by. The slight cases, where the sickness is limited to the time of rising from bed, are explained by the action of gravity in the erect posture suddenly bending the uterus on itself to a slight extent. Undoubtedly whatever tends to hinder the expansion of the uterus may equally induce sickness: thus some cases may not be accounted for by the theory now put forward. The results of treatment based on the foregoing conclusions, and consisting in measures to restore the organ to its proper shape, have been found very successful in the author's experience—sometimes maintenance of the horizontal position alone sufficing; in other cases, mechanical supports, elevating the fundus anteriorly or posteriorly, according to circumstances, being used for the purpose. The author is quite satisfied of the value of the theory as a basis for practice. He believes that the pressure on the nerves of the uterus at the seat of the bend is the exciting agent; this pressure usually leads to congestion of the uterus above and below, and, possibly, to other secondary results.

Dr. Barnes observed that there had been many theories advanced as to the cause of vomiting in pregnancy. Displacement of the uterus was an old theory. He was, however, in a position to state, from many precise observations, that flexions of the gravid uterus were often present without any unusual degree of vomiting, and that most obstinate vomiting occurred when there was no flexion. The theory of the stretching of the uterine fibre had been most distinctly set forth by the celebrated Bretonneau, of Tours. Many facts concurred in proving its truth. Growth that kept pace with the growth of the contents of the uterus did not cause vomiting; but it was caused whenever the fibre was stretched rapidly, the distending contents outrunning the accommodating growth of the uterus. When vomiting had once become excessive, another element entered into the case. The defective nutrition was attended by impoverishment of the blood, and the blood was further degraded by the absorption of noxious material from the system. Concurrently with this, the habit of vomiting had induced a morbidly irritable state of spinal cord, so that it readily responded to the slightest peripheral or emotional excitation.

Dr. Tilt denied that vomiting was any more caused by flexions of the gravid, than by displacements of the unimpregnated, uterus. Uncomplicated uterine malpositions had no symptoms. In the case referred to in the paper, the cure was attributed to rest in the horizontal posture—a remedy of general use, recommending itself on other grounds than the problematic power to rectify a flexed gravid womb. Dr. Tilt thought the proposed practice of restraining the sickness of pregnancy by the use of pessaries likely to lead to disastrous results.

Dr. Wynn Williams thought the sickness might be aggravated by the unequal distension which would naturally result from flexions of the uterus. In the latter months of pregnancy the sickness was due to an entirely different cause; generally to pressure on the abdominal viscera, more especially the liver.

Dr. Playfair confessed to have heard Dr. Hewitt's proposal to apply mechanical supports to the gravid uterus with some alarm. Some points in the natural history of the sickness of pregnancy militated strongly against Dr. Hewitt's theory. Dr. Playfair did not doubt that some degree of sickness was a perfectly healthy phenomenon in pregnancy. Sickness was much more severe, as a rule, in first pregnancies; flexions, on the other hand, were most common in multiparæ. Again, it was by no means rare for sickness to continue beyond the fourth month, and then flexions could but very rarely exist.

Dr. Wiltshire said he had been requested by Dr. Buyko, who sat by him, to say that the hypothesis brought forward by Dr. Hewitt had also been propounded by Professor Krassovsky, of St. Petersburg. Dr. Wiltshire thought that flexions of the uterus were neither the only nor the most common cause of the sickness of pregnancy.

Dr. Snow Beck said that anteversion and retroversion were not uncommon, and were among the chief causes of sterility. When, however, impregnation occurred, sickness was not more frequent than in other cases where no deviation had been present. Much stress had been laid on the anteversion of the pregnant uterus, but he was unable to see anything to prevent the uterus rising in the abdomen in the usual way. As regards the imaginary stretching and thinning of the uterine tissue at the seat of flexion, the constriction of the bloodvessels and consequent congestion, and the assumed pressure on the nerves, he gave all these a direct denial. Further, the nerves at the seat of flexion were not those concerned in the production of sickness, for it was a matter of everyday experience that affections of the fundus of the uterus were those so generally attended with sickness.

The President observed that his experience did not coincide with Dr. Hewitt's. He believed that tension of the uterus was the chief cause, as shown by the immediate relief afforded when the membranes were ruptured in some cases, but he certainly thought with the author of the paper that the retro- and ante-flexed conditions favoured the pressure. The act of vomiting probably tended to increase the displacement.

Mr. Scott said that, in the most severe case which he remembered, the sickness continued to between the sixth and seventh month, in which, therefore, there could be no question of any flexion being a cause. He had frequently seen cases of retroflexion with pregnancy without sickness. Mr. Scott thought acute anteflexion of the uterus was an absolute cause of sterility, whereas pregnancy occurred not unfrequently in severe cases of retroflexion.

In reply, Dr. Graily Hewitt thanked the Society for the criticisms on his paper. It must be evident on necessary mechanical principles that an organ like the uterus could not be actually bent at the cervix without compression of its tissues on the concave side of the bend. He was not aware that the theory had been advanced in this shape by any previous author. With Dr. Barnes he believed, and had stated as much, that the distension of the uterus was the cause; but whether it operated by compression of the nerves, or by stretching of the muscular fibres, was a question. He himself believed the former the true explanation. He could say, in reply to Dr. Tilt, that he had actually carried his own recommendations into practice to their full extent. He, however, recommended caution in the use of pessaries. The best adapted pessary for the anteflexed cases was the globular air pessary. The fact that sickness was most common in primiparæ was quite in uniformity with the theory advanced. It must, however, be recollected that he did not contend that every case of sickness would be found to be a case of flexion, nor would every case of flexion be attended with sickness.

LEGAL INTELLIGENCE.

LOCAL BOARD OF HEALTH IMPROVEMENTS.

The Board has no Power to Deviate from its own Plans.

Mrs. Esther Sutcliffe, the owner of some property in Mill-lane, Failsworth, was summoned by the Failsworth Local Board of Health for a sum of £8 15s. 6d., being the amount due in respect of certain sewerage works for which it was alleged she was liable. The usual plans were deposited at the offices of the Board, and, in pursuance of the requirements of the Act, notice was given to the defendant and the other owners of the property in the lane, requiring them to commence the work within two months from August 19, 1868. None of the owners complied with the requirement, and the Board, as they were empowered to do, took the matter into their own hands, and completed the work in September, 1870. Payment was demanded in January, and refused. Mr. Trapp, surveyor to the Board, admitted, on being pressed, that at one point the sewer was only 5 ft. deep, while, according to the plan, it ought to have been 9 ft.; but it had been found impossible to lay the pipes deeper in consequence of a quicksand which had to be passed. There was a man-hole in the sewer, but he could not say whether the drain entered near the top and went out at the bottom. The plan did not show that it did.

For the defence, Mr. John Smith was called. He said that he had been in the employment of the Newton Heath Local Board for four or five years, and had examined the man-hole referred to. The sewer entered the man-hole 5 ft. 6 in. from the surface, and went out at the bottom, which was 9 ft. from the surface. According to the plan, the sewer ought to have been 9 ft. deep above the man-hole, but it was only 5 ft.

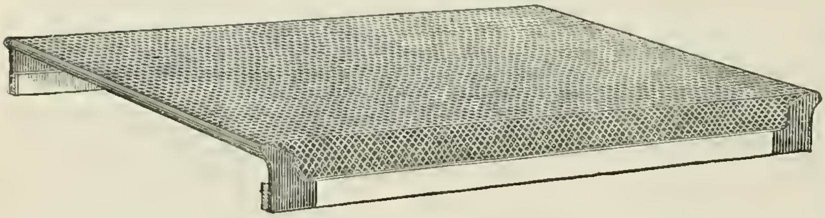
Sir J. J. Mantell said he had heard enough of the case to make him think he ought to dismiss the summons. If plans were allowed to be deviated from, there was no knowing what might be the result, and he thought those furnished should be implicitly complied with. It might also be added that, unless Boards of Health scrupulously adhere to the deposited plans, the whole work of improving the sanitary condition of towns under the Public Health Act of 1848 may be frustrated by the owners of property, at all times too ready to relieve themselves of that responsibility which is the correlative duty to the right by which all property is possessed.

NEW INVENTIONS.

THE WOVEN WIRE MATTRESS.

(*Heron, Gresham, and Craven, Sackville-street, Manchester; and Towle and Co.*, 20, *Budge-row, E.C., London.*)

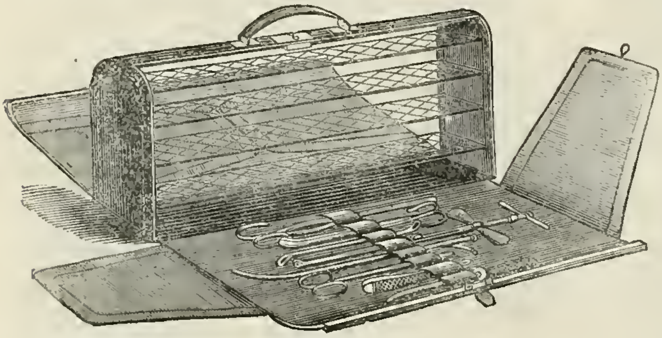
This is a strong, elastic, tensely stretched frame of woven wire, and is intended to answer the purpose of a spring-bed and under-mattress, upon which, of course, the ordinary blankets and bedclothes are to be placed. It appears to us capable of effecting a great and desirable simplification in domestic matters generally, and in sick arrangements in particular. Compared with an ordinary spring-bed and mattress, as the basis for a bed, for sick or healthy, it is manifestly light, airy, incapable of harbouring vermin, easily moved, noiseless, and cheap. Probably in many cases it would take the place of a water-bed. We hope it will be used also for easy chairs and sofas. The price, we understand, is 15s. per foot of breadth. The elasticity and durability of the woven wire seem to be secured by the immense quantity of fine wire woven diagonally. The thorough ventilation which it secures is of great value, for sometimes the under-surface of beds and mattresses becomes quite mouldy from damp during a long illness.



ARNOLD AND SON'S IMPROVED SURGICAL BAG (REGISTERED).

(35 *and* 36, *West Smithfield, E.C.*)

Messrs. Arnold have, at the suggestion of Mr. Barnard Holt, devised a bag, on the same principle as the obstetric bag of Dr. Barnes, which shall hold every known intrument that a Surgeon is likely to want for emergencies great and small. It is, as the cut shows, a bag which folds up so as to look like a gentleman's ordinary carpet-bag; but when opened the sides drop down, and are found to contain a series of pouches for catheters, forceps, bougies, and other instruments whose length is great in proportion to their thickness. The centre is divided into horizontal partitions by a number of wire trays, in which are packed cases containing the various sets of instruments, from those requisite for harelip, hernia, and the smaller operations, up to lithotomy and amputation. Thus, the Surgeon, if he desires to take with him merely some small case which will go into his pocket, can readily do so. On the other hand, should he be summoned to a railway smash, or go suddenly on foreign military service, he has but to snatch up his bag, and there ready packed he will find instruments for every disease or injury requiring operation. We learn that the price with instruments complete is fifty guineas. Should the Surgeon already have instruments, and desire the bag merely, he can get it for three guineas.



OBITUARY.

DR. DE BURGH BIRCH

Was born at Portumna, county Galway, in 1799. He commenced his Medical studies in Dublin, and in 1819 took his diploma at the Royal College of Surgeons of that city, whence he went to Edinburgh, and there graduated in 1821.

About that period, a very serious fever having broken out in Galway, he was nominated with others to assist in suppressing it, and so successful was he in the performance of this duty that he received the warmest thanks, with expressions of deep gratitude, from the magistrate and clergymen, both Protestant and Roman Catholic, for his active endeavours in the discharge of this important duty. These services were so highly appreciated by the Marquis of Wellesley, then Lord-Lieutenant of Ireland, that he immediately recommended Dr. De Burgh Birch for an Assistant-Surgeoncy in the Madras Army, which service he entered July, 1824. He had hardly landed at Madras when, war with Burmah having been declared, he was appointed Assistant-Surgeon to H.M.'s Royal Regiment, then proceeding on service to that country, and continued with it during the whole of the war, and at its termination received the warm thanks of its commanding officer, who further brought his meritorious conduct to the notice of his Excellency the Commander-in-Chief. He was afterwards appointed to the Artillery, and in 1834 accompanied the 36th Regiment, to which he was then attached, in the attack on Coorg. He was stationed with his regiment a short time at Macara, the capital of Coorg. In the same year he was nominated to the important post of Superintending Medical Officer on the Neilgherry Hills, and continued to hold that appointment until 1842, when he came to England on leave, during which time he married. In 1845 he returned to India, and retired from the service in 1849. He died on April 28, 1871.

SAMUEL BARTON, J.P., F.R.C.S. Eng.

This deceased gentleman was one of the oldest Medical Practitioners in the city of Manchester, having been a pupil of Abernethy's at St. Bartholomew's Hospital. He received his diploma in 1811, and in that year commenced practice as a Surgeon in Manchester, and his residence was for many years in Mosley Street. In 1815, when the Eye Hospital was established, he was appointed Surgeon to that institution, to which he devoted his best energies, and always took a deep and lively interest in its welfare up to his death. He received the distinction of Senior Consulting Surgeon, and afterwards, in failing years, of Honorary Consulting Surgeon from his colleagues in that establishment. In 1844 he was made a Fellow of the Royal College of Surgeons of England. He was contemporary with the late Dr. Hull, Dr. Holme, Messrs. Wilson, Windsor, Thorpe, and others, and filled an honourable and conspicuous position, not only in his Profession, but as an inhabitant of Manchester, for the last sixty years. Amongst the present older surviving branches of the Medical Profession he will be well remembered for his extreme courtesy and delicacy of feeling, and his figure and presence will be much missed among them and the older inhabitants who had known him so long. It may be interesting to the Profession to know that he was the contributor to the *Medical Gazette* of a paper on the treatment of certain injuries of the eye with reference to accidental cataract, in which he recommended the extraction of the crystalline lens when injury was succeeded by inflammation; also the removal of the eye, when it had been penetrated with gun-cap or any foreign body that remained in it, to prevent sympathetic inflammation from destroying the sound eye.

His knowledge of books, pictures, painters, and the fine arts generally was of no ordinary kind. The splendid collection of pictures and books of engravings which he has collected during fifty years of his life fully testify to the extreme good taste and mature judgment he possessed in matters of art. Several of his pictures were honoured by being selected for the Art Treasure Exhibition held in this city in 1857.

He died at his residence, Whalley Range, near Manchester, on the 18th ult., within five days of completing his 82nd year, and his will has been recently proved in the Manchester District Court of Probate, and the personalty sworn under £100,000.

DEPUTY INSPECTOR-GENERAL J. T. TELFER.

We regret to announce the death of J. T. Telfer, Esq., Deputy Inspector-General of Hospitals (half-pay) and Medical Officer to the Military Prison at Gosport, as having taken place on the 6th inst. at his residence in Anglesey, Hants. Mr. Telfer entered the service as Staff Assistant-Surgeon in July, 1835, and in September of the same year was appointed to the 14th Foot, with which regiment he served in the West Indies, and of which, during a severe epidemic of fever in 1836, he was for some time in sole Medical charge, in consequence of the senior Medical officers of the regiment being disabled by fever, he himself having previously passed through a severe attack. His services on this occasion received full acknowledgment from his commanding officer. On leaving Dominica, in 1840, he was presented with an address from the inhabitants in recognition of his services to them. He subsequently served in Canada, Turkey, and China. He was promoted to Second-class Staff Surgeon in June, 1846, First-class, March, 1858, and Surgeon-Major in October, 1858; and in December, 1862, he retired on half-pay, with the honorary rank of Deputy Inspector-General, and shortly afterwards obtained the appointment of Medical Officer to the Gosport Military Prison.

DR. KINGSTONE AND DR. McCONNELL.

We have to record the death of two Surgeons of the Bombay Army—Dr. Kingstone and Dr. McConnell. Surgeon H. C. Kingstone, B.A., M.B., officiating Deputy Assay Master of the Bombay Mint, entered the Service in February, 1856, and was an officer of considerable ability. He died, while sleeping, on Friday, March 31, of consumption. He was in his 42nd year. Surgeon R. C. McConnell died at the Sanitarium, in the Marine Lines, on Saturday, April 1. He entered the service on the same day as Surgeon Kingstone. Dr. McConnell had seen service both in Persia and Abyssinia. These two officers entered the Service on the same day, and—strange coincidence—were buried on the same day in the same cemetery.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 9th inst., and when eligible will be admitted to the Pass Examination:—

Austin, Cornehy, of University College.
Balding, Mortimer, B.A. Cantab., of the Middlesex Hospital.
Beresford, William Hugh, of St. Mary's Hospital.
Bromley, John Madder, of University College.
Buck, Charles William, of the Manchester School.
Bury, Dennis, of the Newcastle School.
Cooke, John, of the London Hospital.
Davis, Robert, of the Newcastle School.
Dodd, Alexander Russell, of St. George's Hospital.
Downes, Arthur Henry, of University College.
Etheridge, George, of the Middlesex Hospital.
Farr, Frederick Arthur, of the Charing-cross Hospital.
Galabin, Alfred Lewis, of Guy's Hospital.
Goodchild, John, of St. George's Hospital.
Harcourt, Cyril Baldwin, of St. George's Hospital.
Homan, George William, of King's College.
Keates, William Cooper, of St. Thomas's Hospital.
Lacy, Charles Sethward de Lacy, of St. George's Hospital.
Morgan, John Hammond, of St. George's Hospital.
Morris, Sydney, of St. Bartholomew's Hospital.
O'Brien, Thomas Terence, of St. Thomas's Hospital.
Padman, John, of King's College.
Priddle, Francis, of the London Hospital.
Robertson, Hugh, of St. Thomas's Hospital.
Seymour, Charles, of Guy's Hospital
Tootell, Edward, of St. Bartholomew's Hospital.
Underhill, Arthur Stafford, of the Birmingham School.
Underwood, Thomas Francis Ken, of King's College.
Walker, Robert, of St. George's Hospital.

The following candidates passed on the 10th inst., viz.:—

Atthill, William Eyre Blennerhassett, of St. George's Hospital.
Barron, Frederick William, of St. Bartholomew's Hospital.
Beardsley, Arthur Arnold, of Guy's Hospital.
Dixon, George Seymour, of the Newcastle School.
Dixon, Henry George, of the Dublin School.
Ellis, John Lloyd, of the Dublin School.
Firth, Charles, of St. Bartholomew's Hospital.
Glenny, George Wallis, of the London Hospital.
Harris, Vincent, Dormer, of St. Bartholomew's Hospital.
Hughes, William Steele, of the Westminster Hospital.
Hugman, William, of St. Bartholomew's Hospital.
Hunt, Richard, of the Leeds School.
Irving, William George, of King's College.
Irwin, De Vere Alexander Nesbitt, of King's College.
Jacobson, Walter Hamilton Acland, of Guy's Hospital.
Lubbock, Montagu, of Guy's Hospital.
Miller, John Alexander, of St. Bartholomew's Hospital.
Moorhead, Thomas Hamilton, of the Dublin School.
Morgan, George, of the London Hospital.
Porter, Joseph Francis, of the Dublin School.
Shaw, Thomas, of the Manchester School.
Stevenson, Edmond, of the Edinburgh School.
Stokes, Henry Haldane, of St. Bartholomew's Hospital.
Tomlinson, Watson, of the Leeds School.
Vincent, Henry Bird, of St. Bartholomew's Hospital.
Walter, Clement Cuthbert, of St. George's Hospital.
Watson, Charles Edward, of King's College.
Williams, William Aldersey, of King's College.
Woodward, Walter Benjamin, of the Dublin School.
Wood, Henry Thorold, of University College.
Wright, Francis James, of St. Thomas's Hospital.
Young, Thomas Frederick, of the Liverpool School.

Royal Colleges of Physicians and Surgeons. Edinburgh—Double Qualification.—The following gentlemen passed their first Professional examinations during the May sittings of the examiners:—

Brown, William Henry, Coventry.
Clarke, Arnold, Cavan.
Cochrane, John, Edinburgh.
Hartford, Richard A. H., Templemore.
Kane, John, Adelaide.
Pickering, Thomas F., Nantwich.
Power, Thomas, Cork.
Rutherford, Robert A., Manorhamilton.
Ryder, Henry John, Cork.

And the following gentlemen passed their final examinations, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin:—

Barr, William Henry, Cheshire.
Buckly, Daniel Francis, Cork.
Coleman, James Joseph, Galway.
Fox, Edward Austin, Lancashire.
Fox, Michael John, Lancashire.
Griffin, Thomas, county Galway.
Heigham, Tom, Manchester.
O'Connor, David Watkins, county Cork.
O'Donovan, Jeremiah, Cork.
Shaw, David, county Down.
Sheaf, Charles Alfred Ernest, Oswestry, Salop.
Solomon, Charles, Hull.
Stewart, Robert, Perthshire.
Watson, John Woodrow, Derry.
Wilson, John, Essex.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examinations, and were admitted licentiates of the College during the April sittings of the examiners.

Heuston, Benjamin Tydd, Tipperary.
Gairdner, Matthew William, Crieff.
Morrow, John, county Derry.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 4, 1871:—

Allwood, John Philip, Stafford.
Cockerton, Henry Herbert, Islington.
Hill, Alfred, Leeds.
Rope, Henry John, Wickham Market.
Scale, George John, Merthyr Tydvil.
Wade, Arthur, Boscastle, Cornwall.

The following gentlemen also on the same day passed their first Professional examination:—

Burton, Edward Theodore, Ledwich, Dublin.
Sarjant, Josiah John, London Hospital.

Apothecaries' Hall, Dublin.—At the Examination in Arts, held on April 21, the following gentlemen received Certificates entitling them to commence their Medical studies:

Browne, George Henry.
Daly, Peter.
Daly, Thomas.
Faris, John Johnston.
Good, Charles.
Hamilton, John Beamish.
Hoops, Samuel Evans.
Johnston, David Todd.
Kennedy, William.
M'Kenna, Francis.
Naish, Redmond.
Price, John Griffith.
Wetherman, John.

The following gentlemen, having passed their Professional examinations, obtained the licence to practise :—

Barr, William Henry.
Barry, Robert.
O'Shaugnessy, James.
Wyse, George Hamilton.

The Council's annual prize in pharmaceutical chemistry, open to apprentices, was awarded, on the 5th inst., to Albert E. Swayne; and at the same time a second-rank honour certificate was given to Herbert Alexander Auchenleck for distinguished answering. The subject of the examination was, on this occasion, "The British Pharmacopœia."

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Chittenden, C. P. D., L.R.C.P. and S. Edin.—Resident Medical Officer to Charing-cross Hospital, *vice* S. S. Noakes, appointed Resident Accoucheur.

Cunningham, John, M.B., C.B.—Assistant Medical Officer to the Glasgow Town's Hospital, *vice* Mr. James C. Dove, M.B., C.M., resigned.

Gordon, John Gibson, M.B., C.M.—Junior House-Surgeon at the Royal Infirmary, Manchester, *vice* Arthur E. Sutcliffe, M.R.C.S. Eng., L.S.A. Lond., resigned through ill-health.

Lotti, Mr. Constantine.—Honorary Surgeon-Dentist to the St. George, Hanover-square, Dispensary.

Martin, Henry Charles, M.B., C.M., University of Edinburgh.—House-Surgeon to the Seamen's Hospital, Greenwich.

Noakes, S. S., M.R.C.S., L.S.A.—Resident Accoucheur to Charing-cross Hospital, *vice* C. T. D. Chittenden, appointed Resident Medical Officer.

Owen, Lloyd, M.R.C.S.—Chloroformist to the Dental Hospital, Birmingham.

Ravenhill, E. B., M.R.C.S., L.S.A.—House-Surgeon to the South Staffordshire General Hospital, Wolverhampton, *vice* Mr. H. L. Snow, M.B., resigned.

Ray, William J. R., M.R.C.S.E., L.S.A.—Resident House-Surgeon at the Westminster Hospital, *vice* Mr. T. C. Eager, M.R.C.S.E., L.R.C.P. Edin., L.S.A., resigned.

Reston, Henry, M.R.C.S., L.S.A., L.R.C.P. Lond.—Physician's Assistant at Royal Infirmary, Manchester, *vice* Mr. Gordon, resigned.

Rose, William (King's Coll.), M.R.C.S., L.S.A.—Resident Clinical Assistant to the Hospital for Consumption, Brompton, S.W.

Ross, J. Alex., M.D., Ch.M., Q.U.I., L.R.C.S.I.—Medical Officer to the Newry Hospital, *vice* John Morrison, M.D., F.R.C.S.I., resigned.

Sims, Charles, L.D.S.R.C.S.—Extra Dental Surgeon to the Dental Hospital, Birmingham.

Slack, G. F.—Resident Surgical Officer to Charing-cross Hospital, *vice* J. A. Lea, L.R.C.P. Edin., resigned.

Strange, Arthur, M.D. Edin., late Assistant Medical Officer to the Metropolitan Asylum at Leavesden.—Senior Assistant Medical Officer, Female Department, Colney Hatch Asylum, Middlesex, *vice* R. Carter, M.D., resigned.

Wade, W. F., M.B., M.R.C.P., etc., Physician to the General Hospital, Birmingham.—Honorary Consulting-Physician to the Dental Hospital, Birmingham.

West, James, F.R.C.S., L.S.A., Senior Surgeon to the Queen's Hospital, Birmingham.—Honorary Consulting-Surgeon to the Dental Hospital, Birmingham.

MILITARY APPOINTMENTS.

34th Foot.—Staff Assistant-Surgeon John Middleton, M.D., to be Assistant Surgeon, *vice* David Chambers McFall, who exchanges.

Medical Department.—Assistant-Surgeon David Chambers McFall, from 34th Foot, to be Staff Assistant-Surgeon, *vice* John Middleton, M.D., who exchanges; Staff Assistant-Surgeon Edward Coffee has been permitted to resign his commission.

BIRTHS.

Adams.—On May 8, at St. James's-road, Croydon, the wife of T. Rutherford Adams, M.D., of a daughter.

Bleckley.—On March 29, at Simla, Punjaub, the wife of Staff Surgeon T. M. Bleckley, M.D., LL.B., Secretary to the Inspector-General of Hospitals, H.M. British Forces in India, of a son.

Bourne.—On May 6, at Bradford, Yorkshire, the wife of Walter Bourne, M.D., of a daughter.

Braid.—On May 5, at the Grove, Burgess-hill, Sussex, the wife of James Braid, M.D., of a son.

Sankey.—On May 8, the wife of Heurtley Sankey, Esq., Superintendent of the Littlemore Asylum, prematurely of twin daughters.

Simpson.—On May 6, at Hampstead-lane, Highgate, the wife of G. A. M. Simpson, M.B., of a daughter.

Smith.—On May 5, at Tonbridge, the wife of Cleveland Smith, M.R.C.S., of a daughter.

Wyndowe.—On April 29, at the Vicarage, Cleygate, Surrey, the wife of Samuel Jardin Wyndowe, M.D., of a daughter.

MARRIAGES.

Cowan—Scott.—On May 4, at All Saints' Church, Blackheath, Alexander Oswald Cowan, M.D., youngest son of the late Alexander Cowan, Esq., of Edinburgh, to Rachel Marion, third daughter of James Nairne Scott, Esq., of Blackheath-park.

Davson—Prideaux.—On May 14, at St. Saviour's Church, Dartmouth, Frederick Adams Davson, M.D., of Roseville, Dartmouth, to Georgina Emma, fourth daughter of Samuel Were Prideaux, Esq., Mount Galpine, Dartmouth.

Franklin—Watson.—On April 5, at Christ Church, Byculla, Bombay, Benjamin Franklin, Assistant-Surgeon Bengal Army, to Harriette Sarah, younger daughter of John Ferra Watson, Esq., Heigham Hall, Norwich.

Houseman—Buttle.—On May 6, at the parish church, Wharren Percy Edward Cooke Houseman, M.R.C.S., Knaresborough, to Jane, only daughter of the late F. C. Buttle, Esq., Glasgow.

Lowry—Lyons.—On April 26, at Magheragall Church, John R. C. Lowry, M.B., Indian Medical Staff, son of the late James Corry Lowry, Q.C., of Rockdale, county of Tyrone, to Constance Adela Hastings, daughter of W. T. B. Lyons, D.D., of Brook-hill, country of Antrim.

Such—Harvey.—On March 5, 1870, after banns, at St. Mary's, The Bolton's, West Brompton, Herbert Augustus, second son of the late Edwin Such, Surgeon, Putney, to Margaret Henderson, only surviving child of Gerrard and Eliza Harvey.

DEATHS.

Burke, Patrick, Surgeon, late (and for many years) of Upper Montagu-street, W., at 6, Newton-terrace, Bayswater, on May 8, of bronchitis, aged 65.

Casey, Ann, wife of Thomas Casey, M.D., at St. Albans, on May 8, aged 71.

Cutmore, Emmeline Grenville, the beloved youngest daughter of Dr. Charles Cutmore, at Sussex-house, Church-road, Upper Norwood, on April 15, aged 6 years.

Firth, John, Surgeon, at Macclesfield, from the effects of a carriage accident, on May 6, aged 61. Also, on the same day, and caused by the same accident, Emily, wife of the above, aged 62.

Henry, James, M.D., Physician to the Suffolk General Hospital, etc., at his residence, on April 24.

Mills, Thomas, M.D., M.R.C.S., of Bloomfield, Tipton, Staffordshire, aged 45.

Picken, Dr. Richard, at 7, Victoria-terrace, Sheerness, on May 7, after a long and painful illness, borne with exemplary fortitude, aged 43.

Russell, Anita, the beloved wife of John George Russell, and daughter of the late Dr. Hugh Sheridan, at the Quinta de los Olivos, Buenos Ayres, from typhoid fever, on February 25, in the 25th year of her age.

Telfer, John T., Deputy Inspector-General of Hospitals at Anglesey, Hants, on May 6, aged 57.

Webb, Randolph MacDermid, son of R. Webb, Surgeon 14th Regiment, at Sheffield, on May 5, aged 5 months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Charing-cross Hospital, West Strand, W.C.—Registrar; must be legally qualified to practise, and be registered. Applications and testimonials to the Secretary, on or before May 31.

Cheltenham General Hospital and Dispensary.—Resident Surgeon to the Branch Dispensary. Candidates must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Mr. D. Hartley, on or before May 20.

Cumberland Infirmary.—House Surgeon; must be legally qualified. Applications and testimonials to Mr. John Laver, Secretary, Carlisle, on or before May 27. Election on June 7.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

Huddersfield Infirmary.—Assistant House-Surgeon; must be a Medical student of not less than three years' standing. Applications and testimonials to Mr. E. J. Hardy Booth, House-Surgeon, on or before May 15.

Littlemore Pauper Lunatic Asylum.—Resident Assistant Medical Officer; must be duly qualified and registered. Applications and testimonials to J. M. Davenport, Esq., County Hall, Oxford, on or before May 13.

Macclesfield Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before June 10. Election on the 15th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Northleach Union.—Medical Officer for the district comprising the parishes of Aldsworth, Bibury, and Coln St. Aldwyns. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. H. Stiles, Clerk to the Guardians, on or before May 24. The duties will commence on June 24.

North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Secretary, on or before May 24. Election on June 1.

Royal Asylum of St. Ann's Society, Streatham-hill, Surrey.—Medical Officer; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, at the Office, 52, King William-street, E.C., on or before May 15.

Royal General Dispensary, 25, Bartholomew-close, E.C.—Resident Medical Officer; must be duly qualified and registered. Candidates to attend at the meeting of the Medical Sub-committee on May 30, at 2 o'clock p.m. Further particulars can be obtained of the Secretary, Mr. E. P. Rowsell, 60, Gracechurch-street, E.C.

Royal Kent Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and *copies* of testimonials to W. Bristow, Esq., 78, London-street, Greenwich, on or before May 20. Election on June 2.

St. Mary's Hospital, Paddington, W.—Physician Accoucheur; must be a Fellow or Member of one of the Colleges of Physicians of the United Kingdom. Applications and testimonials to Mr. G. Wilkinson, Secretary, on or before May 13.

Seamen's Hospital Society, Greenwich.—Visiting Physician; must be a Fellow or Member of the Royal College of Physicians. Applications and testimonials to Kemball Cook, Esq., House Governor and Secretary, on or before May 20.

South Staffordshire General Hospital, Wolverhampton.—Physician; must be M.D. or M.B. of the University of Oxford, Cambridge, London, Edinburgh, or Dublin, or F. or M.R.C.P. London, Edinburgh, or Dublin, not practising midwifery or pharmacy. Applications and testimonials to the Secretary, on or before May 13.

Suffolk General Hospital.—Physician. Applications to Mr. W. Oross, Bury St. Edmunds, on or before May 15.

Sunderland Infirmary.—Assistant House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the House-Surgeon, on or before May 25.

West Ham, Stratford, and South Essex Dispensary.—House-Surgeon and Dispenser; must be legally qualified. Applications and testimonials to Mr. T. E. Tonge, St. John's-terrace, Stratford, Essex, on or before May 16.

Worcester County and City Lunatic Asylum.—Assistant Medical Officer; must be a duly qualified Medical Practitioner. Applications and testimonials to Dr. Sherlock, at the Asylum, Powick, Worcester, on or before May 16. Election on the 20th.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Braintree Union.—Mr. William T. H. Wood has resigned the Finchingfield District; area, 8387; population, 2441; salary, £50 per annum.

Dore Union.—Mr. John Brunton has resigned the Madley District; area, 20,563; population, 3223; salary, £70 per annum.

Portsea Island Union.—Dr. D. Mackintosh has resigned the Southsea District; salary, £70 per annum.

Wellington (Som.) Union.—Mr. William Reynolds has resigned the First District; area, 7061; population, 6575; salary, £54 8s. per annum; and the Workhouse; salary, £30 per annum.

APPOINTMENTS.

Alnwick Union.—Henry Candlish, M.D. Univ. Glasg., L.F.P. and S. Glasg., to the Alnwick District and the Workhouse. Alex. J. Main, M.D. Univ. Edin., L.R.C.S. Edin., to the Lesbury District.

Epsom Union.—Frederic S. Moger, M.R.C.S. Eng., L.R.C.P. Lond., to the Carshalton District.

Glendale Union.—Thomas Hunter, L.R.C.P. Edin., L.F.P. and S. Edin. and Glasg., to the Lowick District.

Prestwich Union.—James W. Moss, M.R.C.S. Eng., L.R.C.P. Edin., to the Cheetham District.

Mr. Nettleship has been elected Curator and Librarian of the Royal London Ophthalmic Hospital.

Mr. William Kipling, L.R.C.P. Lond., M.R.C.S., has been appointed one of the staff of the Metropolitan Free Hospital, Devonshire-square.

Collegiate Lectures. — Professor John Birkett, F.R.C.S., will commence his course of lectures on the "Nature and Treatment of New Growths" (in continuation of his course of last year), in the theatre of the Royal College of Surgeons, on Monday, the 29th inst., and on Monday, the 12th prox., Mr. J. W. Hulke, F.R.S., will commence his course of lectures on the "Minute Anatomy of the Eye," in continuation of his course of the last two years. These several lectures will be delivered on Mondays, Wednesdays, and Fridays, at 4 o'clock.

Examinations at the Royal College of Surgeons. —The following were the questions in Anatomy and Physiology submitted to the candidates for the diploma of Membership of the Royal College of Surgeons at the Primary Examination on the 6th inst., on which occasion eighty-two candidates presented themselves, when twelve were referred to their studies on the first day, and nine on the second, making a total of twenty-one:—1. Mention the bones which enter into the formation of the orbit, the foramina in its walls, and the parts passing through them in their relative position. 2. Describe that part of the process of digestion which is effected in the stomach. 3. Mention the muscles which surround the upper third of the radius and ulna, their relative positions, and the nerves supplying them. 4. State the different kinds of epithelium by which the following mucous surfaces are covered:—Nasal duct, superior meatus of the nose, pharynx and œsophagus, gall-bladder, pelvis of kidney, ureter and bladder. 5. The deep cervical fascia: Describe its extent, connexions, and arrangement; specifying particularly its relations to the muscles and bloodvessels of the neck. 6. Describe the superior cervical ganglion of the sympathetic; its form, situation, and connexions. What effects result from its section?

Worcester Asylum.—Dr. Ceeley, the Assistant Medical Officer, has resigned his appointment.

Pleuro-pneumonia is raging in Fifeshire.

Efforts are being made to raise subscriptions for aiding small-pox patients above the class of paupers, but who are unable to meet the expenses which the disease entails, and to take the rest and change essential to their recovery.

The Guardians of the City of London Union, at their meeting on Tuesday, resolved that a sum of twenty guineas be subscribed annually to the funds of the London Hospital.

Hydrate of Chloral in Singultus.—Dr. Leavitt calls attention to the value of this agent in obstinate hiccough when given in five-grain doses.—*American Journal of Medical Science*, April.

Ovariotomy in Dublin.—The operation of ovariotomy was performed by Mr. P. J. Hayes in the Mater Misericordiæ Hospital, Dublin, on Friday, April 21. The patient was quite convalescent on May 4.

A Prosecution by the Police under the Public Health Act.—Esau Lane, a schoolmaster, was last week fined £5 and costs, by the magistrate at the Lambeth Police-court, for, knowing that his step-daughter was suffering from small-pox, having had her placed in a cab and driven, first to the house of a relative, and then to the Homerton Hospital.

Poisonous Cosmetics.—A Sanitary Commission is now sitting, at the recommendation of Dr. Hamberg, Physician to the King of Sweden, at Stockholm, to pass judgment on a certain "hair restorer," to the use of which Dr. Hamberg attributes the King's recent dangerous illness. The cosmetic, according to his analysis, contains a large proportion of oxide of lead.

Benevolence.—The Goldsmiths' Company has given £60 to the Hospital for Women, Soho-square, and the Fishmongers' Company fifty guineas to the Royal Asylum of St. Anne's Society. The King's College Hospital has received £1000 from "M. W. G.," and the London Hospital £1000 from "E. T. H."

Royal Institution of Great Britain.—At the general monthly meeting on Monday, May 8, 1871, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, William S. Burton, Arthur Samuel Hobson, F.C.S., Richard Liebreich, M.R.C.S., Abraham De Mattos Mocatta, and Edward Stanhope Pearson were elected Members of the Royal Institution. John Tyndall, LL.D., F.R.S., was re-elected Professor of Natural Philosophy.

St. Mark's Hospital for Fistula, etc.—At a special meeting of the governors of this institution, held at the London Tavern, the Right Hon. the Lord Mayor the president in the chair, D. H. Goodsall, Esq., F.R.C.S.E., was unanimously elected one of the Honorary Assistant-Surgeons.

The Paris Faculty of Medicine and the Commune. —A decree of the Paris Commune declares that, "the Professors of the Faculty of Medicine having abandoned their post," the Practitioners of each arrondissement shall elect two delegates; the Professors of *L'Enseignement Libre*, also, shall elect three delegates; and the internes, externes, and students, ten delegates. All these (fifty-three) delegates, having met together, will prepare a plan for the reorganisation of Medical education. —*Lyon Méd.*, April 30.

Small-pox in Berlin in 1870.—The number of cases which occurred during 1870 was 1337. Of these, 1064 had been vaccinated (127 having been also revaccinated), and 273 had not been vaccinated. The fatal cases amounted to 122, 58 of the patients having been vaccinated and 64 not vaccinated. The mortality, therefore, among the vaccinated amounted to 5·4 per cent., and among the unvaccinated to 23·4 per cent.—*Berlin Klin. Woch.*, April 10.

Meath Hospital, Dublin.—The annual distribution of prizes took place in the operation theatre of this Institution on May 3. The Medical prizes were distributed by Dr. Stokes as follows:—Senior Medical, to Mr. Jacob O'Connor; Junior Medical, to Mr. David Kennedy; "Martin" Medical Prize, to Mr. William Reed Murphy; "Martin" Junior Medical, to Mr. George B. Cooksey. Dr. George H. Porter distributed the following Surgical prizes:—First Senior Surgical, to Mr. William Reed Murphy; Second Senior ditto, to Mr. Cecil Bushe; First Junior ditto, to Mr. Marcus Gwen; Second Junior ditto, to Mr. Andrew J. Brady; "Martin" Surgical Prize, to Mr. Hayman Thornhill. The "Martin" Medical and Surgical Prizes have been presented since last year by Dr.

Martin, of Portland, to those gentlemen who send in at the close of the winter session the six most able reports of Surgical and Medical cases respectively.

Presentation.—Dr. Prestwood Lucas, of Brecon, has received from his friends in that town and neighbourhood a handsome testimonial, consisting of a silver salver and an illuminated address. Dr. Lucas has been Physician to the Brecon County and Borough Infirmary for thirty years. We hear that the committee have still a large sum in hand to be applied in some way as a testimonial to Dr. Lucas, who has conferred for a long period of time, gratuitously, great benefits on the poor population of Brecon.

Removal of a large Calculus from the Female Bladder.—Dr. Atlee relates the case of a woman, 70 years of age, from whose bladder a calculus was removed by rapid dilatation, under chloroform, by means of Holt's dilator. The stone, which was a hard one, measured $3\frac{1}{10}$ inches in its greatest circumference, and $2\frac{9}{10}$ inches in its smallest, and weighed 220 grains. Reporting upon the case four months after the operation, he says that the patient had never had any difficulty in retaining her urine.—*American Journal of Medical Science*, April.

Exporting Small-pox.—The ship *William Storer* arrived at New York, from Liverpool, a few days ago, with twelve cases of small-pox on board, out of a cargo of 270 passengers; five of these have died. The *Unanima* barque, of St. John's, N.B., has started from North Shields for New York, with two cases of small-pox on board. Sanitary measures are of little use when epidemics prevail, unless the habitations of the floating, as well as of the shore population, are inspected, cleansed, and ventilated.

Curious Application.—A respectable-looking woman appeared before the magistrates at the Highgate Police-court, on Monday, and stated that her landlord had given her notice to quit, and the notice expired that day. She wished to know whether she would be justified in taking a house, as two of her children had small-pox very badly, and one was not fit to be moved. In reply, the magistrate said she would not be justified in removing in such a case, but would be liable, if she did so, to a heavy penalty, and advised her to seek advice at the office of the Local Board of Health, in Southwood-lane.

Fatal Carriage Accident. — Mr. Firth, Surgeon, Macclesfield, and his wife have just expired from the result of an accident which occurred on Saturday. Mr. Firth was driving in an open carriage, accompanied by his wife, daughter, and a young lady on a visit from London, when the horse became restive, and started off at a furious gallop, Mr. Firth entirely losing control over it. The animal ran against some iron posts, the vehicle was smashed, and Mr. and Mrs. Firth alighted on their heads, all four of the party being unconscious when taken up. Both of them died the same day. The young ladies were greatly shaken, but are in no immediate danger. Mr. Firth had been in practice thirty or forty years, and was very highly respected.

Annual Meeting of the Society for Relief of Widows and Orphans of Medical Men.—The annual meeting of the Society was held on Friday, April 28, at 53, Berners-street; Mr. Charles Hawkins, V.P., took the chair in the absence of the President, suddenly summoned out of town. After the reading of the minutes of the last general meeting, and those of the courts of directors held since that meeting, the Chairman commented on the small number of members present (just sufficient to form a quorum), and on the small interest taken in the Society by the Profession at large. Out of over 4000 eligible as members, only about 400 availed themselves of the advantages offered by the Society. From the number of applicants for relief, the Chairman could not think the small number of subscribers could be attributed to the fact that Medical men, as a rule, could provide well for their widows and children, and consequently did not see the necessity of becoming members of the Society. The Secretary read a statement of the affairs of the Society for the year 1870, from which it appeared £2811 10s. had been distributed in grants, the expenses being £255 10s., an increase of grants by £106 10s. on those of the year before. The receipts of the year amounted to £3153 3s. 9d., an increase only of £19 16s. 2d. on those of 1869. The balance of available receipts over expenditure was only £11 odd. Seven new members had been elected, 9 had died, and 5 resigned, leaving a total of 429. Three widows and 5 children had been added to the list of recipients of grants; 6 widows and 8 children had died or become ineligible. At the end of the year there were 55 widows and 50 children on the books of the Society. The following gentlemen were elected directors in the place of the six senior, who retired by rotation:—W. B. Kesteven, Esq.; Robert Fowler, M.D.; W. Graily Hewitt, M.D.; T. H. Tuke, M.D.; Edward Cock, Esq.; and Alfred Willett, Esq. A vote of thanks to the Chairman closed the proceedings.

The death-rate in the Central Provinces of India for December was, per 1000—cholera 0·0, small-pox 0·0, fevers 1·3, bowel complaints 0·1, injuries 0·02, all other causes 0·2; total 1·7. There were 27 deaths from suicide (12 males and 15 females); 9 from wounds (5 males and 4 females); 90 from accident (44 males and 46 females); 49 from snake-bite and wild animals (41 males and 8 females); population 6,732,447. And the death-rate in the North-Western Provinces for December was, per 1000—cholera ·01, small-pox ·03, fevers 1·58, bowel complaints ·23, injuries ·02, all other causes ·16; total 2·06. There were 71 deaths from suicide (33 males and 38 females); 105 from wounds (67 males and 38 females); 354 from accident (210 males and 144 females); and 88 from snake-bite and wild animals (42 males and 46 females); population about 30,000,000.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Clifford Allbutt's lecture on "Overstrain of the Heart" in our next.

An abstract of Inspector-General Lawson's paper on "Cholera in Ships" shall appear next week.

In our number of April 8 the name of Mr. T. Decimus *Price* was put for *Paradise* in the list of gentlemen who passed the first examination at the College of Surgeons.

R. L. C.—*Medical Times and Gazette*, 1870, vol. ii., pp. 177, 207.

H. R.—Thanks for your note.

Mr. J. P. Hayes's case of bronchocele shall receive early insertion.

Birmingham.—The patentee of the deliquescent salts for watering roads is a Mr. Cooper, who, we believe, has an office in Craig's-court, Charing-cross.

A Query.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Can you kindly inform me whether the view entertained by the reviewer of Duchenne's book, that the magneto-electric machines are only playthings, is generally held by authorities. Duchenne himself seems to make no distinction at all between these and the volta-electric induction machines. I am, &c., A Hesitating Purchaser.

Clapham, May 5.

⁂ What was meant was—that the instruments are so constructed as to be incapable of proper scientific application. The *kind* of the electricity does not matter—whether volta-electric or magneto-electric—its quantity and intensity do; and the ordinary instruments contain no means of regulating these or of applying the force to any exact spot.

R. S.—Sir B. Brodie was President of the Society in 1839.

Candidate.—The election is by ballot—one-fifth adverse votes would be sufficient to black-ball.

Z.—The facts are as follows:—On February 14, 1832, his Majesty's frigate *Arethusa* arrived at Plymouth with cases, past and present, of small-pox on board. The *Arethusa* was not placed in quarantine, sick and sound together. Instead thereof it was admitted to "free pratique." Twelve invalids were landed in that ark, the Royal Naval Hospital, where two died; but Plymouth was wholly unscathed by small-pox.

Long Forceps.—Examinations for the Licence in Midwifery of the College of Surgeons seldom occur now; we have ascertained, however, that there will be a meeting of the Board on the 24th inst. The licence is registrable. The examiners are Drs. Barnes, Farre, and Priestley, with Mr. Busk as Chairman.

Carbolic Acid.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The application of carbolic acid and its efficacy in the case of external injuries are well-known; but I am not aware that its utility, when administered internally, is so well understood.

As the cure of tubercles frequently takes place naturally, it occurred to me that nature might be aided by means of this curative agent, administered internally. Accordingly, in the month of March last, in a case of phthisis where the physical and functional derangements were of the most advanced kind, I prescribed two grains in syrup three times per diem—the result being diminished expectoration, and the pulse reduced from 135 to 116, with corresponding abatement of hectic fever. The medicine has been continued till this time, without any counteracting or injurious symptoms. From my experience of this case, I would feel justified in using the medicine in cases from the first to the latest stages of the disease; and I think it is proper to bring it under the notice of the Profession, in order to elicit observations on it, and to have the merits of carbolic acid, as an internal medicine in cases of consumption, brought to the test.

I am, &c., Archibald F. Richmond, M.D.

21, Patrick-street, Greenock, May 3.

A Provincial Fellow.—Mr. T. Spencer Wells will no doubt be nominated for a seat in the Council of the College of Surgeons, of which Institution he is one of the *honorary* Fellows, in July next.

M.D., Toronto.—The following are the Hospitals and Schools of Surgery and Medicine in Canada from which certificates of the Professional education of candidates for the Fellowship and Membership of the London College of Surgeons are received—viz., the University of Toronto; the University of Victoria College, Toronto; the University of McGill College, Montreal; the Royal College of Physicians and Surgeons, Kingston; and the University of Laval, Quebec. The Secretary will give you the desired information.

COMMUNICATIONS have been received from—

Mr. C. Cutmore; Dr. R. D. Powell; Dr. J. A. Ross; Mr. P. J. Hayes; Dr. P. Kraus; Dr. J. Schreiber; Mr. J. Robson; Mr. T. D. Paradise; A Hesitating Purchaser; Mr. E. Stevens; Mr. H. C. Lawrence; Bangalore; Dr. F. Porter Smith; Dr. Inman; Mr. Lewis Thompson; Dr. A. Strange; R. L. C.; Lieut.-Colonel Alcock; Messrs. H. E. Towle and Co.; Dr. J. L. Paterson; Dr. Baxter; Mr. Lawson Tait; Professor Laycock; Dr. Cholmeley; Mr. W. B. Kesteven; Dr. J. T. Jones; Mr. J. Robertson; Mr. Henry Lee; Dr. R. Adams; Messrs. Barber and Sons; Mr. Blackett.

BOOKS RECEIVED—

Annual Report of the Arcot Mission of the Reformed Church in America—Second Annual Report of the Sanitary Commissioner for the Central Provinces of India, 1869—Report of the Board of Managers of the Woman's Hospital of Philadelphia—Dr. Richardson's Discourses on Practical Physic—Report of the General Infirmary Leeds—Report of the Institution for Infectious Diseases, Netherfield-house, Everton—The Principles and Practice of Midwifery, with some of the Diseases of Women, by Dr. A. Milne.

PERIODICALS AND NEWSPAPERS RECEIVED—

Pharmaceutical Journal—American Journal of the Medical Sciences, April—Food Journal, May—The Philadelphia Medical Times.

APPOINTMENTS FOR THE WEEK.

May 13. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

15. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Pathological Society, 8 p.m. Report of the Committee on "Lardaceous Disease." The following Specimens will be exhibited:—Mr. Gay, "Myxoma." Mr. Sydney Jones, "Parts removed in Excision of the Knee-joint." Dr. Bristowe, "Malignant Disease of the Œsophagus." Mr. W. Adams, "Fibroid Tumour of Palate." Mr. Maunder, "Axillary Aneurism." Mr. Nunn, "Warts from a Case of Epithelioma." Dr. Risdon Bennett, "Intra-thoracic Growth." Dr. Crisp, "Illustrations of Diseases of the Eye in the Lower Animals." Dr. Payne, "Villous Cancer; Hodgkin's Disease combined with Acute Tuberculosis." Dr. Andrew, "Malignant Disease of Colon and Stomach, with Fistulous Communication between the Two." Dr. Crucknell, "Malignant Disease of the Gall-bladder and Hepatic Duct."

Royal Institution, 3 p.m. Charles Brooke, M.A., F.R.S., "On Force and Energy."

17. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 8 p.m. Meeting.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Harveian Society, 8 p.m. Clinical Communications. Dr. E. Symes Thompson, "A Case of Chronic Ulceration of Stomach, with Perforation."

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

19. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal Institution, 9 p.m. Prof. Huxley, F.R.S., "On Bishop Berkeley and the Metaphysics of Sensation."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 6, 1871.

BIRTHS.

Births of Boys, 1144; Girls, 1107; Total, 2251.
Average of 10 corresponding weeks, 1861-70, 2092·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	787	735	1522
Average of the ten years 1861-70 . . .	681·1	660·0	1341·1
Average corrected to increased population .	...	...	1475
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	21	1	3	1	4	1	4	3	3
North ...	618210	104	...	11	1	2	3	...	5	3
Central ...	383321	11	...	3	...	9	1	1	...	1
East	571158	39	10	2	...	8	...	1	3	2
South	773175	113	6	10	2	13	2	8	2	4
Total	2803989	288	17	29	4	36	7	14	13	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·880 in.
Mean temperature	49·7°
Highest point of thermometer	69·9°
Lowest point of thermometer	36·1°
Mean dew-point temperature	41·2°
General direction of wind	Variable.
Whole amount of rain in the week	0·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 6, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending May 6.	Deaths Registered during the week ending May 6.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2251	1522	69·9	36·1	49·7	9·83	0·20	0·51
Portsmouth ...	125464	13·2	76	49	70·2	37·2	50·8	10·44	0·15	0·38
Norwich	81787	10·9	43	26	61·0	35·0	46·1	7·83	0·57	1·45
Bristol	173364	37·0	128	64	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	44	24	70·3	34·3	47·6	8·66	0·09	0·23
Birmingham ...	378574	48·3	261	151	...	...	...	...	...	...
Leicester	101367	31·7	112	42	70·7	33·0	47·7	8·72	0·05	0·13
Nottingham ...	90480	45·3	62	36	64·6	34·2	47·1	8·39	0·08	0·20
Liverpool	526225	103·0	352	346	61·6	40·7	48·5	9·16	0·27	0·69
Manchester ...	379140	84·5	259	176	...	...	...	...	...	...
Salford	123851	23·9	114	57	69·1	37·0	46·7	8·16	0·23	0·58
Bradford	148030	22·5	152	88	60·6	38·8	47·6	8·66	0·14	0·36
Leeds	266108	12·3	183	113	59·0	39·0	46·7	8·16	0·07	0·18
Sheffield	255247	11·2	212	122	67·0	34·5	47·3	8·50	0·13	0·33
Hull	135195	38·0	93	48	62·0	30·0	45·4	7·44	0·16	0·41
Sunderland ...	103037	31·2	84	51	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	151	91	57·0	38·0	45·0	7·22	0·12	0·30
Edinburgh	179944	40·6	159	117	56·7	35·0	46·1	7·83	0·40	1·02
Glasgow	477627	94·3	410	306	64·8	35·0	46·5	8·05	0·68	1·73
Dublin (City, etc.)	322321	33·1	161	125	65·4	32·0	50·3	10·17	0·18	0·46
Total of 20 Towns in United Kingd'm	7336961	34·4	5307	3554	70·7	30·0	47·4	8·55	0·22	0·56

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·88 in. The highest was 30·13 in. on Saturday night, and the lowest was 29·43 in. at the beginning of the week.

Note.—The population of Cities and Boroughs in 1870 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, since the last census it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

BONUS YEAR.—SPECIAL NOTICE.

CLERICAL, MEDICAL, & GENERAL LIFE ASSURANCE SOCIETY.

ANNUAL INCOME, steadily increasing ... £230,355 | ASSURANCE FUND, safely invested ... £1,707,769

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Reports and Balance-sheets, Forms of Proposal, and every information, can be obtained of
13, St. James's-square, London, S.W. GEORGE CUTCLIFFE, Actuary and Secretary.

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DIABETES.—Blatchley's Diabetic Bran and Almond Biscuits

(made in accordance with Dr. Camplin's formula) are free from Starch and Sugar, and recommended by the Profession in all cases of Diabetes. The Bran at 1s. 6d., the Almond at 2s. 6d. per lb.; or in boxes, at 5s., 10s., and 20s. Also, the Prepared BRAN POWDER in any quantity.
E. BLATCHLEY supplies all the Hospitals in England. 362, OXFORD-STREET (three doors from the Pantheon). Established 1838.

HUBBUCK'S PURE OXIDE OF ZINC.

See Pharmaceutical Journal of May 1, 1856.

Sold in Stamped Boxes of 14 lbs. each, by the following Wholesale Druggists:—

Messrs. Baiss Brothers & Co.
,, Barron, Harveys, & Co.
,, Battley & Watts.
,, Burgoyne, Burbidges, & Co.
,, Cox, Gould, & Co.
Messrs. Geo. Curling & Co.
,, Drew, Barron, & Co.
,, Evans, Lescher, & Evans.
,, Evans, Sons, & Co.
,, Samuel Foulger & Son.
Messrs. Hearon, Squire, & Francis.
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,, Hodgkinsons, Stead, & Treacher
,, Langtons, Scott, & Edden.
Messrs. Preston & Sons.
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Messrs. Wright, W. V., & Co.
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SOLUTION OF BIMECONATE OF MORPHIA,

(*VIDE "LANCET," MARCH* 4, 1839.)

This preparation has been used by the leading Physicians and Surgeons for the last thirty years.

Dr. MACLEOD stated that it rarely produced headache, and has repeatedly answered where opium has disagreed, and succeeded in cases where the other salts of Morphia had failed to give relief.

Dr. A. T. THOMSON said it possessed anodyne properties superior to any of the salts of Morphia in ordinary use.

Dr. ROOTS states that he had taken every other preparation of Opium, but from none of them had obtained the same degree of quiet rest that he enjoyed from this Bimeconate of Morphia.

P. AND P. W. SQUIRE, 277, OXFORD-STREET, LONDON, W.

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TRADE MARK.

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Is a carefully prepared, fine, long-fibred product, which will be found very suitable for dressing wounds with offensive discharge. It has been tried and approved at King's College Hospital, Manchester Infirmary, Dorset County Hospital, and elsewhere. It is also favourably spoken of in the "British Medical Journal," Nov. 26th, 1870, and "The Lancet," Feb. 18th, 1871.

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The Original Manufacturers of Carbolic Acid for Surgical, Medicinal, and Disinfecting purposes, Carbolic Acid Soaps, Carbolic Acid Sheep-dipping Fluid, and Carbolic Acid Powder, and the sole Purveyors of these products for use in Her Majesty's Army and Navy, Emigrant and Passenger Ships. They have obtained Silver Medal, Paris, 1867; Gold and Silver Medals, Havre, 1868; Diplôme d'Excellence, Amsterdam, 1869; and Diplôme d'Honneur, Santiago, Chili, 1869.

ORIGINAL LECTURES.

CLINICAL LECTURE ON OVERSTRAIN OF THE HEART.(a)

By T. CLIFFORD ALLBUTT, M.A., M.D., F.L.S.

Gentlemen,—You are very familiar with a class of cases of disease of the heart which I point out to you in the wards as consequences of physical exertion. At the bedside we have examined numbers of such cases, and I propose to-day to sum up, so far as we can in the time before us, the conclusions to which these clinical examinations have led us. In order, however, that you may all have in your minds an example of the kind of mischief about which I am going to speak, I will relate a case to you which came under my notice a few days ago. Mr. —— is a master well-sinker, and his occupation chiefly consists in directing those under him, but he sometimes aids in the work himself. He is a vigorous, well-built man, and never had a day's illness in his life. Three months ago, when boring deeply, the borer became tightly fixed in the ground. A cross-bar of some length was therefore passed through the head of the upright rod, and the men pulled as men pull at a capstan bar, their master helping them. When the effort was over, the latter was conscious of having severely exerted himself, but did not suppose that he had done himself any injury. He did not, however, recover his breath as quickly as usual, and shortly afterwards he spat up some bright blood. During the remainder of the day he was conscious that something was wrong with his breathing, and he continued to spit up small quantities of blood of a darker colour. Next day he suffered from dyspnœa on every exertion, and he still spat lesser quantities of dark, clotted blood. In a day or two this hæmoptysis ceased, and the dyspnœa abated in some degree. He remained, however, incapable of any muscular effort, and gradually the dyspnœa, instead of leaving him, grew upon him, so that, on my visit, it was with the greatest difficulty that he walked upstairs to his bedroom, and, when there, he had to sit some minutes upon his bed before he could submit to be undressed. At this time he had an anxious countenance, and his lips were rather bloodless. His pulse was natural in rate, regular, and perhaps a little short, though not shotty. On examining the chest, the apex of the heart was found to beat in the mammary line, and not below the sixth rib, nor did its beat suggest hypertrophy. There was some pulsation in the epigastrium, and a little extension of dulness over the right heart. In addition to this, a loud rasping diastolic murmur was heard over the sternum, and was carried distinctly to the apex; there was no other morbid sound, nor was there undue accentuation of the pulmonary second sound. We determined to adopt means to bring about hypertrophy of the heart—such as nitrogenous food, rest, and the continuous use of digitalis and iron. Now, how are we to explain the state of this patient? From our ward experience, I anticipate that you will say the patient had ruptured his aortic valve or valves by a sudden overstrain. I do not think, however, that the rupture was immediate. On comparing the histories of several of my cases, I find that the aortic valves may be slowly destroyed by continual slight overstrains during a series of years; or, again, they may suddenly be driven down by a single excessive effort. There is, however, a third manner in which aortic regurgitation is established—namely, the excessive effort does not seem actually to drive a valve before it, but so strains it that some leakage occurs, and this leakage slowly enlarges the chink until serious regurgitation becomes possible. Such seems to have been the case with Mr. ——. When an aortic valve is suddenly and at once driven down, I believe that a pang is always felt, and the sufferer has to stop work immediately. Such an accident I once saw as the result of a precisely similar effort—namely, during a pull at a capstan bar; and Dr. Todd, of Selby, has told me of another such instance which came under his notice in the person of a boatman. Both these men felt a severe pang, and were placed *hors de combat* at once. Such an account I have also received from men who have suffered like ruptures during efforts of a similar kind. But many others, perhaps the majority, of my patients in whom aortic regurgitation has definitely followed a particular effort, tell me that they did not succumb all at once; on the contrary, that some days or even weeks elapsed before they became much distressed, and in these persons I believe the valves are forced so slightly that the merest thread of blood squirts inwards. You have seen such spirts, so fine as almost to be invisible, occur in a weak part of a pump or syringe, and you know what power such a spirt once established has to enlarge the opening. Such an experience is painfully familiar to engineers in many ways. I assume, then, that some thready regurgitation takes place, and bores at the orifice until it becomes more largely patent; distress is then more distinctly felt, and the patient is incapacitated until hypertrophy brings him some ease and some release.

Next, let us consider the hæmoptysis. You know that in the wards I have often pointed out to you the coexistence of hæmoptysis with the establishment of valvular or aortic injury during overstrain, and when such injury has resulted in aneurism (as it often does), many of you have been disposed to connect the hæmorrhage with the injury to the aorta. But it is difficult to make out any intelligible connexion between the two, and hæmoptysis as often concurs with mere regurgitation when such a connexion is still less probable. The fact is, no doubt, that the hæmoptysis is the same expression of overstrain on the right side of the heart as is the rupture or other injury on the left side. In hæmoptysis we always, or generally, get the same history as Mr. —— gave me—namely, that bright blood was spat up at the time, and lesser quantities of dark blood subsequently; a part of the hæmorrhage, that is, is ejected at once while fresh, and the remainder is expectorated by degrees. It seems clear that the hæmoptysis has no direct connexion with the injury of the left heart, but is a direct result of engorgement of the right heart and lungs. Not infrequently hæmoptysis is the only result of overstrain, bright blood being spat up at first, and pellets of darker blood being ejected for a few days more, when the patient may wholly recover his health. In such cases the left heart has borne the strain without ill effects. Now, if we divide heart and aortic diseases, as the results of strain, into two classes—the one containing cases where the injury is the more or less immediate consequence of one effort, and the other (and more numerous) class containing the cases where the mischief is a chronic process, and results from the accumulated effects of a long period of overwork—if, I say, we divide our cases (as we usefully may do) into these two classes, we find that no kinds of effort are more likely to produce sudden aortic regurgitation or hæmoptysis than those in which the chest is firmly fixed.

In many cases the chest is fixed by the muscles, as when men are pulling at a lever with the arms, or lifting heavy weights; in other cases the chest is artificially fixed, as in the drilling of soldiers, who are bound in breast-straps, or in the use, by bargees, of a punting-pole fixed against the chest, and so on. The blood is thus prevented from passing through the lungs at the increased rate which is required. The arteries are compressed, moreover, by universal muscular tension, and the heart's pulsations are accelerated; if, then, the chest be naturally or artificially narrowed, the lungs cannot expand in due proportion, and hæmorrhage takes place. A somewhat different event comes about in more chronic cases. When persons with narrow or narrowed chests are constantly over-exerting themselves, they bring about a permanent dilatation of the right ventricle, which is very hard to cure; or, again, if the chest be ample but the food unequal to the excessive combustion required for bodily work, the same tendency to dilatation of the lung capillaries and the right heart is seen. A slight chill in such persons is readily followed by bronchitis or low forms of pneumonia. The recent very able lectures of Dr. Parkes have led us more clearly to see how insufficient nitrogenous food acts also primarily upon the heart's fibre; and in poverty nitrogenous foods are those which fail first. In the West Riding we are often very eloquent about the wicked improvidence of artisans, who buy the very best joints of meat, and outbid their richer neighbours for lamb, duck, and other nitrogenous delicacies; but this strong desire for abundant nitrogen is probably an expression of their need for a kind of food, the absence of which, as Dr. Parkes has shown, is felt so soon at the centre of the circulation. On the post-mortem table I have shown you again and again the big, strong hearts of men, such as forgemen and bargees, whose lives have been accidentally shortened during their years of heaviest labour.

Aortic regurgitation and pulmonary hæmorrhage, then, are not uncommon results of single efforts. Let us now turn to the results of lesser efforts unduly prolonged. Here, as I have said, we do not meet with primary hæmorrhage from the lungs, but rather with that gradual dilatation of the right heart of which

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(a) This lecture has been delivered for some time as a part of the course on Principles and Practice of Medicine at Leeds. The matter is treated more at length in a paper in the recently issued volume of the Reports of St. George's Hospital.

I have already spoken. But aortic regurgitation is still a common, if not the commonest, result of this kind of overstrain. The cusps are not driven suddenly down, nor even dislocated, but, being subject to continual stress, they become opaque, thickened, and sclerosed (chronic endocarditis). Cicatricial or ulcerative (lupoid) action follows next, and incompetence is slowly established. I say, is slowly established; for when cusps are thus toughened, they resist the inroads of regurgitant spirts for a much longer time than the filmy cusps of health can do. In these persons, therefore, aortic regurgitation is set up so gradually that hypertrophy arises *pari passu*, or nearly so, and they are not incapacited until a later period. How common are such states of the heart in towns of heavy labour, like Leeds, you all well know who attend on my out-patient days, and you have also followed many such patients under my guidance through the wards and into the post-mortem room. During this stage I have often pointed out to you the establishment of another lesion—namely, endo-arteritis of the aorta, with loss of elasticity and distension. This results in varying measure, directly or indirectly, from overwork in such persons as hammermen. It may be a direct result of the excessive work of a strong heart, for the aorta has no great capacity of increasing the natural resistance of its tissues; it may undergo some corresponding hypertrophy, but not much. When the result is indirect, it is the direct consequence of the violent thud of a ventricle hypertrophied in obedience to aortic regurgitation, the latter being the direct result of strain. But, whichever be the mode of initiation, the phenomena are the same—namely, miliary lesion of the coats of the arch of the aorta, resistance in the shape of a more or less unsuccessful endo-arteritis, and dilatation of the vessel; with the clinical evidence of spasmodic dyspnœa, pulsation in the episternal notch, dulness over the upper sternum, and a blowing systolic murmur in the same region. It is about this time, perhaps, that our one remaining ally fails us. I cannot say that the left ventricle betrays us, for it makes a hard fight for life; but in time—a time which varies according to the circumstances of the individual—it gives way; its newly-gained bulk degenerates and recedes, partly degenerating from voluntary muscle into mere connective fibre, partly melting away as fat. I have constantly confessed to you that it is hard to say why the newly-gained balance is thus lost again. I once thought it was due to blocking up of the coronary arteries by endo-arteritis; but a few autopsies seeming to prove this are met by others in which I have found these arteries, on the contrary, to be much enlarged and fully patent. It may be that the advancing flaccidity of the atheromatous aorta and the loss of valve-flooring put an end to the filling of the coronaries in arterial systole. This may account for some cases, but not for all. There seems to be some secret in the wasting of hypertrophied muscles after a certain period, which we cannot as yet penetrate. It does not seem to lie in the attitude of their nerves and bloodvessels, for these enlarge *pari passu*, and so, I suppose, do the correlated nerve centres. The fact, nevertheless, seems to be certain, that a hypertrophied heart, like a filecutter's biceps, does waste after a time. When this happens, the newly-gained balance is destroyed, and the circulation comes to an end. The left ventricle dilates and becomes inherently enfeebled; the previously hypertrophied papillary muscles waste in like manner; mitral regurgitation is added to aortic; and the machine is stopped. Once more: You remember we have repeatedly seen that mischief, sudden or gradual, like that which we have described, may affect the aorta alone or in the first instance. The same effort which in one man drives down an aortic cusp, in another cracks the brittle lining of the aorta. The blood-current searches it as it searched the chink of a dislocated valve; the coats are dissected, and sacculated aneurism results. We have seen this in the case of ——, who died in No. 2 the other day, and whose aneurism was caused by his being caught up in the gearing of some machinery, and his chest crushed. Mr. Teale and myself, again, were called, about two years ago, by the West Riding magistrates to certify to a like cause of aneurism in a police constable, whose chest had been crushed, in the exercise of his duty, between a moving cart and a wall.

In other cases, as we have seen in the heart, the mischief creeps on gradually. A forgeman, let us say—and more especially those men who, like moulders, have to lift heavy weights—is constantly throwing stress upon the left heart. The ventricle grows; the aorta can grow but little, if at all; balance is thus disturbed, and the heart's impulse becomes more than the resistance of the aorta. The aorta thus suffers what I generally term at the bedside "miliary lesion"; repair in the form of endo-arteritis is attempted, and often, no doubt, is attempted successfully so far as particular patches are concerned.(b) On the whole, however, the vessel loses elasticity, and loses uniformity; atheromatous abscesses and ulcers are formed, it yields, and pouched or saccular aneurisms result, according as the yielding is general or is circumscribed. Not infrequently, as you doubtless remember, we find both forms; the whole arch may be dilated, and we may also find two or several wide-mouthed sacs without clot, or with but little clot, opening into it. It is astonishing how long in such cases the aortic valves may remain competent; they are often competent, although opaque and thickened, up to the last. Such, gentlemen, are some of the chief results of overstrain of the heart, aorta, and lungs. As we should expect from the uniform character of the causation, we find that these cases form a natural and easily recognised class; so much so, that we do not find it difficult, apart from their history, to dissociate these cases in strong young men from those in which the heart-mischief is due to rheumatism. In our wards you know the "mechanical hearts" are as familiar to the class, and are as easily interpreted, as the "rheumatic hearts"; and it is a matter of surprise to me that they are not as clearly acknowledged and described in your text-books. When we pass on to discuss their treatment I shall have to tell you that in digitalis we have our chief means of encouraging compensatory hypertrophy, and of sustaining it when present, and that by means of nutritious diet (nitrogenous, Parkes), digitalis, iron, and rest, we may do a great deal to bring comfort to these sufferers, if not to enable them to return to some light occupation. Unfortunately, in the lower ranks of life we do not see them until the mischief has attained some serious proportion, and in these patients loss of working power too often means also loss of nitrogen.

ORIGINAL COMMUNICATIONS.

NOTES ON THE PATHOLOGY OF MALIGNANT NEW GROWTHS.

By HENRY ARNOTT, F.R.C.S.,
Assistant-Surgeon to the Middlesex Hospital, and Lecturer on Surgical Pathology in the School.

I.

Introductory—Necessity for an Anatomical rather than a Clinical Classification of Tumours—The Degrees of Malignancy met with—Importance of Examination of Thin Sections—Value of Scrapings for Diagnostic Purposes.

If it be necessary to apologise for the appearance of the series of papers of which this is the forerunner, a sufficiently ample apology is offered by the fact that at the present time, perhaps, no term is used more vaguely and yet with more caution and misgiving, both by pathologists and by practical Surgeons alike, than the term "cancer." Here in England the old clinical significance is still fondly adhered to; and although on the Continent a far greater number of Surgeons recognise a definite anatomical structure to be implied by the term cancer, yet few venture to settle by any distinct form of words what that structure is, and a considerable number protest altogether against the attempt. The common argument of the practical Surgeon is something like this:—"When I speak of a cancer, I mean a tumour which will return if I cut it out, which will probably also appear eventually in certain internal organs, and against which I am well-nigh helpless in any effort to eradicate it from the system. As for anatomical characters, it is enough for me that the tumour infiltrates the tissues amongst which it grows. The precise form of its microscopic cells and the relations of these to each other and to surrounding parts are to me points of no moment." The reply of the pathologist—that, chemistry having failed us, no truly scientific classification of tumours can be made upon other than an anatomical basis, and that nothing short of a careful microscopic discrimination will suffice for this—finds small favour with a Surgical utilitarian. He knows full well the difficulties which have beset those engaged in the endeavour to arrange this anatomical classification, and he fails to see what practical good will result when the work shall have been successfully accomplished.

Now, I think that in this matter we Surgeons might very profitably take a lesson from the Physicians. It is only quite lately, long since the microscope has come into general use in Medicine, that the various diseases of the lung, formerly grouped under the heading "Consumption," or phthisis pulmonalis, have been recognised and classified; and, although the old term may still be a convenient one for common use outside the Profession, I suppose that few Physicians will long rest satisfied with being told that a given case is one of phthisis. They will further inquire whether it be a catarrhal pneumonia, or an interstitial pneumonia, or a chronic tuberculosis, and the answer to the inquiry will greatly affect the prognosis as well as the immediate treatment of the case. Just in like manner it behoves us to recognise that we can no longer content ourselves with the assertion that a given case is one of "cancer." As a vague term implying a malignant tumour, it may be clinically serviceable to retain it in common parlance; but we must not forget that there are as many forms of cancer, in the clinical sense of the word, as there are of phthisis; and to give a reliable prognosis—nay, even to decide upon the suitable treatment—we must look further: we must see to what special class of malignant growths the case properly belongs. It is the main object of this series of papers to present, in as clear a way as possible, the present stage of this inquiry; and, in order to render them practically useful, I shall avoid as far as possible entering into the disputes of the Schools and all the more recondite problems which suggest themselves to the pathologist, and limit myself to a brief account of the structure and mode of growth of the common forms of malignant tumours, and the manner in which this structure may most readily be made out, briefly hinting at the same time at the bearing of the point upon the diagnosis and prognosis of the several varieties. And in order further to clear the ground for an anatomical classification, it may be pointed out at once that what may be termed the *clinical* classification is extremely defective. What, for instance, can be more unsatisfactory than a diagnosis which must await for its confirmation the return of the tumour or the infection of distant parts of the body? And if we are told that the confused blending of the tumour with the surrounding structures, causing adhesion to skin and the parts adjacent to the growth, are sufficient evidences of malignancy, I reply that even this sign is very delusive; for I have seen a growth so harmless to health, as the "recurrent fibroid" of Mr. Paget, infiltrating the fat and muscle in its neighbourhood as completely as the most virulent cancer; and, on the other hand, I have seen an apparently encapsuled cartilaginous growth in a testicle followed by numerous secondary growths in the lumbar glands and lungs. Moreover—and this is the point to which I wish to draw special attention, and I would that we could speak more dogmatically upon it—amongst the infiltrating tumours, some are far more truly malignant than others, and the degree of this malignancy—in other words, the prognosis of a tumour—can only be definitely settled by the microscope. Of course, it is not meant by this that the microscope is an infallible guide in the prognosis of tumours; if it were so, no Surgeon could honestly practise his art without its aid. Within the last few years, instances of malignancy associated with almost every kind of new growth—excepting, perhaps, the simple lipoma or tumour of adipose tissue(a)—have been recorded to the confusion of Surgeons; but these instances must be regarded as exceptions to ordinary pathological rules, and need not in any way deter us from trying, at some no distant period, to deduce from the large number of rapidly accumulating observations certain general laws as to the relation of anatomical structure to clinical history and symptoms.

(b) Since this lecture was delivered and written out, a paper, by Dr. Moxon, has appeared in the Guy's Reports for this year, in which this question is ably considered, and I venture to think with like results.

It is not intended on the present occasion, however, to introduce the more harmless of tumours, but rather, as the title of the papers sets forth, to deal only with those new growths which, having tendencies to infiltrate the tissues amongst which they lie, and to exhibit other features of malignancy, are usually included by English Surgeons under the term "cancer."

In our investigation of these tumours, the term malignancy will be in constant use. Let us, then, pause on the threshold of our inquiry to settle definitely what especial meaning we attach to the word. By "malignancy," then, we imply such an energy of growth as baffles in a greater or less degree the Surgeon's interference. And it is convenient to speak of three degrees of malignancy—viz., (1) The persistent recurrence *in loco* after apparently complete removal by the knife; (2) the tendency to infection of the nearest chain of lymphatic glands with the same morbid growth; and (3) the possible combination of one or both of these conditions with a proneness to the formations of other like tumours in distant parts of the body, and especially in the lungs and liver. Each of these degrees of malignancy may profitably engage our attention in these introductory notes, in order that subsequent reference to them may be rendered more intelligible.

Firstly, the persistent recurrence *in loco* after careful removal by the knife. It has been sought to place the "recurrent" tumours in a class by themselves, as including a series of growths less malignant than cancers, but yet mysteriously prone to local recurrence after ablation. Perhaps the clearest light is thrown upon the habit of these tumours by the practice of examining thin sections of hardened tissues rather than scrapings from freshly-cut surfaces. Certainly, I have myself ceased to be surprised at the frequent recurrence of many tumours since the attention of the Profession was strongly directed to the influence of inadequate operations on the theory of cancer by the late Mr. C. H. Moore. In his paper bearing this title, in the *Transactions of the Medical and Chirurgical Society*, Mr. Moore pointed out how constantly the local recurrence of cancer after amputation of the breast was demonstrably due to the disease germs left behind by the operator; and, if he had been spared to us a few months longer, he would have seen a very remarkable corroboration of his views in the facts furnished by the novel practice of skin-grafting for the healing of ulcers. Indeed, when we witness the wonderful effect of a few epidermis scales scraped from the skin and applied to the granulating surface of an ulcer (as has been recently done by Mr. Henry Lee, at St. George's Hospital)—a nucleus of new skin being formed by these few apparently dried cells—it seems wonderful that cancer should ever be satisfactorily removed by operation, its cells having so very slight cohesion, compared with that of the elements of most other new growths.

I have so often, on making thin sections through the margin of a growth and into the adjacent structures, discovered a real infiltration of microscopic elements where no naked-eye confusion of tissues had been apparent, that I am satisfied that the explanation of the great majority, if not all, of the instances of speedy recurrence *in loco* familiar to Surgeons is not that the tissues of the part have taken on a special tendency to the production of a morbid growth which is not to be arrested by free use of the knife, but that, in fact, elements of the growth are left behind by the operator, and sooner or later develope into fresh tumours. Let me give two illustrations of this kind of infiltration:—I had not long ago an opportunity of examining some secondary tumours in the lungs of a patient dying with what was said to be cancer of the uterus. The peculiarity about the secondary growths was that each was apparently encapsuled, shelling out readily on squeezing the lung, and presented none of the ordinary characters of blending with the surrounding lung tissue met with in cancer. Careful examination, however, showed that the growths were made up of small spindle cells only, and that cells exactly similar to those of the tumours were to be traced shooting out freely amongst the connective tissue of the alveolar walls and vessels of the neighbouring lung. On another occasion I remember assisting at an operation for the removal of a soft tumour recurrent amongst the muscles of a woman's buttock. The growth appeared to be clearly encapsuled; at least, there was no great difficulty in enucleating it from its bed and turning aside the muscles stretched about it. Nevertheless, this was already a recurrent affair, and since that time two more operations have been performed upon the same woman. This led me to make a careful examination of the tissues surrounding the growth and partly removed with it at the last operation. I found the structure of the tumour to consist entirely of the oat-shaped cells constituting the growth known to English Surgeons by the name "recurrent fibroid"; and stretching out into the fat and muscle on all sides were crowds of similar cells, invading and breaking up the muscular fibres and separating the large oil cells of the adipose tissue—in fact, the tumour was a genuine infiltrating growth. Here, then, was at once the solution of the proneness to return which had been so repeatedly manifested, for the infiltration had probably been present in the earlier tumour, although in a less degree, perhaps. And the examination of these and similar cases surely teaches us this great practical lesson—namely, that, excepting perhaps in distinctly encysted growths, the Surgeon can hardly err on the side of too free use of the knife in the removal of tumours; nay, one may even affirm that the old operators who removed with one sweep of a red-hot knife the whole of a cancerous breast, with its covering skin, more truly served their patients than do such modern Surgeons as are careful to remove only the scirrhous nodule, leaving the nipple and as much skin as possible, that the gaping wound may not unnecessarily alarm and disfigure the patient. Of course, in thus attempting to explain the frequent cause of immediate recurrence of tumours (what Thiersch has called "continuous recurrence") by particles of the morbid growth being left behind by the operator, it is not intended to deny that cases may, and undoubtedly do, arise from time to time, in which, after an absolutely complete removal, a similar growth may spring up in or near the cicatrix, after a lapse of many years, from the same causes which led to the formation of the primary growth (regional recurrence). Such questions, bearing as they do on the etiology of new formations generally, may well be avoided in the present papers, which profess to be purely practical, and I only refer to the point lest it should be thought that such a mode of recurrence is absolutely denied.

(a) And even here we must speak with caution; for Mr. Curling has narrated a case in which a fatty tumour recurred five times in the scrotum, in spite of very careful removal. This case was reported upon for the Pathological Society of London by Mr. Campbell De Morgan and Mr. Hulke; and, in the opinion of these pathologists, the recurrence was to be explained by an active connective tissue growth accompanying the fat development, this active growth spreading from a pedicle which in each instance had been cut through.

The second degree of malignancy, in which the nearest chain of lymphatic glands is infected with the morbid growth, offers also some points which need consideration; and, in the first place, it is to be noted that the disease occurring in the glands is invariably of the same nature as that of the primary tumour from which the infection has spread. At least, in all the cases which I have myself examined this has been the case, and I have not met with a single reported exception to the rule which has borne the test of careful scrutiny. It is, indeed, very seldom possible to trace the morbid elements extending along the lymphatic vessels. I have seen two cases in which the lymphatics were visibly distended with what seemed to be cancerous material, once leading from a scirrhous breast to the axillary glands, and another time stretching away from a soft cancer of the uterus; but such easily recognisable examples of lymphatic infection are very rare. When it is stated that the disease affecting the lymphatic glands is always identical with that forming the primary tumour, it must be borne in mind that this does not exclude instances of medullary or soft carcinoma appearing in the axilla secondary to a scirrhous nodule in the breast. The real identity of hard and soft cancer (restricting the term to its anatomical sense) will hereafter be considered; but it may be mentioned at once that the secondary growths spreading from a scirrhous cancer are hardly ever so hard as the original tumour, and they may present very various degrees of softness without losing their distinct anatomical structure.

Again, certain cases occasionally present themselves in which the lymphatic glands, swollen and indurated, yet gradually subside after the removal of the tumour which apparently infected them, and these are sometimes said to be instances of cancer of the glands, disappearing upon the removal of the primary cancer. From what we know of the nature and habit of cancer, however, it is not probable that this ever takes place. It is more likely that these are glands in a state of what Dr. Sanderson has called fibroid induration, due to prolonged irritation—a condition frequently met with apart from any malignant disease, and due to a certain pathological process, in which the delicate fibrillar network which normally supports the corpuscular elements of the gland becomes enormously thickened and increased, gradually pressing aside the corpuscles, and materially affecting the function of the gland.

Comparatively, harmless, however, though this state of induration may appear, there are not wanting those who regard it with considerable suspicion. Thus, Mr. Birkett has known a case of return of cancer in the glands five or six years after the removal of a scirrhous breast, the glands at the time of the operation showing no sign of genuine cancerous infection. And MM. Cornil and Ranvier attach still greater importance to this fibroid induration, as lending support to their view of the true nature of cancer, to which reference will be subsequently made. Perhaps the point of greatest practical importance in this connexion is the comparative frequency of lymphatic gland implication in the several forms of malignant disease. This is a question requiring much further investigation and more numerous observations than are as yet at our disposal. Dr. Billroth, the eminent pathologist of Vienna, was one of the first to draw attention to the fact that sarcoma in its spread very seldom infects the lymphatic glands, or at least not until late in the course of the disease. I have examined a considerable number of cases of malignant growths with special reference to this point, and my observations, so far, accord entirely with this view. I have once seen well-marked secondary enchondroma in the lymphatic glands, and I do not remember to have seen a single case of true anatomical cancer confirmed by microscopic evidence in which the neighbouring lymphatic glands were not at length obviously infected. But amongst the sarcomata I have only once seen anything like distinct lymphatic gland implication which was confirmed by microscopic examination. This was a case of melanosis, in which, together with multiple tumours occurring in the subcutaneous connective tissue all over the body, the lymphatic glands generally were secondarily affected with the disease; and it is worthy of remark that in anatomical structure this morbid growth was just on the border-land between true cancer and round- or oval-celled sarcoma, very little visible matter separating the cells of the soft and juicy tumours. This tendency to infect the lymphatic glands, which is sufficiently strongly pronounced in epithelioma, but extremely constant in true cancer, has been amply accounted for in the latter case by the researches of MM. Cornil and Ranvier. These pathologists, by means of specially prepared thin sections of scirrhus stained with nitrate of silver, have clearly demonstrated that into the minute alveoli which, packed with cells, form the characteristic structure of cancer, lymphatic vessels open, offering a direct and easy means of conveying the special juices, and possibly cells, of the cancer to the nearest lymphatic glands. From these remarks it will be gathered that the question of lymphatic gland infection is of more than mere pathological interest. It becomes of genuine value in discriminating between true cancer and the various forms of sarcoma simulating that disease.

(To be continued.)

A CASE OF ECCENTRIC EPILEPSY (HEPATIC).

By JAMES C. KERR, L.R.C.P. & S. Edin.

It has occurred to me that the case I am about to relate is a good example of this form of disease, besides presenting interesting features peculiar to itself.

The patient, A. R., a nurse in a gentleman's family, was the subject of a coroner's inquest. Her age was 24 years. I was called on a Sunday night, after eleven o'clock, to see her, and found her lying dead upon the kitchen floor. She had evidently died from apnœa. Moreover, the blackness of the face, the swollen, livid lips and tongue (the latter fixed between the teeth), and the foam from the mouth unmistakably bespoke an epileptic fit. However, the suddenness of her death, which may almost be said to have been instantaneous, pointed to some other hidden cause. A post-mortem examination being ordered, I carried this out with the assistance of Dr. Lamb, of this town. We found that the inner surface of the scalp, the pia mater, the interior of the ventricles, and the substance of the brain all showed unmistakable signs of congestion. There was, however, little effusion. The tongue was found cut, and the froth from the mouth tinged with blood. On opening the thorax and abdomen, the additional or real cause of death was at once apparent. The thorax, especially on the right side, seemed occupied by the liver, so much was the diaphragm removed upwards by this organ, which, being enlarged to an unusual extent, stretched upwards as described, likewise covering from view the stomach, by lying right across, as well as low in the abdomen. When taken out it weighed eight and three-quarter pounds. The proper shape was preserved, except at the left lobe, upon which was developed a cystic tumour of about two pounds weight, pyriform in shape, having a dense wall structure, and attached by a broad base to the left lobe. This tumour was not unlike an enlarged heart; it pressed upon the stomach. The contents were a serous fluid, bright, and only at one period of the flow tinged with bile. The right lobe was entirely disorganised, readily breaking down under the touch. The gall-bladder was small. The lungs were congested, but the heart and other organs were quite healthy.

Such was the result of the examination, showing, I think, plainly the part played by the liver in inducing the epileptic fit; and also of hastening the fatal issue by its mechanical pressure upon the lungs and heart. As regards the general history of the patient, it is remarkable that she, if the evidence of her friends be accepted as true, had never been laid up from illness, nor needed Medical advice, and that the fit which proved fatal was her first and last. Certain it is that during the last six months of her life, when in her last situation, she was never known to be ill, except from occasional sickness, which can readily be accounted for by the pressure of the tumour upon the stomach.

18, Balls-road, Claughton, Birkenhead.

ON

THE COMBINED ACTION OF IODIDE OF POTASSIUM AND OZONIC ETHER

IN THE TREATMENT OF CONSTITUTIONAL SYPHILIS AND OTHER DISEASES IN WHICH IODINE IS INDICATED.

By JOHN DAY, M.D., M.R.C.S.

In July, 1867, a case of well-marked constitutional syphilis came under my care, which, for more than six months, resisted all the usual remedies, and ultimately made a rapid and permanent recovery under the combined action of iodide of potassium and ozonic ether.

The patient, a respectable married woman, aged 32, had been the subject of neglected syphilis for about eight years—having been infected by her husband, who, at the time of his marriage, was suffering from a urethral chancre, which he had been led to suppose was only a gleet of a non-contagious character.

During the whole of this long period she had been kept in ignorance of the true nature of her disease, and no specific treatment had been adopted for its cure. The most prominent symptoms which at this time presented themselves were—copper-coloured patches of psoriasis scattered over various parts of the body; pains in the nasal bones, and an offensive discharge from the left nostril; hoarseness, and a feeling of dryness and tenderness about the throat; and a troublesome cough, accompanied by copious muco-purulent expectoration, loss of flesh, great debility, and night sweats.

A careful examination of the chest convinced me that the lungs were free from tubercular deposit, and the only mischief I could detect was chronic bronchitis, which, as it did not yield to the usual means, and quickly disappeared with the syphilitic symptoms, I am disposed to think was of syphilitic origin.

From the commencement she was placed on a light nourishing diet, with a moderate allowance of wine and beer. Among the remedies employed during the first six months of treatment were—iodide of iron, with cod-liver oil; green iodide of mercury; perchloride of mercury, with compound decoction of sarsaparilla; iodide of potassium, given three times a day, in doses gradually increased from five grains to half a drachm; and calomel vapour baths. At the expiration of this time, with the exception of the patches of psoriasis having given place to brownish-looking blotches, I could observe no improvement in the patient's condition. Her cough was more harassing, she was weaker, and she had almost entirely lost her voice, and spoke only in a whisper.

Having now exhausted most of the known remedies, I ventured on an experiment, which, fortunately, was attended with most satisfactory results. It occurred to me that, as the therapeutic properties of iodide of potassium were probably due to the small amount of iodine which was set free by decomposition of the salt in the blood and tissues, a plan might be devised for liberating it more freely whilst in the circulation. With a view to attain this end, I prescribed iodide of potassium in doses of from four to eight grains dissolved in water, to be taken three times a day; each dose to be followed in about half an hour by from half a drachm to a drachm of an ethereal solution of peroxide of hydrogen mixed in a wine-glassful of water.

I may here mention that the ether I then used was some that had become highly charged with peroxide of hydrogen by a process of natural change, which takes place, more or less, in all the ethers and essential oils which have been long exposed to the influence of light and heat. I now use in preference that prepared by Mr. Robbins, of Oxford-street, and sold under the name of ozonic ether. It is of a uniform strength and great purity.

The *modus operandi* of this method of liberating the iodine from iodide of potassium whilst in the circulation may be explained as follows:—Iodide of potassium is a salt possessed of a very high diffusion power, and speedily passes into the blood, from which, however, when administered in the usual way, a large proportion of each dose is almost as speedily eliminated unchanged by the kidneys. Ethereal solution of peroxide of hydrogen (or, as it is more commonly called, ozonic ether) is a substance which also has a high diffusion power, and passes very quickly into the blood, where, by the catalytic action of the globules, its oxygen is transformed into ozone, which, on meeting with the iodide of potassium in the circulation, decomposes it, and sets the iodine free. Although I believe this to be an approach towards the true explanation of what takes place when iodide of potassium and ozonic ether meet in the circulation, it is sufficient for my purpose to state that, without the intervention of blood, iodine is liberated from its combination with potassium by the action of ozonic ether alone.

My own experience in this mode of exhibiting iodide of potassium enables me to speak very favourably of it. The patient whose case I have related so rapidly improved under its action that, in a few weeks, she had lost her cough and completely recovered her voice. The treatment was continued for about six months; but, long before the termination of that period, every symptom of syphilitic mischief had passed away, and she was left in the enjoyment of excellent health.

I have been in the habit of seeing her constantly, and am in a position to say that she has not had the slightest relapse.

I have, at the present time, a gentleman under my care who is suffering from what I believe to be a syphilitic affection of the liver; and he has already derived great benefit from the iodide of potassium and ozonic ether.

This method of exhibiting iodide of potassium may, I think, be usefully applied to the treatment of other diseases in which iodine is indicated.

Geelong, Australia.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

DISPUTED POINTS IN THE DOCTRINE OF SYPHILIS.

(*Continued from page* 512.)

In no subject, perhaps, is *doctrine* of so much importance as in syphilis. Thus, it is difficult for a man who has not made the subject a specialty to see a sufficient number of cases to enable him to form just conclusions. Indeed, it may so happen that the few he sees are of that exceptional kind only occasionally seen by those even in large practice, and so his conclusions may be hopelessly at variance with those of the mass of the Profession. It is for this reason that a collection and comparison of the views of those whose opportunities for seeing the disease are most ample is so desirable. Here, for instance, is a most instructive case forwarded by a well-known authority in Liverpool:—

"I see that you are collecting facts upon hard and soft chancres; allow me to add my quota. For some years I was one of three Honorary Surgeons to the Liverpool Workhouse Infirmary, and had under my charge a weekly average of fifteen women of the town, varying in their status from the lowest to the highest class of prostitutes—the former being in the greater numbers. I had not been in office a month before I was struck with the rarity of what I had been taught to regard as chancres—*i.e.*, hard sores. As my experience increased this attracted my attention the more, and I soon fell into the routine plan of treating every sore with a ten-grain solution of nitrate of silver, and nothing else. The average duration of the treatment was ten days. It was very unusual to find a patient uncured at the end of a fortnight. Where so many persons had to be seen in the other wards, the time I assigned to venereal cases was short; I simply felt the sore, and if soft said, 'Nitrate solution.' After having been officer for about two years, there seemed to be an epidemic of hard sores, over which the argentine dressing had no influence—mercury was required for all. In some of these cases buboes followed, and secondary symptoms. I do not remember one such accident having occurred in those who had soft sores.

"Being interested in these matters, I talked over the subject with my colleagues, now dead, and we found on comparing notes that each had made the same observation. I can only remember one case of soft sore in which it was necessary to give mercury, and as this was a curiosity in its way, I will give a short account of it:—

"E. L., aged 21, a school-teacher, proper, but not prudish, went to stay with some friends in lodgings in the Isle of Man. Whilst there (about a fortnight) she was never out of the sight of one or other, except when at the water-closet. She went to bed and slept with a female relative; yet, on the day of her return home, she complained to her mother of pain about the vulva, and after a time was brought to me with a large soft sore inside the right labium. There was no mock-modesty about the case, and, though certain of its venereal nature, the evidence against the complaint having been contracted in the usual way was very strong. She had never had a sweetheart, nor was any young man in the house where she was. The hymen was unbroken. Ere any improvement ensued, the girl had typhus and was very delirious; but when I examined the vulva, etc., there was no allusion to anything or anyone. After recovery, the sore remained as bad as ever; and at last, three weeks after the fever, I was resolved to give mercury. The effect of this was apparent in two days; the parts were perfectly healed in ten. As I cannot yet make up my mind to believe that this sore was contracted by sitting on a foul water-closet, I will not sk my readers to do so."

Now, with regard to our second query—"What are the relations between the lesions of the infecting and infected parties?"—we have in a very considerable number of instances had the reply, "They are similar"; but from a few, as might be anticipated from the answers to the first query, we have received different replies.

Mr. J. R. Lane says—"I believe a soft sore may communicate a hard sore, and *vice versâ*."

Mr. Gascoyen also says—"I have not had many opportunities of examining both the infecting and infected parties, but in the few instances where I have been able to do so I have found sometimes a similar condition of sore in each, but at others not so. I should expect to find in a majority of cases a similarity in the primary lesions of each, but I am quite satisfied that such is not invariably the case."

Mr. Berkeley Hill gives similar evidence. He says—"According to my experience, Bassereau's dictum is correct—namely, if the *infected* person has constitutional syphilis the *contaminating* person has it also—but I cannot give any evidence to prove that a particular kind of sore generates its like. I can say this much against it—namely, that the women who have propagated syphilis within my observation are usually affected with mucous patches of the vulva—yet the men so infected have had the different varieties of initial syphilis (the so-called infecting sores), and never 'mucous patches' at the point of contagion. I believe a great number of venereal sores are simply the result of local irritation, and are not caused by any specific contagion, whether syphilitic or otherwise."

Mr. Langston Parker says—"A soft chancre in the woman may produce in the man either a soft or a hard chancre."

Mr. Buxton Shillitoe holds that soft sores will only produce simple soft sores, but suppurating or irritated venereal sores, whether primary or secondary, will produce in a virgin subject constitutional syphilis.

To give some explanation of the above statements, we would recall to the minds of our readers that the peculiar secondary symptom known as a mucous patch is exceedingly common in women as compared with men. Their chosen, though by no means their sole, site is the border-land between skin and mucous membrane, as upon the lips (at their angles) and the labia in the female; warmth and moisture foster their growth. It was first observed by Ricord, but has been since abundantly proved by others, that primary sores situated on such spots may during the process of healing assume the characters of a mucous patch; or, in other words, a primary may become a secondary sore. This may be one reason why it is said that a primary sore follows infection with a secondary lesion. One great cause of mucous patches is filthy habits and want of cleanliness among the lower grades of prostitutes. Among these they are excessively prevalent, and these are the class who do most to propagate syphilis. Bumstead has remarked the same in New York.

Then, again, when a chancre has fairly healed, leaving only a slight patch of induration, this may again give way; it is then very liable to phagedæna, and as infectious as ever. Nor should it be forgotten that the hardness is in many cases slight as well as evanescent; so that a soft sore may appear as the result of a hard one, and *vice versâ*. Still, it is well to bear in mind that good authorities are willing to admit that a lesion of one kind may give rise to a lesion of another.

The fourth inquiry—"What are the relative proportions of hard and soft sores as seen by you?"—has elicited replies which would serve to show that these vary in different practices and in different parts of the country. Thus, Mr. Buxton Shillitoe says:—"Lately the proportion has been one hard to five soft; this is above the average. One to eight or ten would be nearer the mark."

Mr. Gascoyen thinks the proportion "somewhere about three cases of soft sore to one of hard." Mr. J. R. Lane, speaking with regard to males, thinks the proportion about four or five soft to one hard. Dr. Barton, Dublin, thinks they are as two to one; whilst Dr. M'Donnell, of the same city, says—"I do not use the terms *hard* and *soft*; but if they are intended to mean syphilitic and simple, then the simple sores are about four times more numerous than the syphilitic."

On this particular subject Mr. Berkeley Hill has taken unusual pains to be accurate. He says:—"In 1869, among the male out-patients at the Lock Hospital, I had 1887 individuals under observation; of these, there were 675 cases of venereal sore. In 201 the patients were under observation long enough for the local nature of the disease to be ascertained. In 403, the sores were accompanied or followed by symptoms of constitutional disease—*i.e.*, skin eruption, sorethroat, etc. In 71, the sores had hard bases and enlarged inguinal glands; but as they were seen only once or twice, and then ceased to attend, they have been reserved for a 'doubtful' category."

On this subject the statistics of Puche and Fournier are ordinarily quoted. Amongst 10,000 sores, Puche found 1955 indurated chancres and 8045 soft chancres—that is, something less than one hard to four soft. Fournier noted 341 cases, of which 126 were hard and 215 were soft, which is more than one to two. But another remark of the same author is very well worth notice; he says, "In private practice the simple chancre is rarer than the syphilitic chancre. I have been especially struck with this difference, which may be expressed in figures as follows:—Out of 334, 82 were simple sores and 252 infecting sores." It is, at least, pleasing to find that in this country hard sores are much less frequent, although it is affirmed, especially in Dublin, that syphilis following soft sores is much more frequent than abroad. It is, further, quite plain, as already pointed out, that a negative diagnosis cannot be formed from the sore alone with regard to the probability of secondaries following in its train.

(*To be continued.*)

EDINBURGH ROYAL INFIRMARY.

USE OF THE ÆSTHESIOMETER IN DIABETES.

Professor Laycock lately called the attention of his class to the fact that anæsthesia is one of the morbid conditions in diabetes mellitus, and that the defective nutrition and abolished functional activity of the cutaneous glands depended upon a centric neurosis, of which the hunger, thirst, and abnormal productions which characterise the disease are also signs. It is this defect in trophic innervation of the skin which renders diabetic patients so peculiarly predisposed to cutaneous diseases, and upon which the harshness and dryness of the skin depend. We are enabled, by the kindness of Mr. Lowton, one of Dr. Laycock's clinical clerks, to publish a note of the sensibility of the skin as determined by him in two cases of diabetes mellitus, and as compared with the normal sensibility and with that of psoriasis. The localised diminution is suggestive.

Comparative Cutaneous Sensibility in Diabetes Mellitus. Case 1.—*John C., Medical Ward No.* 1.

	The Æstresiometaic Distances are, in—											Average Diminution.
	Fore-arm.	Palm.	Deltoid.	Inter-scapular.	Anterior Surface of Thigh.	Posterior Surface of Thigh.	Leg.	Sole of Foot.	Dorsum of Great-toe.	Over Malar Bone.		
Normal state	1 inch	5′	1 in. 6′	1 in. 9′	1 in. 4′	9′	2 inches	7′	7′	5′		
Diabetes mellitus—right side .	1 in. 8′	7′	3 inches	2 in. 11′	1 in. 10′	1 in. 10′	2 in. 4′	1 in.	1 in.	9′		8 lines.
Ditto—left side . . .	1 in. 9′	7′	2 inches	2 in. 4′	2 inches	1 in. 10′	2 in. 2′	8 in.	1 in.	8′		5½ lines.
Psoriasis vulgaris . . .	1 in. 2½′	8′	1 in. 7½′	1 in. 10′	1 in. 5′	10′	2 in. 2′	10′	10′	7′		2 lines.

Note.—The most marked diminution of sensibility in this case is manifested by the region over the right deltoid and infra-spinatus muscles. A similar defect is notably present on the anterior and posterior surface of both thighs.

Comparative Cutaneous Sensibility in Diabetes Mellitus. Case 2.—*William M., Medical Ward No.* 2.

	The Æsthesiometric Distances are, in—										Average Diminution.
	Fore-arm.	Palm.	Deltoid.	Inter-scapular.	Anterior Surface of Thigh.	Posterior Surface of Thigh.	Leg.	Sole of Foot.	Dorsum of Great-toe.	Over Malar Bone.	
Normal state	1 inch	5′	1 in. 6′	1 in. 9′	1 in. 4′	9′	2 inches	7′	7′	5′	
Diabetes mellitus—right side .	1 in. 5′	6′	2 inches	2 in. 6′	2 in. 2′	1 inch	2 in. 5′	7′	1 in. 3′	7′	5 lines.
Ditto—left side . . .	1 in. 5′	6′	2 in. 2′	2 in. 8′	2 in. 4′	1 in. 1′	2 in. 1′	8′	1 in. 2′	7′	5⅕ lines.
Psoriasis vulgaris . . .	1 in. 2½′	8′	1 in. 7½′	1 in. 10′	1 in. 5′	10′	2 in. 2′	10′	10′	7′	2 lines.

Note.—In this case, also, it is seen that the most marked affection of cutaneous sensibility is in the region of the deltoid and scapula, above the anterior and posterior surfaces of the thigh below.

BIRMINGHAM GENERAL HOSPITAL.

HEREDITARY BRONZE COLOUR OF THE SKIN SIMULATING ADDISON'S DISEASE—INTRA-THORACIC ANEURISM (?), WITH A REMARKABLE COLLATERAL VENOUS CIRCULATION OVER THE CHEST AND ABDOMEN, ESTABLISHED FOR THE RELIEF OF THE SUPERIOR VENA CAVA.

(Under the care of Dr. JAMES RUSSELL.)

Case 1.—The interest of this case lies in the contribution it makes to the clinical history of that form of coloured skin which in its general characters imitates very closely the colouring observed in Addison's disease. In the present instance, indeed, the resemblance was so striking that, on a superficial examination, the idea of Addison's disease at once occurred to the mind. Joined to the colouring of the skin, in this case, is to be added the circumstance which generally gives significance to cases of questionable diagnosis in the disease just named—the presence, namely, of protracted anæmia, without any of the usual explanations of that condition being presented by the patient. Of course the occurrence of dark skin in other members of the patient's family at once threw doubt upon the diagnosis, and the doubt was confirmed by the absence of certain peculiarities in the distribution of the colour which are present in Addison's disease. Similarly, the symptoms, whilst coinciding with those of Addison's disease so far as the general evidence of anæmia went, were yet wanting in those special developments related particularly to the circulating and digestive apparatus, which impart so decided a character to the history of true Addison's disease.

C. F., aged 38. The whole of the body and limbs presents a remarkable tint of a rather dusky copper-brown. The colour is perfectly uniform in all parts, excepting on the soles of the feet, where it is nearly, if not quite, absent. The bronzing is very deep over the entire trunk, before and behind. It is also strongly marked on the dorsum of the hands and of the feet, where it is very dusky. The forearms and the knees are deeply coloured; the rest of the extremities more lightly. But the forehead and face, though presenting the characteristic tinge, are the palest parts, with the exception of the palms; the face has rather an anæmic character. The nipples and their areolæ are of a deep brown, but, with this exception, the parts of the body which usually exhibit a deep colour in Addison's disease—the armpits, groins, and scrotum—are not, with the partial exception of the latter, more deeply tinged than the neighbouring skin. Moreover, the eyeballs, in place of being clear and pearly, have a curious smoky colour, somewhat intermixed with yellow; the lips and the glans penis are very smoky; the mucous membrane of the lips, cheeks, gums, hard and soft palate are simply anæmic, quite without any streak or stain. The patient's hair is everywhere jet-black; his eyes deep-brown. He asserted that his skin had always been dark, but that it had become materially darker since his illness began, the change being progressive. The accuracy of this statement is fully established by my friend Dr. Buck, who had watched the patient for the last three years. A change in the opposite direction took place in a marked degree in his face whilst in the Hospital. There appears no doubt that a dark skin is hereditary in some members of the patient's family on his father's side. His father had black hair and a dark skin; a brother and sister of his father had also black hair, but a fair skin. He remembers that one of his brothers had black hair and a dark skin; and all of his sisters, seven in number, had black hair. He can say nothing further, as he has been away from his family for a long time. Out of seven of his children, five have black hair, and one a dark skin in addition. He knows that his family have lived in the neighbourhood of Pershore, in Worcestershire, for the two generations preceding his own, and that they have been healthy. His illness began seven years ago, with a sudden attack of giddiness and sickness whilst he was working in the fields in the summer-time, probably a mild sunstroke. He lay in bed two days, but from that time he dates gradually increasing debility. Each spring he has been laid by with an attack of weakness of increasing duration and severity, and on each occasion he has less perfectly recovered. During the past three years he has greatly failed in capacity for work, and during the past year has been almost incapacitated—indeed, the chief question which Dr. Buck had to decide was whether he should be permanently removed to the workhouse. But with these symptoms he has suffered little or not at all from faintness; his breath, though rather short if he exerted himself specially, has never troubled him much, and though he vomited his food during a fortnight in an attack which he suffered last year, yet he has been almost free from this symptom. His appetite has been variable, frequently voracious. He has never passed worms. During the whole period of his residence in the Hospital he has been entirely free from any important symptom; his appetite has been good; he has always been about, and fairly active. For the rest, he is fairly nourished, presents no disease in any organ, his urine is free from albumen and from sugar, he has been quite free from œdema.

Case 2.—A. C., aged 46; formerly in the army, now a flax dresser; of questionably temperate habits. Had a sore on his genitals and a running twenty-five years ago, but no secondary symptoms. He presents marked prominence of the entire right mammary region, with a strong, diffused, heaving pulsation over the prominent part; decided dulness of the right side of the chest (incomplete beneath the clavicle, where there is a faint respiratory murmur), from the clavicle to the lower edge of the fifth rib, and from the right edge of the sternum (but not extending behind that bone) on one side, to the axillary line on the other. No bruit is audible, neither in the tumour nor over the heart, but a double sound is distinct in the former situation, precisely like that belonging to the heart. He was knocked down by a cab three years ago, and brought into the Hospital, and my colleague, Mr. Baker, who was at once recognised by the man, has an indistinct recollection of suspecting the existence of blood in the anterior mediastinum. The patient's symptoms are disguised by those occasioned by his very dusty occupation, but the chief complaints date only from the beginning of the past winter, though he refers to his accident as the prime cause of his ailment.

The most remarkable part of his case is the establishment of a most extensive system of venous anastomosis over the entire front of the thorax and abdomen, by which the circulation through the superior vena cava is in great part, perhaps wholly, transferred to the femoral and iliac veins, and through them to the inferior vena cava. The upper parts are entirely free from œdema, and have been so throughout his illness; his face is bloated, red, and full, especially about the cheek-bones; it varies, however, remarkably in this particular almost from minute to minute; at the least excitement, or as soon as he begins to talk, the vessels fill, and the eyes become watery and red, and the lips somewhat livid. The two superficial epigastric veins, enormously dilated, run up the abdomen, forming a closely set series of broad S-like convolutions as far as the ensiform cartilage, where, after forming apparently a considerable reservoir, they disappear, presumably to unite with the internal mammary veins. Each superficial circumflex ilii vein, also greatly enlarged, can be traced running in one continuous trunk, to disappear at the apex of the axillary cavity. The entire front of the chest is occupied by a complete network of distended cutaneous veins, ramifying in all directions, and among them, on the right side, is one large trunk, which runs, apparently independent of its neighbours, directly to the external jugular, into which it appears to open. Both external jugulars are distended, and the anterior jugulars are greatly developed. The cutaneous veins of both upper extremities are much distended, and both internal saphena veins of the thigh are also very full. The course of the blood through the dilated veins of the thorax and abdomen was clearly ascertained to pass from above downwards.

During the last month the patient has become subject to paroxysms of violent laryngeal dyspnœa; it was the occurrence of one of these attacks in the out-patient room, threatening suffocation, which occasioned his admission into the Hospital.

Repeated examination by the laryngoscope failed in detecting any permanent abnormal condition of the larynx besides congestion of the epiglottis; the movements of both vocal cords in respiration and vocalisation were perfect. Finally, both pupils are much contracted, the right one being somewhat the larger of the two; no amount of blindfolding succeeds in producing any dilatation. The pulse in each wrist is alike.

During the last week of his remaining in the Hospital, the patient had some attacks of epistaxis. His urine is free from albumen.

Note.—I wish to supply a careless omission in a case of "epileptic" loss of vision, reported at page 449. I omitted to point to temporary paralysis of the internal rectus as indicating the quarter in which the blindness originated—viz., defect in the muscular apparatus.

Glycerine as a Vehicle for Chloroform.—Dr. Murdock, of Cold Spring, New York, strongly recommends glycerine as by far the best vehicle for the internal administration of chloroform. Most other formulæ are of difficult preparation, and contain too little chloroform. By a little care in rubbing it up, one part of chloroform by bulk can be dissolved in three of pure glycerine. It is best first to take two parts of glycerine only, add the chloroform very slowly, and rub up carefully. Put this into a bottle, and let it stand for twenty-four hours, by which time a little of the chloroform will have become deposited. This is to be separated and rubbed up with the remaining part of glycerine, and mixed with the rest. No further separation will take place, and six ounces of glycerine, with two of chloroform, will furnish seven fluid ounces of solution, each drachm of which contains about seventeen minims of chloroform. It may be taken either as it is, or after water has been added.—*Boston Journal*, March 30.

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Medical Times and Gazette.

SATURDAY, MAY 20, 1871.

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"VELUTI IN SPECULO."—DR. MAZZONI'S VISIT TO LONDON.

Whoever amongst the London fraternity of Physic wishes that—

> "Some Power the gift would gie us,
> To see ourselves as others see us,"

may easily be gratified if he will take up the account which Dr. C. Mazzoni has given of his visit to the London Hospitals in the summer of 1868.(a) Dr. Mazzoni's chief object was to gather information respecting those capital operations which, he says, "have aroused the wonder of all Practitioners," and especially ovariotomy, and we must confess that his book gives us, in small compass, newer and fuller information respecting the minutiæ of this last operation than is to be met with in any work or journal published in this country. But before beginning his account of operations and similar *material* facts, Dr. Mazzoni devotes a few pages to the *moral* condition of the Medical Profession in England, and these are so singularly flattering to us, that we conceive them penned not only under the influence of the friendly sentiments which a courteously received foreigner would feel and express towards ourselves, but under the scarcely disguised conviction that a very different and worse state of things prevails at his own home—just as the description which Tacitus gives of the virtues of the Germans, or Voltaire of the *Ingénu*, are supposed to be backhanded blows at the vices of Rome and Paris.

One of the first things, Dr. Mazzoni tells us, which strongly arrested his attention was the kind of relation (not only rare, but unique, he calls it) which exists between the Physician and the patient. The mode in which Dr. Mazzoni describes this phenomenon is so remarkable that we will give the passage with little abridgement:—

Here, he says, Physician and patient seem impressed with a generous rivalry in working for the patient's recovery: the one displays a zeal that may be called heroic, and exhausts all the powers of his mind in contriving means for the cure, the other submits himself with blind confidence to the prescriptions and commands of the Physician. The blind confidence of the patient stirs up, so to say, all the energies of the Physician, who feels that the former has thrown himself entirely into his hands, and given him, as it were, power of life and death. It would be very difficult to say whether the desire of the Doctor to cure the sick, or of the sick man to be cured, is the greater. Hence arises such an accord and unity of sentiment between the two, that you may often hear the patient urging on the Doctor to leave no experiment untried; especially since, says our author, to the Englishman work is life, and idleness misery. No Englishman will resign himself to an invalid life without inevitable necessity.

(a) "Una Visita agli Ospedali di Londra, nell' estate del 1868." Pel Dott. C. Mazzoni. Estratto dal "Giornale Archivio di Medicina, Chirurgia, ed Igiene." Roma. 1869.

Another grand character, says Dr. Mazzoni, of English patients, is their constant fidelity to the same Physician or Surgeon. Old patients reappear constantly, bringing back prescriptions dated years ago. They don't look to success or want of it; they know the Physician does his best, and if he fails—'tis his misfortune, not his fault. The English well know that nature is stronger than art, and they never commit the enormous injustice of blaming the Practitioner when he has failed in the unequal combat. To the virtues of trust and constancy, English patients also superadd those of gratitude and generosity. How different amongst ourselves at home! sighs Dr. Mazzoni. How our patients humiliate us by their want of confidence and of constancy! How they blame us as the cause of illness and of death! And, alas! how often are their false and unjust accusations inspired by the unworthy Practitioner who is called in after us!

English Practitioners, continues Dr. Mazzoni, unite the happy characteristics of veneration for the traditional doctrines of their art, and of perfect freedom in the trial of every new and promising practice; and he deduces justly the success of the English school in ovariotomy from the persistence with which they have followed out Hunter's doctrine of "union by the first intention," without which the triumphs of that operation could hardly have existed. He naturally calls attention to the fact that this "union by the first intention" was the method of early Italian Surgery. Not less happy, he goes on to say, are English Practitioners in the disposal of their time. With his countrymen, he complains, the Physician is expected to be at the beck and call of the patient on the most trifling cases all day long—he cannot consecrate any fixed hours to society, to his family, or to literature; whilst in England the fixed customary hours for consultation at home, for the Hospital visit, and then for patients at their homes afford space for every purpose. And well, he says, do the English Practitioners spend their time; they have no insular prejudices, but search out whatever is valuable in all other countries under the sun. Spencer Wells, Holmes, Brodhurst, and Couper are distinguished for their acquaintance with Italian literature, and Dr. Mazzoni records with pleasure how Holmes reduced a dislocation after the manner of Professor Fabbri, of Bologna, how Brodhurst imitates Palasciano, and how Lawson cured aneurisms by digital compression, after the manner of Vanzetti. The London Hospitals come in for a full share of praise, and especially for the order and hygiene which reign therein; for the moderate size of the wards and good space for the beds; for their cleanliness, and the surprising absence of smells—no odds-and-ends of medicine or scraps of poultices are to be seen lying about the wards and passages. On the topic of Hospital hygiene Dr. Mazzoni evidently speaks with great authority, and it was he who brought the subject of death after operations before the International Medical Congress at Paris in 1867. The English Hospital Medical staffs, he continues, are distinguished for the delicacy with which, in consultation, they oppose, if need be, the opinions of a colleague, and the self-abnegation with which they will renounce any opinion, however cherished, when it is shown to be untenable. At their consultations all personal considerations vanish; the good of the patient is the sole aim, and no one considers it beneath him to do any act, however humble, that shall conduce to the patient's benefit. Sir W. Fergusson may be seen holding the staff for Henry Smith—"Non destò quindi alcuna maraviglia il vedere un giorno il celebratissimo Fergusson sostenere lo sciringone al giovane Smith, mentre operava un fanciullo di cistotomia." Not that this harmony in the least tends to monotony; on the contrary, each Surgeon is free to use his own method, and you may see in one day at one Hospital the same operation done by two Surgeons in different manners. Every man, whilst maintaining his own opinions within legitimate bounds, pays due respect to those of his colleagues. In this happy town, no base passions of envy or jealousy refuse to a colleague the homage due to his merits. Consultations are inspired solely by consideration of the patient's benefit, and never by the design of favouring one Practitioner or snubbing another. And, Dr. Mazzoni goes on to say, with some bitterness, London is not a place where a man is taken up merely because he is a foreigner, and out of a paltry desire to insult and humiliate native Practitioners.

We can assure Dr. Mazzoni that although, perhaps, a more intimate acquaintance with us might have enabled him to detect some few flaws in our Professional *morale*, inseparable from human frailty and active competition, yet that we desire to express the gratification which we all feel at the eloquent expression of his admiration for the gentlemanly and honourable manner ("la maniera decorosa e leale") in which the London Physicians and Surgeons practise their art.

We have lingered long on Dr. Mazzoni's account of our *morale*, and must compress into few words our remarks on the really valuable accounts which he gives of Surgical operations. As might be expected, he devotes most space to ovariotomy, which he witnessed in the practice of Mr. Spencer Wells, of whom he says—"Uomo di circa 50 anni, lo trovai facile e cordiale; parla la lingua nostra come un' italiano." This, which forms an excellent treatise on ovariotomy, occupies the greater part of the book, and is followed by succinct accounts of gastrotomy for fibrous tumours of the womb, and incision of the cervix uteri for dysmenorrhœa; next of lithotrity, of which he says—"Nei grandi Ospedali io la vidi praticare pressochè da tutti i chirurghi primarî, fra i quali vi noterò il Fergusson, l'Erichsen, il Paget, lo Smith, l'Holmes," etc.; then resection of bones and joints—a practice which he describes as of English origin—and, lastly, the practice at the Moorfields Ophthalmic Hospital, and the cliniques of Dixon, Bowman, Critchett, Couper, and Lawson. Then follows an attempt to explain the English Medical institutions, but as these are simply unintelligible and inexplicable, we need not wonder if this is the least trustworthy part of the book. The writer more than once affirms that, in his enthusiastic praise of our institutions, he does not wish to blame, by contrast, those of his own country, but only to exhibit a good example for imitation. We may with humility say that it would be good for us were we always to realise the flattering picture which he has drawn of us.

THE SANITARY COMMISSION ON MEDICAL OFFICERS OF PUBLIC HEALTH.

In the new volume of the Report of the Sanitary Commission, which has just appeared, is a memorandum upon this subject, which we hasten to notice. The Commission has come unanimously to the conclusion that every question affecting public health should be brought into relation with one central office, presided over by a minister, and that every Health Officer should thus stand, directly or indirectly, in official relation to him. Further, they consider that every person ought henceforward to be entitled to such reasonable public protection in respect of his health as he is in respect of his liberty and his property, and this everywhere and at all times. They lay down three principles of sanitary administration. The first is, that no member of the community shall, wilfully or for profit, damage another man's supply of the three absolute essentials of life—food, water, and air; and, therefore, that it is the duty of the State to secure, as far as possible, that these essentials shall be supplied in sufficient quantity and the greatest attainable purity, in all circumstances in which these objects cannot be attained by individual care and resources. The second is *universality*, through constant supervision by Health Officers in every part of the country. The third is efficiency in the agents, who must be well instructed and capable. The fourth is economy. Constant and universal supervision of the essentials of public health by competent persons, economically conducted, being the true object to be aimed at in sanitary legislation, the memorandum proceeds to consider:—

1st. *The supervision required.* This must be statistical in respect of births, deaths, marriages, diseases and the census, for which registrars already exist, except in the instance of sickness. For legal supervision there must be in every district an authorised legal adviser or clerk conversant with public-health law and public-health literature. Further, there must be engineering supervision. Sanitary engineering is, as they observe, one of the youngest branches of applied science, and, therefore, it is not to be wondered at that experts in it have been few. Its practice is also unsatisfactory, as shown by the fact that the very rules of water-supply, the construction of sewers and drains, disposal of sewage, etc., are still subjects of constant dispute. It is for the interest of ratepayers that there should be systematic and ready means of obtaining the most skilled supervision and arbitration on all large plans and works. So, too, there are required specially trained persons to advise and arbitrate upon chemical and Medico-legal questions not strictly pertaining either to the province of the engineer or the Medical man. Lastly, there must be Medical supervision. For this public health officers are and will be required, whose duty will be—firstly, the treatment of disease among the sick poor; and secondly, the disposal of questions relative to the prevention of disease and of injury to the health of the population. As the basis of a staff of public health officers the Commission look favourably upon the existing Poor-law Medical Officers. By laying health duties upon them, the three conditions of universality, efficiency, and economy will, in the opinion of the Commission, be met.

2ndly. *The qualifications of the sanitary agents to be employed.* Under this head, the Commission consider first the duties of local Medical officers of public health. Their scheme may be thus summarised. The curative duties of such an officer would remain much as at present; he would be required to fill up and transmit to the central office returns of sickness upon a form to be supplied, and upon another form returns of the general sanitary condition of his district, with observations as to special local causes of ill-health. If competent and willing, he might also undertake water analysis and meteorological observations. The Commission would guarantee his independence by making him irremovable by the local authorities; neither would they hinder him from undertaking in addition the duties of inspector of nuisances, inspector of workshops or factories, registrar, coroner, etc. In making this suggestion of utilising the existent staff of Poor-law Medical Officers, they would not be understood as withholding local authorities from employing, at a higher salary, Practitioners of higher qualifications or attainments. They next consider the subject of central inspectors of public health. They think that for this purpose the numbers of the present inspectors in the several central offices would, with few additions, meet the exigencies of the case. These are the twelve inspectors under the Poor-law Board, the seven Physicians employed under the Medical Officer of the Privy Council, the six lunacy inspectors, the thirty-three inspectors and sub-inspectors under the Factory Act, and the engineers under the Local Government Acts. They are of opinion that the district inspector, though he cannot be thoroughly versed in all the subjects which will come under his supervision, may be sufficiently master of most of them to know when the machinery under observation is working properly, and to decide when it may be necessary or expedient to call in a special expert. They very properly observe that, under the present system, by virtue of which the officers of the several central boards work independently, there is a great waste of power; and if all these officers were united under one chief, and acting harmoniously as members of one staff, they could thoroughly superintend the whole sanitary arrangements of the country and the 4000 Medical officers who, under the scheme, would be entrusted with local health functions.

3rdly. *How complete sanitary organisation may be best obtained.* They believe there should be (1) a Minister of Health; (2) six permanent departments under that Minister, for (*a*) law of local government, (*b*) engineering, (*c*) registration and statistics, (*d*) relief of the poor, (*e*) Medical care of public health and poor, (*f*) legislation bearing on the Profession of Medicine; (3) a body of inspectors attached to the Health Office—viz., (*a*) general inspectors attached to and generally residing in the registration divisions, poor-law districts, or (as they will be also) public health areas, (*b*) special inspectors, legal, engineering, scientific, and Medical, (*c*) special experts, advising professionally for special fees, (*d*) local clerks, surveyors, public health Medical officers, etc. They regard this arrangement as simple, since no existing office need be destroyed, and some will be amplified; and also as advantageous, since it will be efficient, complete, and economical. Neither money nor skill will be wasted. All reports bearing upon public health will be connected one with the other, and mutually illustrating each other. The connection of the Minister of Health with the Medical Profession would be beneficial to the whole country, would tend to disseminate uniformly scientific knowledge, and do away with crude theories and impracticable plans bearing upon the physical condition of the masses.

Such, in brief, are the views of the Sanitary Commission. They are no doubt open to much criticism, and such criticism will be freely made. One difficulty they themselves suggest, and we think it is no mean one—namely, whether highly educated youths will take the posts, at present ill-paid, which the public may offer to them; and whether the rural districts, when the younger and more highly trained classes of men have occupied the field of practice, will be supplied at all at the present rate of remuneration.

THE SMALL-POX EPIDEMIC.

The sudden fall of deaths in London from small-pox which occurred last week—namely, from 288 to 232—occurring about three weeks after the mean temperature of 50° was reached, appears to be confirmatory of the favourable hopes we expressed last week, that the epidemic had, for this season, arrived at its climax. That it should decline, however, steadily and without fluctuation, is scarcely to be looked for. The comparatively cold weather of the last fortnight scarcely permits of such an anticipation. All the districts in London participated in the decline, notably those where the disease has been recently most prevalent. In the North the deaths fell from 81 to 64; in the South, from 108 to 84; in the West, from 30 to 23; in the East, from 51 to 46; and in the Central districts, from 18 to 15. The Registrar-General says, "Greater energy appears to have been shown in securing the more general adoption of the protective influence of vaccination," and he would lead us to infer that the decline of the disease is due to this cause. We scarcely think any such inference ought to be drawn, inasmuch as there is no evidence whatever that vaccination has been more generally sought within the last few weeks; but perhaps the Registrar-General has some information on this subject not possessed by other people. Our own belief is, that the decline is altogether independent of anything of the sort. In Southampton there has been a decline both in the deaths and in the number of new cases of small-pox. Brussels and Berlin are still suffering greatly. In Brussels, out of 159 deaths in the week ending May 6, 35 were from small-pox; and in Berlin, in the week ending May 11, out of 585 deaths, 110 were from small-pox.

YELLOW FEVER AT BUENOS AYRES.

The last news from Buenos Ayres, in respect to yellow fever, has been of so serious a character as to divert our attention back to earlier data. There has been of late an epidemic in Paraguay, and also, for some few years past, in Brazil; but the superior attention which has been paid at Rio Janeiro to its port—the most objectionable, till of late, in many points of hygiene, as well as the most beautiful—has reduced yellow fever there to a few sporadic cases. The quarantine which exists between Buenos Ayres and Paraguay is, at the present time, so little effectual, that one-half of the passengers are said to escape from it by landing at some other point. Buenos Ayres, situated on a vast river, has, properly speaking, no port other than a rivulet (the Riachuelo), a sort of Fleet, serving largely for sewer purposes. The present relation of these countries to yellow fever, which has long been no stranger among them, is now pretty fairly such that with every hot summer its appearance may be calculated on, while with the cold of winter it subsides. This is very well seen in Brazil. Its moist and humid climate seems precisely framed to acquire and also to retain the incalculable privilege of this yellow pest. The circumstance that paludal fevers, with gastric, biliary, and intestinal disturbance, are native to the country—fevers which, in their highest phase, bear a close resemblance to yellow fever—offers to the endemicity of the latter, in fact, the most favourable of opportunities for its fixation whenever it may appear upon the stage.

In Buenos Ayres, just before the epidemic, this very class of cases prevailed (of no very fatal character indeed), leading, as is wont to be the case, to a denial, on the part of some, of the identity of the yellow fever. It is fair to state that in the reports of January such cases as these were prominent above all others, exception being made for typhoid and also biliary fevers. The days at that time were very hot, and the nights were fresh and cold. This state of Medical constitution continued till the end of February, towards the end of which month and the beginning of the next it was relieved by rains and by fresh winds from the north-west, which gave rise among the population to frequent acute disorders, especially of the respiratory apparatus, the same class of affections continuing still in the gastro-intestinal apparatus and organs subsidiary to it. It was in the last week of the month of January that cases of yellow fever were signalised by Dr. Larrosa in the Calle Bolivar, attributable by him to the defective hygiene of the close habitations there, to the reigning Medical constitution, and to the elevated temperature of the middle of the month, especially towards the latter end, when the heat continued far into the hours of the night. The "Commission of Municipal Hygiene" caused the house to be cleared, had some of the furniture burnt, and the rest disinfected. The Commission of the Parish also appointed Dr. Wilde for the service *ad hoc* of the district. The fever is stated at this time to have made but little ground, being confined to San Telmo, the quarter in which it arose, of whose bad hygienic conditions and exceptional character we shall have more to say anon; but before February 8 some cases had occurred in the north of the city. In the Medical journal the *Independencia Medica* there had already appeared a *rationale* of the clinical treatment and prophylaxis of yellow fever, which, being copied into other journals, showed a very general anticipation of increase in the disease. On February 9 there occurred the death from yellow fever of Dr. D. B. Ventura Bosch, one of the celebrities of Buenos Ayres, founder of the Hospital de Dementes and Hospicio de Mujeres, philanthropist and Physician, who was venerated and esteemed by all his fellow-townsmen. Subsequently, as the month went on, affections of the gastro-intestinal tube began to divide attention with the incessantly predominating small-pox, passing as they did into yellow fever, if we may use an expression, current at that time among the people, which is not scientifically correct. The yellow fever had now gained its footing as a minor epidemic at San Telmo, the ward where it had commenced, but with promise of speedy extinction, as it was affirmed to be on the decline. Some few cases had occurred, it is true, in the north and west of the city, the affiliation of which to the infected quarter was perfectly ascertainable. Some other cases—as in the Calle Bergamo, for example—could not be so explained, and it was precisely these cases that gave best cause for alarm as to the future. At this time, and as if in the usual course, several persons made themselves conspicuous in denying the existence in the city of yellow fever; among the rest an English señor, whose want of sincerity was commented upon in some of the public prints. At this time, variola, which counts for a fifth of the ordinary mortality, was still absorbing the largest share of interest. For two years previous an epidemic of small-pox had reigned in Buenos Ayres. There were present, also, pneumonia of severe type, acute and rapid phthisis in adults; in children, head, chest, and throat affections. The general apprehension of yellow fever was further lessened by a reprint in the leading Medical journal of historical and therapeutical articles (from the *Siglo Medico* of Madrid) upon that dreadful pestilence. On March 4 there appeared an article in the public print the *Nacion*, on "Mortality and its Causes," stigmatising the Riachuelo as a common and ever-present enemy, as a very immediate source of peril, thus giving a further proof of the general apprehension as to the future of the disorder; indeed, on March 8, the *Revista Medico-Quirurgica* of the Medical Association of Buenos Ayres had to announce so many as 800 deaths during the previous fortnight from yellow fever. Meanwhile, the same Medical constitution was maintained as regards chest affections and small-pox, and with them some typhoid fever and cholera cases. There were noticed generally in the city saburral, gastric, intestinal, and hepatic complications, and, as highest expression of these and of the Medical constitution, the yellow fever epidemic at this time so thoroughly developed as to characterise, if not to constitute, a real and potent epidemic. Its growth and diffusion continued, for the most part, in the ward where it first appeared—namely, in the parish of San Telmo—infecting the open spaces surrounded by streets both narrow and moist which are found in this quarter. The deficiency of pavement in these streets, called *terceros*, with numerous crevices and faults and holes, and much stagnant water, exhaling all manner of abominations, renders the place a public nuisance; it is the resort of the idlest and lowest class, who here abound and take their pleasure. No good will here be effected, perhaps, but by personal responsibility thrown on the individual, both as to himself and also to the property he owns. This is the regular haunt of the over-stimulated emigration. It is observable that, as yet, among the deaths from yellow fever, the Italians count for seventy in 100. Recruited chiefly from the Neapolitan States, these emigrants bring with them an *incuria*, an idleness and neglect of hygiene which is almost beyond conception. There is no home to receive them on arrival, and the Lazaret (*La Ensenada*) is not worthy of the name. A doubtful good at the best, they are a constant peril to the community. This and the Riachuelo are the two great standing abominations. The genius of the stream is stigmatised by the public press as battening on human victims, and as worshipped and guarded with religious awe by certain thriving classes in the town, and quite safe while protected by their hands from any innovation; meanwhile it counts its hecatombs, it is compared to the goddess Febris of the Romans, to the Olà-Bibi of the Ganges. The Riachuelo serves as a common sewer, and also as issue for the salting-places, where there is a constant outpour and overflow of organic refuse and filth. In other respects the municipality has not been inert, and some murmuring has been produced by one of its acts as of very equivocal benefit; this directed that "every person, without exception, proceeding from the infected points (parish of San Telmo), if any way infected with the yellow fever, should transport themselves or be transported to the municipal Lazaret with no reserve whatever as to sex or position." To this ordinance the Faculty are generally opposed, as prejudicial, futile in operation, and contrary to instinct and experience, as well as to the more wholesome and ordinary rules of modern hygiene. Dispersion, they say, has ever proved the only effectual means, or at least the best ultimate resource in contending with a virulent contagion. In 1849 and 1854 in Paris this was proved as to cholera, especially in the Salpétrière where an agglomeration in cholera wards had intensified the epidemic. This question, it must be confessed, touches us in London nearly in respect of small-pox, though the circumstances are not quite identical.

THE WEEK.

TOPICS OF THE DAY.

The General Medical Council is summoned to meet on Tuesday, July 4. Dr. Sharpey, whose term of Membership had expired, has been reappointed a Member by the Privy Council.

A new scheme for the formation of a Conjoint Examining Board for England has emanated from the Royal College of Physicians, and is now under the consideration of the Council of the Royal College of Surgeons and of the governing body of the Apothecaries' Society. It would be premature to discuss at length the propositions offered by the College of Physicians for the acceptance of the other Corporations. In its general tenour the scheme seems to be a fair one, although there are not wanting points in it on which exception may reasonably be taken. In considering it, the first question will be whether the mode of appointment of examiners or assessors proposed by the College of Physicians be practicable under the legal instruments which empower other of the bodies to examine and grant licences. This question being settled in the affirmative, as we have said, the scheme presents such a general appearance of fairness that we do not think it should be rejected without full discussion. The first resolution arrived at by the College of Physicians is that a Board of Examiners shall be appointed in England by the co-operation of the Universities and other Licensing Bodies mentioned in schedule A to the Medical Act, "it being understood that, liberty being left to the Universities and other Licensing Bodies to confer, as they may think proper, their honorary distinctions and degrees, each co-operating body will abstain from the exercise of its previous independent privilege of giving admission to the Medical Register." With the general principle of this resolution, which is intended to secure the co-operation of the Universities on the understanding that all Medical students graduating shall pass the Conjoint Board, we heartily accord. But it seems to us that the term "honorary distinctions and degrees" leaves open a very wide door. If an English University should grant to a British subject a degree, honorary or otherwise, of Doctor of Medicine, could the Registrar of the General Medical Council, acting under the 15th clause of the Medical Act of 1858, refuse to register him? We very much doubt it.

The next resolution is to the effect that a committee, to be called "the Committee of Examinations," shall be appointed by the Universities and Licensing Bodies, and that this Committee shall consist of one representative of each of the English Universities, two representatives of the Royal College of Physicians, two of the Royal College of Surgeons, and two of the Apothecaries' Society. Here objection, we think, may fairly be taken to the disproportionate amount of power this resolution would vest in the hands of the University of Durham, an institution which has but little claim at present to be considered in any practical sense a Medical examining body. It might also be urged that the element of pure Physic would predominate too greatly in the Committee, as the representatives of the Universities would rarely, if ever, be Surgeons or General Practitioners. These are reasons for diminishing the number of University representatives, but, of course, they do not affect the principle of the scheme. The duties of the Committee of Examinations are to be—"To determine the number of examiners to be assigned to each subject of examination, and to nominate such examiners for appointment by the several Universities and Licensing Bodies; to regulate and superintend all other matters relating to the examinations, and to transact such business as may be referred to them by the Universities and Licensing Bodies, and to report periodically their proceedings." It is, however, easy to foresee that the powers of this Committee of Examinations must be more carefully defined and limited, or the scheme cannot be expected to work satisfactorily. It is true that the appointment of examiners would still be vested in the present Examining Bodies, nomination only being the function of "the Committee of Examinations." The legal rights of the present Examining Bodies would thus nominally be preserved. But it is clear that the power of the Committee of Examinations could never be stretched to over-ride the legal powers of the Examining Bodies without danger of the disruption of the alliance. The next resolution provides that each candidate is to be required to pass two or more Professional examinations. The rest of the scheme deals with finance. The candidate is to pay £15 15s. to the Committee of Examinations, to defray the expenses of the examination, but will have to pay an additional fee for his diploma to the College of Surgeons and either of the Medical Corporations which he may select. University graduates in Medicine will only be required to pass the final Professional Examination, and to pay a fee of £5 5s. This, however, would not entitle the graduate to the diploma of either Corporation without an additional fee. Such are the main features of the scheme elaborated by the Royal College of Physicians. We shall be very glad if it prove the platform whence an easy ascent may be made to the settlement of this vexed question; and we can only express again our hope that a mutual understanding may be arrived at by the contracting parties before the meeting of the General Medical Council on July 4.

For the office of Obstetric Physician and Lecturer on Midwifery at St. Mary's Hospital, vacant by the retirement of Dr. Tyler Smith, we hear there are three candidates in the field—Dr. Meadows, Dr. Edis, and Dr. Heywood Smith.

The Anatomy Act (1832) Amendment Bill, which is now before Parliament, is simply intended to lengthen indefinitely the time during which a body may be kept for dissection. The following is the important clause in the Bill:—

> "It shall be lawful for one of Her Majesty's Principal Secretaries of State in that part of the United Kingdom called Great Britain, and for the Chief Secretary for Ireland in that part of the United Kingdom called Ireland, from time to time, by order, to vary the period limited by section 13 of the recited Act (the Act of 1832) as to the time within which certificates of interment are to be transmitted to the inspectors of districts."

CHOLERA IN RUSSIA.

We have received some important statistics relative to the outbreak of cholera in Russia, which, it seems, is more severe than we had conceived. The following tables show the number of cases and deaths up to May 1, and from the 1st to the 9th of the present month thirty new cases had occurred, with eleven deaths. The epidemic is officially notified as prevailing in the governments of St. Petersburg and Moscow, and in the neighbourhood of Wilna. Probably it prevails over a wide area in North-Western and Central Russia. Even before March 20, when the statistics began, about sixty cases were occurring daily. During April the weather is stated to have been hot and sultry, and the air stagnant. There was a remarkably early and rapid break-up of the winter, with flooding of the lower portions of St. Petersburg, which intensified the naturally unhealthy condition of the city. The sanitation is bad.

St. Petersburg Cholera Bulletin (*"Spring" Outbreak*), *from "Gazette de Police."—First Daily Bulletin, March* 20, 1871.—(*English time.*)

	Males.	Females.	Total.
Cases to March 20 . . .	135	96	231
New cases	60	38	98
Cured	1	3	4
Died	19	23	42
Remaining under treatment on March 21	175	108	283

Total from March 20 *to May* 1, 1871.

	Males.	Females.	Total.
Cases	1522	913	2435
Cured	978	595	1573
Deaths . . .	601	318	919

Moscow Bulletin, May 9, 1871.

New cases	3
Deaths	2
Remaining under treatment . . .	12

FROM ABROAD.—PROFESSOR BILLROTH'S LETTERS FROM THE SEAT OF WAR.

In concluding (see *Medical Times and Gazette*, p. 458) his observations on the arrest of hæmorrhage in wounded arteries, Professor Bilhroth observes that, for the determination of the agency of the thrombus, those cases are of very great importance in which the individuals have died before the ligature has come away. He refers to such a case which came under his own care at Zurich (*Arch. für Klin. Chir.*, B. ix., p. 304), the subject of which died fourteen days after a double ligature of the carotid on the right side. The ligature came away without bleeding, on the very day of his death, and the artery was found closed by a firm thrombus of two inches firmly adhering to the walls of the vessel, extending downwards to the arteria innominata, and upwards to the internal and external carotid. On the left side, on which the common carotid had also been tied forty-eight hours prior to death, the artery exhibited no thrombus whatever, nor was its inner coat torn through, although the walls of the vessel were so completely plaited together as to become impermeable. In the museum at Zurich there is also a carotid after ligature, in which the whole thrombus is scarcely three lines in length. In the three cases of ligature of the external iliac related in the present letters, there was either no thrombus at all or only a very small one; while, in the statistics of ligature which have been published, the absence of thrombus has been frequently recorded. The cause of this irregularity in the formation of thrombus is very difficult to determine, and, indeed, cannot be determined until we are better acquainted with the laws of the coagulation of the blood. After noticing some of the circumstances influencing this, and the contradictory character of some of the conclusions, Billroth observes that it is only too obvious how little is clearly made out. One practical, although a negative result is, that neither by the choice of the point of application of the ligature nor by any other circumstance do we find ourselves able, in any operation we undertake, to exert any certain influence on the formation of a thrombus, and still less upon its extent: for, on critical examination, all the points which have been supposed to be essential turn out to be of mere contributory influence. The practical importance of the rupture of the internal coat of the artery after ligature in relation to the formation of thrombus, first so accurately set forth by Jones, has been again brought into prominence by Kocher, in his able work on acupressure. Yet the small size of the thrombus, and its occasional absence after ligature and acupressure, show that even this circumstance exerts sometimes but a slight influence; for it is evident that a thrombus which can only be detected by a magnifying glass cannot furnish any security against hæmorrhage after a too early separation of the ligature.

With respect to the closure of the arterial wound without the agency of thrombus, Billroth is of opinion that formerly he, like most others, too much overlooked its possibility. Recent experience, however, and the attentive study of the writings of Kocher and Roser upon the subject, have much modified his former views. Although he has much employed acupressure, he seldom examined the vessels after death following amputation, assuming that a thrombus, as is usually the case after ligature, was present. As this, however, is not always the case, and yet hæmorrhage does not occur, this can only happen from the contorted end of the vessel remaining in the same position after the withdrawal of the needle as it had been placed in by it. Kocher has shown that this "fixation" is not brought about by the firm adhesion of the inner coat over so limited a space; while that the mere trace of a coagulum, which is all that is often present, is not able to arrest the stream of blood from a femoral artery two days after it has been wounded, need hardly be stated. Neither does acupressure or acutorsion induce the entanglement and crushing of the arterial tissues which result from écrasement. Small arteries may easily become closed by muscular contraction, and so remain until other means aid in rendering their closure definitive; but large arteries, being almost devoid of muscular tissue, are not enabled by contraction to close their bore. There remains but one other mode. The mouth of the artery closed by means of the pressure of the needle, or by torsion, becomes fixed while in such condition by the fibrinous exudation which is secreted or deposited amidst the tissues of the wounded surface. This extremely dense, cohesive, contractile substance, which gives rise to granulating and cicatricial tissue, retains the ends of the arteries *in situ*, first adhering to and then intimately uniting with them, so as to permanently close their orifices. Whoever has had to separate the flaps two or three days after an amputation is well aware how firm this adhesive substance may become within that time, and will not feel surprised that it should suffice to occlude the ends of the vessels after the removal of the needles.

It is more difficult to understand how the closure of the end of a vessel that has been tied is effected when no thrombus is formed. We generally assume that a thrombus is formed which closes the vessel until the wounded surface has healed. That this thrombus disappears at a later period, the artery becoming closed finally by a cicatrix, is shown by the fact that, in all the healed amputation-stumps that he has examined, Billroth has found the arteries terminating conically, without any trace of thrombus being discernible. Are we to conclude that, in all the cases in which no thrombus was present, hæmorrhage would have occurred had the circular eschar caused by the ligature separated? The question is not easily answered, but it is very probable that the end of the artery conically disposed by means of the ligature might remain so fixed by the fibrinous exudation, which, on the fall of the ligature, if this did not happen too early, would close the aperture. Kocher well compares this occurrence to Cooper's operation for the closure of a small aperture in the intestine. The peritoneal and mucous surfaces are taken up by a forceps and tied; but although mucous membrane is brought in contact with mucous membrane, union only becomes possible after its division, and when brought in contact with the peritoneum. This, without being a good operation, serves to illustrate how an artery without any thrombus, and without its walls uniting with each other, may become closed. After the fall of the ligature, any disposition of the artery to recover its cylindrical form by means of its elasticity would be impeded by the fibrinous effusion or granulations. The elasticity would also be considerably diminished in consequence of the participation of the vessel in the surrounding inflammation. The general conclusion to be drawn is, that the orifice of an artery that has been tied may be closed without a thrombus; but that, in the absence of thrombus, acutorsion is a more secure procedure than ligature.

It has justly been remarked how extraordinarily rarely hæmorrhage occurs after the ligature of the ends of arteries in an amputation-stump or in a large wound. Its far commoner occurrence when a ligature is applied in the continuity of the vessel has led to the application of a double ligature and a division of the artery between them, under the idea that the formation of thrombus would be thus more favoured. An examination of the results of ligature has also led to a well-grounded belief that when the vessel is tied in continuity the central end becomes better secured by a firm thrombus than the peripheral end. There are, indeed, but few cases on record in which it is shown with exactitude from which end the hæmorrhage has really occurred after the separation of the ligature; and certainly more facts are required before any definite conclusion can be arrived at. It is evident, however, that the definitive closure of wounds or the ends of arteries is more difficult after ligature in continuity, or hæmorrhage would not occur so much oftener. This has been sought to be explained by the defective thrombus-formation; and leaving out of account the cases in which the closure may take place without any thrombus, there are circumstances which may exert an unfavourable influence. Among these is the more or less difficult displacement of the tissues around the artery, impeding the spread of granulations over the tied artery. Those spots are especially unfavourable to ligature in which the artery is surrounded by a very dense immovable tissue, or when it lies on a bone. The subclavian (where it passes over the first rib), the femoral (first under Poupart's ligament and then in the tendinous sheath of the adductor), and the popliteal, according to this view, should be especially liable to hæmorrhages after ligature; and this corresponds tolerably well with the results of experience. Certain motions, also, are especially likely to disturb the healing process going on in the artery. Thus, moving the arms, deep respiratory movements, cough, sneezing, etc., may give rise to a rupture of the recent cicatrix, which may secure the aperture of the carotid or subclavian after the fall of the ligature. Raising the pelvis in order to pass a bed-pan under might induce hæmorrhage from a femoral which had been tied under Poupart's ligament.

Among the circumstances which may favour secondary hæmorrhage is the pyæmic condition. This in itself exerts no influence on the solidity of the arterial walls, nor does it impede the formation of thrombus; for those who ascribe to pyæmia an influence upon secondary hæmorrhage also, for the most part, admit as one of its consequences extensive venous thrombi, which, indeed, in Billroth's opinion, are chiefly due to periphlebitis. He also believes that the pyæmia favours the softening and disappearance of the thrombus, as almost all recent pathological formations take on under its influence a purulent character. Moreover, the failing and relaxed granulations are ill-suited to effect a definitive closure of the vessel, especially when the thrombus is defective or absent.

In concluding this subject, Professor Billroth states that thus, although in the majority of cases a thrombus is formed after the ligature of an artery, the length and cohesion of this to the walls of the vessel are far more variable than most Surgeons formerly believed. When the ligature cuts through at an early period, and a firm thrombus is present, this is a very favourable circumstance, as the bleeding may be not only temporarily but permanently arrested until cicatrisation of the artery is effected. Experience of the uncertainty of thrombus-formation has, however, led to increased attention being paid also to the other modes of preventing hæmorrhage. Among the precautions taken in order to favour the formation of thrombus is the rule that we should not tie an artery in the immediate vicinity of a large branch, or, if this is unavoidable, that the branch should also be tied. Another is the application of a double ligature and the division of the artery between them. Both precepts are useful, but, unfortunately, they furnish no guarantee that hæmorrhage may not follow ligature, as is shown by some of the cases related in these letters. That inflammation of the walls of an artery, induced by their free exposure, will lead to extensive thrombus-formation, is contradicted by the author's trials made on the carotid and axillary arteries. Various attempts have been made to induce thrombus by acting upon the inner coats of the artery by means of ligatures temporarily applied, pressure with forceps, etc.; but as, to be effective, the injury done to the artery must be considerable, there is no security that in the constricted portion gangrene may not be occasionally induced or an aneurism developed. Another plan is, after having tied the vessel in its continuity, to place two small acupuncture needles about four lines above and two at four lines below the ligature, leaving them *in situ* for forty-eight hours. The procedure could not be executed in all localities, but no ill effects need result from it, unless the thrombus, from being very extensive, gave rise to gangrene of the limb. Whether a thrombus so induced would remain and become organised, or whether it would have only a short duration, it would be difficult to predict. Upon the subject of durability of thrombi, Billroth has made many observations. Some of those which form in cavernous tumours and veins persist in the form of phlebolites, or occasionally stretch across the cavities of the vessels in the form of calcified cords. Arterial thrombi in arteritis with gangrene, as a rule, remain; and on a section of a thrombus of the posterior tibial, chalk and a great deal of pigment were found imbedded. A thrombus, when it becomes very vascular at an early period, probably soon disappears; but in other cases it may persist and petrify. In conclusion, Billroth adverts to the recommendations which have been made of healing the wound as speedily as possible, and thereby securing the definitive closure of the artery; of separating this as little as possible from its sheath, and applying ligatures strong enough to exert sufficient pressure, but not completely to divide the inner coat. In allusion to Hennen's practice of cutting the ligatures off short and leaving them in the wound, he observes that the silk we employ at the present time is better suited to this practice than that used formerly. In one of his successful cases of ovariotomy, fourteen silk ligatures cut short have remained within the abdomen for years without any ill effect.

PARLIAMENTARY.—METROPOLITAN POOR ACT AMENDMENT BILL—ATTENDANTS ON LUNATICS.

On Thursday, May 11, in the House of Lords,

The Metropolitan Poor Act (1867) Amendment Bill was read a second time, the Earl of Kimberley explaining that further accommodation for small-pox patients was required than was afforded by the three Hospitals erected under the Act, and that the Admiralty were ready to place a ship at the disposal of the Poor-law Board. This arrangement necessitated an amendment of the Act.

On Friday, the Metropolitan Poor Act Amendment Bill passed through committee.

In the House of Commons, on Monday, in reply to Sir James Lawrence,

The Chancellor of the Exchequer said the Commissioners of Inland Revenue were simply giving effect to the existing law in reference to the licences to attendants on lunatics. No licences were required by the attendants on lunatics in institutions supported by the public, but whenever a patient had a person attending upon him as a servant, a licence must be taken out.

The Metropolis Water-supply Bill.—Mr. Bruce expressed a hope in the House, last week, that, in the interests of the poor in the metropolis, this Bill would be passed during the present session.

THE AUTUMN TOUR OF A DRESSER, 1870.

Part III.

(*Continued from page* 461.)

Waking about four o'clock next morning (Tuesday, August 30), we set off in search of fuel, and, "requisitioning" some vine-sticks, proceeded to build up a fire and prepare our breakfast—a meal we found very comforting after the night's bivouac. About six the commissariat column in whose company we had left Rémilly moved on.

A few miles from Corny is Gorze, a large village in the valley of the Moselle, the houses of which, at the time we passed through it, were full of sick and wounded from the bloody fields of Gravelotte, Gorze, and Rézonville. There were a great many cases of typhus exthanthematicus, cholera, typhoid, and dysentery. This we learnt *en passant.* Our journey lay west, and we had to ascend a steep incline, the summit of which was a plateau some two miles square, which was the scene of the celebrated victory gained by the Germans on August 18, after three days' successive checks. It bore ample traces of the contests, the stench arising from the decomposing corpses being almost unbearable, and there being, at every twenty paces, piles of helmets, knapsacks, and broken muskets heaped up.

Connecting Gorze and the field of Gravelotte is a wood, through which runs a road with ditches on either side, about a mile in length. These ditches presented a most extraordinary spectacle, being completely filled up with broken rifles, helmets, knapsacks, sabres, and the usual *débris* of a battle-field. The field of Gravelotte itself, occupying an area of over four miles, bore fearful testimony to the determination and ferocity with which the fight was waged by the contending armies; not a vestige of vegetation was there to be seen on the whole space, the ground being literally ploughed up in all directions by the wheels of gun-carriages and shot and shell, and littered with ammunition—expended and otherwise—and rifles.

Passing through St. Marie-aux-Chênes, where the large houses had been converted into defences, and the walls and roofs were drilled with holes from shot and shell, we ascertained that Prince Louis had changed his head-quarters to Pierrevilliers, a small village to the north-west of Metz, between the latter fortress and Thionville, where, after a hard day's march, in the course of which we passed along the outer line of investment, we arrived at six in the evening.

Immediately, on our arrival, we were directed by our chief to start for Agneaux-la-Grange, a handsome old château which the Germans had converted into a Johanniter depôt, for which purpose a barouche and a pair of horses had been kindly provided for us by Prince Louis. At Agneaux-la-Grange, in addition to the depôt, there was a large military field Hospital, over which we were taken by the Staff-Surgeon in command. We found that our services were not immediately required, there being already a sufficient number of Surgeons on the staff, but we were directed to hold ourselves in readiness, as a sortie was anxiously expected from the beleaguered fortress, the result of which would require the services of all Medical men on the spot. We here saw several cases of primary amputations which were going on very badly—in fact, many were gangrenous; and I observed a manner of treating receding flaps, when the end of the bone was uncovered, by applying longitudinal strips of plaister around the limb, with the unattached ends long enough to be able to obtain gradual extension; a few cases of tetanus, no recoveries; a great number of resections of the elbow, which, with a few exceptions, seemed to be doing well—the resections of the knee proved in every case (as far as I remember) mortal—and others which called for no special comment. After having afforded some assistance in dressing, etc., we were requested by the Staff-Surgeon to go to the adjoining village of Joinville, where the church and some of the houses had been converted into temporary Hospitals. I cannot say the offer our services was accepted by the Surgeon in command in the same spirit in which it was made; in fact, we were regarded more in the light of interlopers than otherwise, and our proceedings were watched very jealously.

There was nothing left, therefore, for us but to return to the place from whence we came, where we stayed for two days more, doing what service we could.

We then proceeded in reserve with the Hessian division to the new head-quarters on the east of Metz, where the sortie was expected, and where it actually came. It was the desperate sortie of September 1, which was not repulsed until after several hours' hard fighting. We had no occasion to complain of any lack of work that evening, as we had to attend with the military Surgeons to about 400 wounded, which had been deposited in a large château in the neighbourhood.

The Hessian troops, to whom we were temporarily attached, being in reserve during the action, had but little to do, and were ordered to return the next day to their old head-quarters at Pierrevilliers. Here we remained all through September, doing such service as occasion required of us, getting quite inured to all the sights and sounds incidental to the great game of war—the deep, sullen roar and reverberating echoes of heavy artillery, the march and drilling of troops, the tattoo of drums, the sounding of bugles, the pleasant but monotonous strains of "Die Wacht am Rhein." No need had we of the services of attendants in calling us in the morning or in announcing bed-time—a friendly or hostile gun did that for us; for, as day dawned and evening closed, the salutations of Fort Mont Julien, most politely returned by the Prussian batteries, rang in our ears. One day, while out sketching in the neighbourhood of Thionville (much too close to be prudent), I received an unpleasant experience of the French army. Hearing the sound of military music, I looked up and saw at no great distance a company of red trousers who had issued from Thionville for the purpose, as I believe, of taking the air; one of the gentlemen descrying me, favoured me with a chassepôt bullet, which, whizzing over my head, caused me to beat an undignified and precipitate retreat, leaving my sketching materials in the hands of the enemy.

About the end of September we learnt that the National Society had sent out £2000 for the purpose of founding an English field Hospital in the rear. Darmstadt was the spot chosen, and thither we had orders to proceed. To reach our destination we had to take a round-about route. Pierrevilliers, as I before stated, was to the north-west of Metz. From it we went, by means of country carts returning homewards, which had been supplied for the commissariat department, to Courcelles—a town, by road, about twenty miles off, lying to the east of Metz—a journey which, owing to the tardiness of our means of conveyance, lasted us the whole day. On our arriving at Courcelles late in the evening, we went direct to the railway station, and found that we were destined to have the pleasure of staying there for the night, as no more trucks were returning that night for Saarbrücken. The hotels and houses were filled with the reigning heroes of the hour—the military; and we poor civilians, after receiving the cold-shoulder wherever we applied for accommodation, had eventually to think ourselves lucky in obtaining lodgings for the night in a horse-truck, one of a train which was going to start at some unknown hour before morning. Our supper we cooked for ourselves by the aid of a fire we built up by the side of the truck, and we washed it down with water procured from the engine-boiler, mingled with the usual schnapps.

The train moved on while we were slumbering peacefully on the bare boards of our truck, and when we did open our optics it was at our old friend Rémilly again. Here we were delayed for one or two hours, still in the horse-truck; once off we were not long in reaching Saarbrücken.

Here we found ourselves much more agreeably situated, food, etc., being plentiful and less expensive. We did not stay long in this "land of promise," as our orders were imperative; so on we went to Darmstadt, which town we reached after a night's stay on the road (*i.e.*, in our railway-carriage). I have neglected to state that we left our sanitary corps doing duty with the Hessian troops at Pierrevilliers, three of whom, we subsequently learnt, died of dysentery, and five or six others of the same corps were invalided home, narrowly escaping death. We English, I am thankful to say, without an exception, passed unscathed throughout our experiences of the campaign. On reaching Darmstadt, our party, for the first time, had to endure a separation, two of the four being sent to Strasbourg (the famous siege of that town being then in full swing), while I had to proceed to Bingen-on-the-Rhine, a town well known to English tourists from its attractive situation, where a tent Hospital, which has of late become famous, was in process of erection. Our chief stayed at Darmstadt to superintend the completion of the field Hospital provided by the National Society.

For the first fortnight or three weeks I was at Bingen I had orders to attend every alternate night at the railway station, for the reception of the wounded and sick, who came literally in shoals from the scene of war. Though I was not immediately connected with the International Field Hospital at Bingen, yet in my leisure moments I took the opportunity of inspecting it, and a short description of this most interesting place will not, I trust, be thought amiss.

It was situated in a large field on an eminence overlooking the Rhine, enclosed on all sides, in some parts by wooden hoardings, and in others by artificial hedges, so constructed as to allow of a free current of air, without any of the inconvenience possible to be raised by a strong wind. It was composed of a series of tents, each bearing, in large red letters, the German inscription of "Vom Deutschen Hülfsverein in London," and certain wooden buildings supplementary to the tents. These were ranged in two rows, with a broad path between each row. Each tent was surrounded with a ditch for the purposes of drainage, etc., was excellently ventilated, and warmed by means of stoves, the flues of which, in many instances, where necessary, passed underneath the boarding. The tents themselves were about thirty feet in length, and of proportionate height and width. A moderate-sized shed at one end served as an operating-room, and answered its purpose admirably; another, in a different part, was the wash-house. The water for the use of the Hospital was obtained direct from the Rhine by means of a powerful engine placed on the river just above Bingen, which pumped the water up to a large tank erected on a lofty scaffolding at the east end of the plateau on which the field Hospital was situated; pipes communicating between the tank and each tent conveyed the necessary supplies. The tank was brought out from England at great expense; the charcoal-filters in use here were also supplied by an English company—the water-purifying company in the Strand, I think. The drainage arrangements were equally perfect, no complaint, as far as I heard, ever being made of them. The cooking, etc., were carried on in a temporary kitchen attached to the Hartmann Hotel adjoining, which also, in time of need, contained patients for whom no room could be provided in the Hospital itself. Telegraphy was also called into requisition, a series of wires connecting the Hospital with the railway station at Bingenbrücken, so that no time was lost in obtaining information of the arrival of the wounded, nor in their transport to the tents.

The sick transport carts in use were designed by Herr Collischon, manager of the Hospital zum Heiligen Geist at Frankfort, and were built, as I believe, at Heidelberg; they all were hand-carts, with just room for one patient in them, who reposed in a litter supported on springs, admirably balanced to the cart; over the whole was raised a covering of canvas. The vehicle itself was taken up the hill to the Hospital by two men—one pulling in the front, and one shoving behind. The springs to which I have alluded effectually obviated the ill-effects of any jolting that might arise during the conveyance.

The *ménage* and all the interior arrangements were simply perfect, the most cordial understanding existing between the British and German Medical officers, and every courtesy being shown by the Government officials to the Medical staff. I may here, I trust, pay a slight tribute to Mr. Simon, the Medical Officer to the Privy Council, who was the founder of this Hospital, and under whose direction all these admirable arrangements were carried out. For the first fortnight of its existence he had the entire management, but then, after having done all the good that a man can do, the state of his health, I regret to say, seemed to necessitate a journey to Italy.

By way of conclusion, I cannot do better than add the following extract from a letter which was sent by Mr. Herbert William Page, one of the Assistant-Surgeons, to his brother, Mr. Ernest Page—an extract which appeared in the *Times* at the end of last October, containing, as my readers will perceive, an account of the total destruction of this remarkable place. It was, however, subsequently re-erected, and finally handed over to the German authorities, who removed it to Cologne, accompanied, as a German would-be satirist remarked, in one of the Cologne papers, "by a brave son of Albion, rejoicing in the name of Smith, and some few score tins of preserved milk."

"Last night, amid a storm unparalleled for its violence, and such as I never shall forget, which rose as suddenly as it departed, after forty-five minutes' duration, the whole Hospital was swept off the face of the earth. Never was such a scene! never such agony! If it was awful for wounded men, without shoes or stockings, with nothing but their blankets, which in a second were drenched, to turn out and be exposed to the elements, it was even worse for the sick. Imagine a typhoid fever patient, for whom it is almost fatal to move in bed, having to take up his bed and walk! The storm began at 8·15 p.m., and not till one this morning did we succeed in housing the unfortunate creatures in the operation-room, in the porter's lodge, and in the hotel. The wonder is that they all lived through it. To-day, what a wreck! Nearly every roof is stripped, and the people declare they never remember such a storm."

"WORK DONE UNDER THE RED CROSS."[a]

Mr. MacCormac, in his "Notes and Recollections of an Ambulance Surgeon," by simply recording his personal experience and the impressions he derived from the rather novel circumstances in which he found himself placed, without entering upon a systematic account of gunshot wounds, has produced a moderate-sized and well got-up book, which possesses very considerable interest for general as well as Professional readers. He writes in the simple, unpretending style of a man so completely absorbed by the work in which he was engaged as to feel apparently that fine writing in the recital would be unworthy of the importance and serious nature of the events which he witnessed, and in which he took such an active part. Although he does not think there is much that is mysterious or unknown to the exoteric Surgical world in either the principles or practice of military Surgery, Mr. MacCormac admits that errors may be committed by being too exclusively guided by the experience gained in civil Hospitals, and that, had he another opportunity similar to the last of practising military Surgery, he would not yield so often as he did to the temptation of trying to save limbs, the bones of which were seriously damaged by conoidal bullets; and that, however reluctantly he may come to the conclusion, he fears that radical and not conservative Surgery is the great principle of treatment for severe cases of gunshot wounds which must be cared for on or near the field.

This is exactly the principle which military Surgeons maintain, and it will no doubt be gratifying to them to see it advanced by so high an authority. By the admission that, in the extensive opportunities which he has had of practising military Surgery, his views founded on the experience which he had attained as a civilian Surgeon underwent considerable modification, Mr. MacCormac affords a sufficient reply to the advocates of the proposal that, in case of this country being engaged in war, the services of distinguished civil Surgeons should be employed to advise with, or in any way control, military Surgeons on points of practice. Mr. MacCormac must now feel himself better qualified to act in such a capacity than he would have been had he not become so practically acquainted with the difficulties with which military Surgeons have to contend.

On the subject of the aid so impartially afforded to the belligerents by what Mr. MacCormac considers the large-hearted liberality of neutral powers, especially England, we unfortunately are of those who differ from him, not only as to the propriety of such aid on the part of neutral powers, but as to the value of the aid afforded by England during the late war, relatively to the vast expense at which it was effected, and to the detriment which it is known to have inflicted on many of our most deserving charities at home, both public and private. Such views Mr. MacCormac considers to be founded on somewhat harsh and narrow-minded premises, which the sterner logic of the appalling suffering on the actual field of battle would soon cause to melt away; nevertheless, we hold them, and in so doing must agree to differ with Mr. MacCormac.

Having devoted so much attention to the preface, we now turn to the body of the work; and here we find in almost every page matter calculated to interest and instruct. The first and second chapters contain a short account of the preliminary visit to Metz; the condition of the garrison and the inhabitants; the difficulties by which he was beset, and by which he was ultimately compelled to leave the town and return to Paris, where he became connected with the Anglo-American Ambulance, with which, having been delayed on the evening of August 30, near Sedan, he had an opportunity of seeing the Emperor, MacMahon, and the whole Etat-Major arrive during the night, the front thus coming to the ambulance party, instead of their going to the front. They there had the good fortune to be placed in possession of a large Hospital containing 384 beds in the Caserne d'Asfeld, an infantry barrack situated on the ramparts of Sedan, of which a good view is given in the frontispiece. The battles on August 31 and September 1 and 2 soon supplied Mr. MacCormac and his colleagues with an overwhelming amount of work, the particulars of which, interspersed with many exciting and pathetic incidents, are detailed in the following chapters. In the plan of its construction, the Caserne d'Asfeld was almost everything which a Hospital for wounded men should not have been. It was a two-storey building about 240 feet long, containing nine large rooms and four smaller on each floor. With an average of twenty beds in the large wards, each patient would have had a cubic space of 450 feet; but as, at first, there were twenty-four occupied beds in each, the cubic space was only 375 feet. The wards, which ran pretty nearly north and south, had large windows at each end, and the intercommunicating doors were at the middle of each side. Some of the smaller rooms were used as sleeping apartments for the members of the staff, and others as separation wards for particular cases, for stores, and for an apothecary's shop. During the fighting on September 1 the Prussian shells several times struck the building, and some burst in the inclosure, killing and wounding several persons—amongst the rest two male nurses or *infirmiers*, and a number of soldiers. Meanwhile, Mr. MacCormac and his colleagues were attending on the numerous wounded, and actually operating in the direct line of fire, with the shells hitting the building from time to time. During the first ten days or fortnight the staff were shorthanded and overworked. From the diary kept by Mr. MacCormac he finds that frequently they had been working for twenty hours at a time, performing operations, noting cases, and making dressings.

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[a] "Notes and Recollections of an Ambulance Surgeon." By William MacCormac, M.A., M.R.I.A., Assistant-Surgeon to St. Thomas's Hospital, Consulting Surgeon to the General Hospital, Belfast, and Member of Senate of the Queen's University. 8vo, pp. 155. London: J. and A. Churchill, New Burlington-street. 1871.

The French voluntary ambulance corps are described by Mr. MacCormac generally as having been monstrously cumbrous. There were too many Surgeons, too much material to transport, and too many *infirmiers*. As a system of organisation, he considers the French Society for Aid to the Wounded to have, to a certain extent, failed in its mission, and not to have effected an amount of good proportionate to its resources.

The German authorities, on September 12, shortly after getting possession of Sedan, transferred 130 of the French wounded from the ambulance in the college, or district public school building, to the Caserne d'Asfeld, in order to make room for their own wounded. The transference was effected during villanous weather. Of the new-comers, 105 had received serious injuries, and the remaining twenty-five were cases of fever and dysentery. Upon the accession of so many fresh cases, the Hospital became fearfully overcrowded. Very few days passed until the wounds of the original patients began to alter in appearance for the worse. Secondary hæmorrhage became frequent, many of the most promising cases of operation showed symptoms of pyæmia, and nearly all the patients, in fact, sickened more or less. The difference was felt even among the staff, for one and all got attacks of some sorts of illness, Dr. Sims alone being happily exempt.

An increase in the death-rate was soon observed. In thirty-three cases death arose from acute pyæmia. Twenty of these deaths occurred within a few days of each other, and twelve of the twenty within a few hours of each other, on which Mr. MacCormac remarks that, although it is dangerous to draw conclusions from limited premises, “if the disease run an approximately fixed course as to time, the inference clearly is that it commenced in these different cases about the same date, and other considerations fix that date as being from September 9 to 12, when the large numbers of fresh patients were crowded in upon them.”

This high-handed action on the part of the German authorities appeared to the Surgeons of the Caserne d'Asfeld at the time, under the circumstances, most unwarrantable and cruel, and a distinct violation of the Geneva Convention, according to which a wounded man becomes *ipso facto* a neutral, and should cease, so far as the Doctors are concerned, to possess any nationality whatever. With our frequently expressed views as to the impracticability of the neutrality clauses of the Geneva Convention, we can hardly join Mr. MacCormac in his indignation at their infringement. The result, no doubt, was most lamentable; but if the Germans had done otherwise where the interests of their own wounded were supposed to be concerned, they would have been so much more than human that they would never, even in the defence of the Fatherland, have in the first instance accepted the cruel arbitrament of war. Being victorious, they did the best for their own, as conquerors ever will.

Mr. MacCormac details a curious item of Professional experience, of which he was himself the subject. Having received a cut on the finger, he found on September 5 that the lymphatics up the arm were inflamed, he had a smart rigor, and felt very unwell for a day or two, but shook off the attack; afterwards, however, notwithstanding several cuts on his fingers, and frequent contact with offensive discharges from wounds, it seemed, strange to say, as if the first inoculation had procured for him immunity from such influences, for he experienced no further trouble from that cause whatever, although the Hospital for a long time was in a very poisonous state. We hardly expect that on this exceptional instance any one would like to found a system of prophylactic inoculation.

In all amputations digital compression of arteries was preferred to the torniquet, and torsion to the ligature. In twelve cases of penetrating wounds of the knee-joint, nine terminated fatally. In only one case, because it appeared so very suitable, did Mr. MacCormac attempt resection, but the result was speedily fatal. His conclusion is that in military Surgery immediate amputation should always be practised in gunshot wounds of the knee clearly implicating the articulation. Pyæmia, as a rule, occurred only in those cases in which the bone had been injured, or in which amputation had been performed. It was far more frequent, also, after secondary than after primary operations. In some cases of resection of the elbow-joint which came under Mr. MacCormac's notice, reported to have been performed by German Surgeons, he was much surprised to observe that the method adopted was by transverse instead of by longitudinal incision, the result, as might be expected, being in all exceedingly unsatisfactory.

In addition to the statistical results attained in the Caserne d'Asfeld, Mr. MacCormac gives those of the Feld Lazareth at Floing, under Stromeyer, the latter being much the more favourable—attributable, in our author's opinion, to the patients having been treated virtually in the open air in small detached wooden huts without windows, but with the sides open in their whole length by means of large *louvres*, and when these were all raised, the entire circumference of the hut was laid open. Only ten patients were treated in each, and Stromeyer had a large staff of Surgeons and assistants under him. In the treatment of gunshot fracture of the upper arm, Stromeyer has employed a triangular cushion instead of splints, and considers it the most valuable appliance he has invented during his life. The cushion is in the shape of a right-angled isosceles triangle, four inches thick at the apex, which rests against the chest and supports the elbow, the forearm being bent at a right angle with the arm; the base is narrowed down to a mere edge, and one angle passes up into the axilla, while the other rests on the chest under the wrist. While this simple apparatus is applied, Mr. MacCormac tells us the arm rests upon it beautifully supported and in excellent position, the ordinary dressings are easily applied, and in case of its being necessary to transfer the patient from one place to another, or if he be fit to walk about, the cushion, arm and all, can be bound by a broad bandage to the body, and thus form an immovable whole. Mr. MacCormac has tried this treatment himself, and has found it answer every purpose. We have, however, been informed by another Surgeon who visited the German armies during the war, that this cushion is not universally popular among German Surgeons, and is in fact little used, except in Hospitals under Stromeyer's own superintendence. The idea appears good, and we should be glad to hear of its being put to a practical test in this country.

Notwithstanding the length at which we have noticed Mr. MacCormac's book, much remains in it to reward individual readers. A few well executed woodcuts, and seven exquisite heliotype sketches by Mr. Ernest Edwards, add much to the value of the work. Our space only permits us to congratulate the members of the Anglo-American Ambulance on the highly creditable manner in which they acquitted themselves in the trying scenes through which they passed at Sedan, and to express to Mr. MacCormac our best wishes for his success in the well-earned metropolitan career now before him as one of the staff of St. Thomas's Hospital.

YELLOW FEVER IN BUENOS AYRES.—It is estimated that 15,000 persons have fallen victims to this epidemic since its first outbreak, and among them are included a number of well-known British residents. 80,000 of the inhabitants have sought safety for their lives in the open and uninfected places. All business is suspended until May 1, by a decree of the Government.

THE annual return of deaths of seamen reported to the Board of Trade as having died in the British Merchant Service shows—5237 in 1868, 4832 in 1869, and 4523 in 1870. The return includes all ratings from mates downwards.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	April 8.	April 15.	April 22.	April 29.	May 6.	May 13.	May 13. Sent to Hospital.
West—							
Chelsea	4	9	9	9	4	?	—
St. George, Hanover-square	12	16	19	23	14	11	7
St. James, Westminster	8	8	6	2	8	?	—
Paddington	?	?	24	12	20	24	20
North—							
St. Pancras	122	102	121	89*	104	?	—
Islington	54	69	67	59	64	59	39
Hackney	31	?	46	30	—	?	—
Central—							
City of London	7	16	14	13	5	13	12
St. Giles-in-the-Fields	?	11	2	14	5	5	7
Holborn	4	8	8	9	5	13	12
St. Luke's	20	20	17	25	12	13	12
East—							
Whitechapel	19	14	17	23	7	4	?
South—							
St. Mary, Newington	27	34	37	47	25*	28	38
St. Olave, Southwark	3	3	3	5	3	2	1
St. George-the-Martyr, Southwark	19	30	31	26	?	?	—
Lambeth	32	24	?	32	20	—	—
Clapham	40	28	23	32	29	13	9
Wandsworth	13	6	6	8	4	4	1
Putney	?	1	?	?	?	?	—
Streatham	4	7	2	?	?	?	—
Greenwich	—	?	?	—	?	?	—
Lewisham	4	?	?	?	—	—	—
Plumstead	19	5	3	3	—	6	1

* Return imperfect.

REVIEWS.

The Geographical Distribution of Heart Disease and Dropsy in England and Wales. (Illustrated by a large coloured map.) By Alfred Haviland, M.R.C.S., late Surgeon to the Bridgewater Infirmary, etc. Folio, pp. 61. London: J. and A. Churchill.

We believe we are correct in saying that this work is the first undertaking on a large scale, having for its object the utilisation of the General Register of Mortality in this country, for the purpose of determining the habitual localisation of diseases, and of drawing therefrom such inferences as may arise out of the inquiry. From time to time, in his various reports, the Registrar-General points his finger to certain spots which, during the periods the reports embrace, have been the seat of local outbreaks of contagious epidemic or endemic disease, and thus calls the attention of sanitary authorities to the duty of checking their spread or preventing their recurrence. From time to time, also, with praiseworthy assiduity, the Medical Department of the Privy Council, taking cognisance of the facts and figures issuing from the sister establishment at Somerset-house, tracks the destroyer to his lair, and stirs up local boards to unaccustomed effort. But the task which Mr. Haviland has set himself to accomplish is of a broader character, and his work is consequently not only of local but in the fullest sense of national importance. That which we are now about to review is only the first part of a volume which, when completed, will probably be one of the most valuable contributions to sanitary literature which this country has received at the hands of a single individual. The succeeding parts will relate to cancer, phthisis, scrofula, small-pox, typhus, scarlet fever, cholera, and diarrhœal affections, lung diseases, and mortality from all causes. The general scheme of the work, and the laborious and patient research of which it is the issue, are deserving of the highest commendation.

In reviewing a book it is often convenient to reverse in some degree the plan adopted by the author in writing it, and, commencing with his inference, to trace back the steps by which it has been attained. In this way, by keeping continually in view the final result, the evolution of the argument is invested with the greater interest, and its value is more readily tested. Putting, then, Mr. Haviland's inference into the form of a proposition which he has engaged to prove, it would stand somewhat thus: *Heart disease, for the most part, depends upon a* matcries morbi *resident in certain localities, perhaps in all, operating usually by the establishment of a rheumatic condition of the system, not necessarily of a regular attack of rheumatic fever, but insidiously, often unheeded and occurring in early life. This* materies morbi *may be regarded as an " air-sewage " of animal or vegetable origin, or both. Its accumulation in any locality leads to excessive development of its results in that place, while, on the other hand, heart disease is less prevalent where the air-sewage is more or less freely swept away by the operation of currents of* pure air, *the purest air being that arriving at the spot after having passed over an extensive surface of sea.*

Before proceeding to lay before our readers the proofs afforded of this proposition, we must say a word about the conjunction of heart disease and dropsy adopted by the author. And this is the more necessary, because he does not refer to the subject himself. General dropsy is, as everybody knows, a condition which arises out of a variety of interlaced causes; it is but a symptom of other diseases—notably of the heart and depurating organs—and its appearance as a specific disease in the nosology of the Registrar-General can only be looked upon as a necessary concession to the imperfection of diagnosis inseparable from a national return of causes of death. Mr. Haviland's justification, as we hold, lies in the general experience of the Profession that, whatever the primary lesion may have been, it is an ordinary event in making a post-mortem examination in a case of chronic dropsy, whatever other mischief may be revealed, to find the heart more or less structurally damaged. The observer may in each case adopt his own view of the order in which the lesions of the several organs were brought about, but the fact remains, and we think Mr. Haviland was justified in availing himself of it. Had he failed to do so, and to recognise the symptom of dropsy as associated with heart disease, we think he would have been throwing away no small part of the truths upon which he had to rely in his investigation. We consider that the small infusion of error arising from the inclusion of cases in which the heart disease played but a minor part in bringing about the fatal result is lost sight of in the general advantage derived.

It is no part of the business undertaken by Mr. Haviland to show what this " air-sewage " consists of. All he pretends to do is to point out that the geography of heart disease lends high probability to the belief that, if it is not the sole cause of this multiform affection, it nevertheless plays an important part in determining its prevalence. Taking, then, the eleven registration divisions, the fifty-three counties, and the 623 union districts into which England and Wales are divided, he indicates, as respects each, the facts which come out of an analysis of the death-rate during a period of ten consecutive years, 1851-60. In this way, as he says, he is enabled to sift his facts through three gauges of different degrees of fineness.

1. As respects the eleven registration divisions, he finds that the two *midland* divisions have a mortality from heart disease and dropsy above the average, and that two-thirds of the *coastal* divisions have a low rate of mortality. Then, comparing the character of the coast line which forms the boundaries or the divisions having a high with those having a low mortality, he finds, coincident with a *high* mortality, a precipitous rock-bound coast, having few inlets, and those at right angles to the prevailing winds and the current of the tidal wave; and, on the other hand, coincident with a *low* mortality, low or shelving coasts, valleys, and rivers, having a direction in their course favourable to the free access of the prevailing sea winds and tidal currents, and numerous sea inlets opening into wide vales, which freely admit a thorough afflux and efflux of powerful winds from any quarter.

2. As respects the fifty-three registration counties which make up the registration divisions, Mr. Haviland finds, first, that the *coastal* counties with a low mortality from heart disease and dropsy are more numerous than those with a high mortality; that those most exposed to the prevailing winds or most free from obstruction to their operation have the *least* mortality; while those which are most protected by their physical surroundings, and are most inland, have the *greatest* mortality. As regards the *inland* counties, on the other hand, out of twenty-six only six have a mortality below the average.

Dividing the counties into coastal, inland, and midland or central counties, the death-rate from these diseases was as follows:—Coastal, 11·9; inland, 12·5; and central, 15·1 per 10,000 persons living. Thus, coincident with the lowest amount of exposure to the sea air, as in the midland counties, is the highest amount of mortality in those counties. On the other hand, coincident with the highest amount of exposure is the lowest amount of mortality; and, finally, the counties which lie intermediately between these extremes have also an intermediate death-rate.

3. As respects the 623 union districts, the *coastal* registration districts, as a rule, have a *low* mortality from heart disease and dropsy. There are three coast lines around England and Wales—the east, the south, and the west. "Coincident with the great number of sea inlets and low coast line on the eastern side of England we find a *low* mortality in 29 out of 41 districts. Coincident with the rocky and precipitous coast of the south, an absence of important sea inlets, and, the courses of the rivers being at right angles with the prevailing winds, we find that of the 40 districts 28 have a *high* mortality. And lastly, coincident with the physical facilities afforded on the western coast for a full purging by the strong winds from the Atlantic of the valleys from air-sewage, it will be seen that out of 52 districts, from Redruth to Wigton inclusive, 42 are below the average, and only 10 above it."

With regard to the inland, midland, and insular or peninsular districts, Mr. Haviland finds that, on the whole, the *inland* districts have a higher mortality than the coastal, but that the low-mortality inland districts are found contiguous to those which border the great sea inlets and the coast, as well as where there is elevated ground admitting of free ventilation on all sides; that the *midland* groups of districts, which are not intersected by the great sea inlets, but are protected by high ranges of hills on all sides, have the highest mortality; and lastly, that the insular and peninsular districts, the most exposed to the sea winds of all districts, have a low mortality from heart disease and dropsy.

This is the proper place to mention that the large map of the union districts is coloured in six different shades, three of blue and three of red, to correspond with three degrees of mortality above and three below the average. We should regret that we cannot follow Mr. Haviland in that part of his analysis which relates to the geographical distribution of these several six degrees of mortality from the disease in question, were it not that we feel that the work itself must of necessity find its place with other standard works on hygiene upon the shelves of everyone who is not satisfied with the bare outline which we have been enabled to present. It must suffice us to say that this minuter inquiry only tends to corroborate the inferences derived from the grosser analysis, even to the extent of accounting for the differences of mortality of different districts of London and its vicinity, according as they lie upon different reaches of the river, according as they are free to be swept by the sea winds running up the Thames Valley, and according as the direction and width of the main thoroughfares and the abundance of open spaces favour or disfavour their ready access.

We have, therefore, only further to add that for obvious reasons this is a subscription work. We have said that it is a national work also; and hence Mr. Haviland has a right to expect to find upon the list of his contributors, at least, every public sanitary board, not only in England and Wales, but wherever the English language is read. The law he has established cannot be believed to be applicable to our kingdom alone. We ought to know how far it applies to and is modified by the physical geography of foreign lands.

NEW BOOKS, WITH SHORT CRITIQUES.

Companion to the Last Edition of the British Pharmacopœia: comparing the Strength of its various Preparations with those of the London, Edinburgh, Dublin, United States, and other Foreign Pharmacopœias, with Practical Hints on Prescribing. By Peter Squire, F.L.S., etc., etc. Eighth edition. London: J. and A. Churchill. 1871. Pp. 397.

⁂ We are glad to see the rapidity with which edition after edition is issued of this very useful work. Its property is that it shows at one *coup d'œil* the leading facts relating to any given medicine. The Practitioner, if he be of some standing, may desire to make sure of the real chemical nature and newest name of any given drug; and old or young may often desire to know its dose, the best mode of combination, and the extra-pharmacopœial or popular preparations. All this will be found readily in Squire; and there is not a page that does not contain some hint that could only proceed from a man practically versed in every detail of the combination and preparation of medicine.

Geological Map of London and its Environs. By R. W. Mylne, F.R.S., F.G.S., etc. 1871. London: E. Stanford, Charing-cross. Third edition.

⁂ This is a map which will have the greatest interest for Medical Officers of Health, architects, and geologists. It is constructed in contour, so as to show the level of every part about Trinity high-water mark; and every part is coloured in accordance with the geological nature of the surface. It comprises an area of 159 square miles. There is also a section, extending from Hendon across the Thames to East Wickham, through Hampstead-hill, Gray's-inn-road, St. Paul's Cathedral, London-bridge, Greenwich, Blackheath, and Shooter's-hill. The map has already all the reputation which its intrinsic excellence and the reputation of the author deserve; and this third edition will be gladly welcomed.

FOREIGN CORRESPONDENCE.

FRANCE.

(*From our own Correspondent.*)

Paris, May 16.

Although in the midst of strife and civil war, the members of our Medical institutions gather together at the usual hours for their meetings to discuss whatever matter may be of interest, as in time of peace. The last two sessions of the Medical Academy have been wholly taken up by M. Verneuil's discourse on purulent infection. This subject was first brought up in 1869, and promised to become very interesting, when, for some reason or other, the question of vaccination and its supposed dangerous effects took its place. M. Verneuil has, for years past, much occupied himself with the pathogeny of purulent infection, of which his Hospital, unfortunately, has always furnished a vast number of cases. During the siege of Paris M. Verneuil, besides the Lariboisière, also had charge of a temporary Hospital, the Magasins Réunis—a large building, capable of accommodating some 800 wounded; where, too, pyæmia made great havoc. Whatever Verneuil may say on the subject is, consequently, drawn, in a great measure, from bedside observations, as well as from theories reigning abroad. Taking for granted that the subject of pyæmia must always remain an important one, I intend to give to your readers the whole of the discourse.(a)

HOLLAND.

Rotterdam, May 16.

The Small-pox Epidemic in Holland.

The mortality from small-pox in Holland during the past six weeks has been as follows:—

Week ending	Rotterdam.	The Hague.	Utrecht.	Amsterdam.
April 8 .	. 208	31	33	50
„ 15 .	. 88	31	38	74
„ 22 .	. 200	36	9	60
„ 29 .	. 82	38	—	94
May 6 .	. 28	16	—	73
„ 13 .	. 48	—	—	—

Thus, Rotterdam is diminishing; Amsterdam increasing. In my paper of May 6 on the epidemic of small-pox, etc., there is in the second column of page 510, the twelfth line from above, in the last *few* years, instead of in the last *thirty* years; but, as in the end I have stated that in the last period falls the origin of a sect of puritans, this is already a correction.

Mr. Broughton, the Government quinologist at Ootacamund, has extracted carbolic acid from the *Andromeda leschenaultii*, a common plant on the Neilgherries. The acid differs in some respects from that procured from coal tar; it is less deliquescent and far more pure, and would therefore be an admirable substitute for carbolic acid in delicate cases. The Madras Government consider this a very important discovery.

(a) It shall appear very shortly.—Ed.

PROVINCIAL CORRESPONDENCE.

EDINBURGH.

(From an old Correspondent.)

The summer session here is fully aflow. Introductories have been given, and students have settled down to work, more especially those who see the pass examinations of June looming not far in the distance. How many of these regret lost opportunities? The mortality amongst the candidates for the first examination held last month was great. Professor Wyville Thompson, the new Professor of Natural History, is well received. He spoke kindly and justly of Dr. Allison, his predecessor, in his introductory lecture. The new Professor of Geology, Mr. Geikie, has been inducted, but has not as yet spoken; much is, however, expected from him. Edinburgh is well situate as a school for the practical study of natural science. The botanical excursions extend sometimes far into the Highlands—and, by-the-bye, an amusing story was current as to the difficult position in which a "lady student" was placed last year, who had volunteered to accompany the botanical class. She got up a high hill with "Excelsior" as her cry, but could not get down again without gallant assistance of a kind I need not describe. It is hoped the Professors of Geology and Natural History will work the resources of the Frith of Forth and of the Pentlands in like manner—ladies excepted. Professors Laycock and Sanders have the clinic at the Infirmary. Dr. Sanders will doubtless be found to be a useful acquisition to the Medical Faculty, as he can combine "practical pathology" with his systematic and clinical teaching. I hear that Dr. Laycock's introductory lecture on Medical Psychology and Mental Diseases was numerously attended, and that his course interests much. All the best students of the year take the course, although optional, as it is thought to be an excellent finish to their education. A weekly excursion to an asylum on the coast is part of the business, so as to combine science and practice.

There has been a delicious bit of controversy all about nothing, between a learned, but retired Physician, Dr. Charles Wilson, and Dr. Maclagan, Professor of Medical Jurisprudence. The latter gave a preliminary flourish in a letter in which, by an atrocious neglect of the rules of composition, he declared himself ready to prove himself "both unwilling and unable" to convict his antagonist of error. The former was not proved in a subsequent long letter, but the inability was manifest.

I must not forget that the "lady students" have had their controversial musings in the *Scotsman* also. A bitter lamentation appeared one morning to the effect that they were shamefully insulted as a body by the same class of Medical wretches who "hurled mud and foul language" at them last autumn; but, on a careful perusal of the indictment, it dwindled into "cowardly" assaults on the bell-pull and name-plate of *one* of the ladies. Three letters, evidently from the same quarter, have also appeared in the *Scotsman*, the object of which evidently is to prejudice the public against contributing to the funds of the Infirmary, the collection being now made, and the *sole* excuse being an anonymous letter which appeared lately in the *Medical Times and Gazette*. The feminine stamp of the logic is plain, and illustrates well the intolerant character of these enthusiasts. Everybody must give way to the schemes of "the little band," whatever be their opinion as to the evils they will inflict upon the prosperity of the University and Medical School of Edinburgh. But of what account is that to the sisterhood of seven, if it stand in their way? The only result of all these vituperations, it is thought, will be to widen and deepen the conviction that the "Medical lady" movement here is worse than a folly, and that the sooner it ends the better for all parties. It is expected the pending trial of Craig *v.* Jex Blake will elicit facts of the same kind. The "lady students" have been refused admission to the Sick Children's Hospital almost unanimously.

Dr. Keiller spoke in very moderate and kindly terms of "the ladies" in his introductory lecture on midwifery and diseases of women and children, but clearly showed how impracticable was their proposed scheme of academic union with the men. He also threw out a good hint—not without a touch of irony—viz., that the ladies might teach rhetoric and botany to ladies very well—the point being that the Professor of these two subjects have been out-and-out supporters of the Medical lady-movement. But the stone hits deeper and further than Dr. Keiller meant. Why should not we have ladies teaching all subjects in the faculty of arts, mathematics and botany, rhetoric and English history, moral philosophy and logic, natural philosophy and chemistry? These might all be taught by ladies to mixed classes extra-academically. All that is required for success is, that the monopoly of teaching enjoyed by the Arts Professors should be broken up, and the Faculty placed in the same position in regard to graduation in Arts as the Medical Faculty is in regard to graduation in Medicine. A strong public opinion is growing up in favour of this change; when it is carried out, the lady Professors would have their own way, for they would have large classes, especially in philosophy and rhetoric.

GENERAL CORRESPONDENCE.

THE OPHTHALMOSCOPE AND THE MEDICAL SOCIETY OF LONDON.

Letter from Dr. Wm. Cholmeley.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the "list of subjects brought before the Medical Society of late years, and of the men who have brought and discussed them," which I introduced towards the end of my oration (page 549 of your last number), I find I have mentioned "Sansom on the Ophthalmoscope"; it should have been "Mr. Jabez Hogg on the Ophthalmoscope." The list is confessedly "very short and imperfect"; but the above is an error of commission, and an injustice to Mr. Jabez Hogg, who contributed an important and valuable paper on the ophthalmoscope so long ago as 1857; and I shall be much obliged by your allowing me to make this correction. I am, &c.,

May 16, 1871. Wm. Cholmeley.

CHLORAL IN PUERPERAL CONVULSIONS.

Letter from Mr. George F. Whidborne.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me to give you a case of convulsions after labour, which came to my lot last week (having had three other cases similar since Christmas), principally to show the good effect of hydrate of chloral in suppositories when rejected by the mouth in every form.

Mrs. J. C., aged 40, in excellent health, but of a nervous temperament, soon after the birth of her seventh child suffered for many hours with severe and constant uterine pains, which induced convulsions more severe than I had seen in any other case. After all the usual remedies being made use of without any permanent effect, I had recourse to the chloral hydrate suppositories—℞ chloral hydrate ʒj., saponis duri ℈ij., mellis q.s. ut ft. suppositorium om.: horâ adhibend. After using two of the suppositories, she had no more convulsions. She had four hours' good sleep, from which she awoke convalescent.

I have thought this worth recording, as I have now tried it in three cases with the same success.

I am, &c.,
George F. Whidborne, L.R.C.P.,
Late Phys.-Acc. to the Great Northern Hospital.
May 15.

CONVULSIONS.

Letter from Dr. F. R. Hogg.

[To the Editor of the Medical Times and Gazette.]

Sir,—Writing feelingly, how bitterly the middle-aged Practitioner regrets the days when, as a lazy, idle dog of a student, splendid opportunities were neglected, interesting cases unconsidered. Ours is a hard life, otherwise the opulent and aristocratic, so fond of praising the "godlike Profession" (taking good care, however, to keep out of it), would be in the ranks; still, there are prizes, and, in another world, where a warm corner is prepared for the bar, doubtless a bright spot will be reserved for us. However, to understand the convulsions of children alone travels over an immense field of inquiry in anatomy, physiology, and Medicine, amply repaid by satisfactory results. Including that rare and curious condition, eclampsia nutans or salaam convulsions, soldiers' children appear specially prone to cerebral derangement. Quoting from poor Dr. Hillier's book, the causes of the greater frequency of convulsions in infancy are the active growth of the nervous system, and the consequent want of controlling power in the latter, so that reflex movements of all kinds are very frequently excessive from slight causes. Amongst others, the following circumstances appear to encourage these alarming symptoms—namely, parental history of phthisis, rheumatism, epilepsy, syphilis, or drink, early marriages, fright or mental emotion of mother during pregnancy or lactation, prolonged lactation on tea, delivery by forceps, improper food, worms, dentition, exposure, neglect, stimulants (such as gin), quackery, fright, falls, blows, heat, cold (especially on board ship), damp, constipation, diarrhœa, calculus, suppression of cutaneous diseases, association of measles, hooping-cough, scarlet fever or variola, noise and clatter in barracks, sound of music (especially drums), early teaching, or the culpable encouragement of precocity.

In suitable cases, the gum lancet, leeches, warm bath, cold douche, calomel, bromide of potassium, zinc, arsenic, quinine, brandy, sinapisms, emetics, turpentine enematas, hypodermic injections, etc., are all valuable remedies, but the majority equally dangerous when injudiciously applied. There's the rub. In many instances, whilst forbidding the nursing mother tea, coffee, and sugar, it is of advantage to give her an aperient, followed by large doses of bromide of potassium at night, the child kept in the dark, his ears plugged up with cotton-wool.

Should this letter, particularly the expressions of vain regret, catch the eye of any student, let him bear in mind that heaven helps those who help themselves, and, whilst envying the fame of Dr. Nebuchadnezzar Smith or the yellow chariot and fine income of Mr. Napoleon Jones, anticipate their good fortune may be his. Working hard and living steadily, let his motto ever be "Death or Savile-row," with a decided preference for the latter. I am, &c., F. R. Hogg, M.D.

Royal Artillery Barracks, Woolwich.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 2, 1871.

John Gay, F.R.C.S., in the Chair.

Dr. Murchison narrated the Post-mortem Appearances encountered in an old man, aged 71, who had suffered from Paralysis Agitans for twelve years. He died of typhus. The palsy had gradually been increasing, until during the latter portion of the fever he was in a constant state of tremor. Dr. Cayley had examined the spinal cord, and reported on it. The external connective tissue was thickened and nuclear. It passed inwards into the substance of the cord, especially near the posterior roots of the nerves. No central canal was to be seen, but in its place a thick mass of cells, of various sizes and shapes, leucocytes, and granules. There were many patches of exudation. These two series of changes seemed to be connected with the two diseases—the sclerosis from connective tissue with the palsy, and the condition of the central canal and the exudative patches with the fever. Dr. Murchison explained that there was much atrophy of brain with effusion of serum, but this was common in typhus. Others had found similar lesions in paralysis agitans.

Dr. Payne inquired as to the condition of the central canal. Gerlach had often found it crowded with cells.

Dr. Cayley said it was common to find cells crowding the central canal of the cord. He could not say whether their presence was due to the mode of preparation. In this case the quantity was twice as great as usual.

Dr. Dickinson read an elaborate report on the Renal Calculi in the London Museums. The subject he considered of interest, especially with regard to their solubility or insolubility with certain reagents taken by the stomach. Dr. Roberts, of Manchester, had shown that alkalies could dissolve urates, uric acid, and cystine, whilst the other calculi were insoluble. He had tried to make out the proportion of renal calculi, as vesical gave no correct idea of original composition. There were ninety-one in all the thirteen museums examined; of these, fifty-two were simple in composition, thirty-nine compound. Of the compound twenty-two were composed of two ingredients, ten of three, and seven of four. Of the whole, uric acid constituted more than one-third, next in abundance came oxalates, next phosphates (of which none consisted of pure phosphate of lime). Carbonate of lime was found in one instance, cystine in two, and xanthin in none. The compound calculi always had a nucleus of oxalates, of uric acid, or urates. Alkalies would act on one-third of all, whereas Dr. Bence Jones had asserted they would on 75 per cent., and Dr. Roberts on five-sixths of all.

Dr. Murchison asked if this basis was fair in practice. The rarer forms would be sure to be more frequently preserved than the more common.

Dr. Dickinson thought the objection might apply to the cystine and carbonate of lime calculi, not to the others.

Mr. Arnott desired to know how they could diagnose the nature of the calculi, as alkalies, in certain kinds, would do harm.

Dr. Dickinson thought this a question of practice to be discussed elsewhere.

Mr. Nunn said the majority of small calculi passed were renal, and in almost every instance these were of uric acid.

Dr. Thomas Ballard had seen one calculus of carbonate of lime passed, and

Mr. W. Adams had met with one of pure phosphate of lime in a case of mollities.

Dr. Dickinson had not met one of pure phosphate of lime; all were mixed with the ammonia—magnesian phosphate.

Dr. Murchison asked what evidences there were that calculi were ever dissolved in the body.

Dr. Dickinson said it had been done outside the body.

Dr. Risdon Bennett exhibited a specimen supposed to be Cancer of the Lung. The patient, a woman, aged 42, had had her breast removed, but the disease recurred. Her health began to fail, and she suffered much from cough and dyspnœa. She died suddenly. The pleura was found unaffected, but the pericardium at certain spots was adherent. A cancerous growth infiltrated the lungs and certain parts of the heart's substance, and there were some nodules in the liver. The evidence as to the microscopic structure was incomplete. Mr. Maunder had seen a somewhat similar case three years ago.

Dr. Payne thought, as the breast was removed at St. Mary's, he might be able to give some particulars as to its condition if he knew the patient's name. (Referred to Morbid Growth Committee.)

Mr. John Gay exhibited a specimen of Subclavio-Axillary Aneurism, which had been operated on. The patient was a man, aged 30, who had been a sailor, and afterwards worked in a brewery. In August last he complained of pain in both shoulders; this was supposed to be rheumatic, but turned out to be due to double aneurism. That on the right side was the larger, and gave rise to great pain; that on the left was smaller, and produced neither bruit nor pain. He tried manipulation without success, so was compelled to cut down on the subclavian in the third part of its course, though he intended to tie in the second. There was some little difficulty in finding the vessel, but it was managed. In the evening the temperature of the whole side had fallen, but both sides were equal on the third day. He did well till the fifteenth day, when, having been attacked with bronchitis, he died. The aneurism had corroded the ribs and clavicle on the right side. As to the aneurism itself, the result of the operation had been quite successful, producing complete obstruction and consolidation. The wound was nearly healed. The aorta was atheromatous, and in the heart were some curious old clots. The aneurism on the left side was fusiform.

Mr. Maunder referred to two recent instances in which he had performed this operation, in which no pulsation had been seen in the vessels. He would bring a case before the Society.

Mr. T. Smith asked the nature of the pyrexia on the seventh day; what was the post-mortem condition of lung; and whether there was any effusion into the pleura—in short, as to signs of pyæmia. He thought free exposure of a large artery was enough to arrest its pulsatile action.

Mr. Gay said there was no shivering and no appearance of pyæmia. The ligature had not come away. Drinking brandy, which his friends had brought him, might have had something to do with his fatal attack.

Dr. Cholmeley said he had examined the patient carefully. There was no idea of pyæmia, only intense bronchitis.

Mr. Arnott exhibited a specimen of Malignant Osteoid Tumour of the Fibula from a man, aged 22. In October, 1868, there was some pain, and in January, 1869, there was swelling, which rapidly increased. The right side of the right leg was most affected. It was soft and nodulated. Amputation on the thigh was performed, but another tumour appeared in the left calf, another in the scalp, and a third in the clavicle; by-and-bye more appeared, and all grew rapidly. He died exhausted. The original tumour was partly hard, partly soft; the hard part contained no true bony tissue. It consisted of a spindle-celled sarcoma, developing into fibrous tissue, also of cells with nuclei, such as are seen in medullary cancer.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, May 3.

Dr. Braxton Hicks, F.R.S., President, in the Chair.

Edward Martin, Esq. (Weston-super-Mare), was elected a Fellow of the Society.

Mr. Pedler exhibited the Pelvis of a Woman, the subject of Mollities Ossium. She was an inmate of the West Riding Asylum for four years, and died there last January. The pelvis was much distorted, and its diameters greatly contracted. A chemical analysis of the bone proved it to consist of—

Water	24·74
Fatty and oily matters	26·49
True bone	48·77
	100

The inorganic matter was present in exceedingly small quantities, forming only 23·71 per cent. of the true bone.

Dr. Protheroe Smith exhibited the Uterus and its appendages removed from a patient upon whom he had performed ovariotomy. The pedicle and the uterus were free from inflammation, yet the patient died from acute peritonitis of the small intestines, which were found inflated, inflamed, and covered with recent lymph. In explanation of this anomalous condition he said that, after tabulating a large number of cases from the published records of Mr. Spencer Wells and others, and on taking a statistical view of such as had terminated unfavourably, he had found a large majority had succumbed in consequence of inflammation resulting in the formation of lymph or the effusion of serum or blood into the peritoneal cavity. He had also remarked, in a large number of cases operated upon, vomiting of fluid in excess of that taken, and, if protracted, becoming grumous; or that hæmoptysis, hæmatemesis, and bloody motions, hæmaturia, and albuminuria not unfrequently took place. Such morbid conditions were, he thought, due, in long-standing cases especially, to an effort to relieve the vascular system, which in the progress of the ovarian malady had contracted the habit of depletion by effusion into the cyst, which was suddenly arrested by ovariotomy. On these grounds he begged to call attention to a previous treatment, which, if judiciously practised, he believed would tend materially to obviate the fatal issue of ovariotomy—viz., bloodletting—first, as a means of removing cysto-peritonitis when diagnosed before the operation; and, secondly, as a prophylactic measure to prevent its occurrence afterwards.

Mr. Squire said that precedent peritonitis need not prevent good recovery after the removal of an ovarian tumour, as shown in a case lately under his care. The patient had vomited blood on more than one occasion, and had also passed blood by the bowel before the operation. He considered that dependence upon the effect of bloodletting before an operation was at least hazardous.

Dr. Wiltshire thought that bleeding might, in certain selected cases, prove beneficial, and related a case of his own, which appeared confirmatory of this view.

Dr. Barnes exhibited Mr. De Berdt Hovell's Uterine Truss for preventing and arresting post-partum hæmorrhage. It has a spring pressing, with a force of about seven pounds, a pad down upon the uterus. It is admirably adapted to support the uterus, and to relieve the Practitioner from the fatigue of grasping it. It stimulates to contraction by sustained elastic pressure.

Dr. Barnes communicated, for Mr. Porter, of Lindfield, the particulars of a case in which the fœtus died at the third month of gestation, and was expelled piecemeal, but the placenta was retained to about the full term, and was then expelled undecomposed.

The President communicated, for Mr. H. Gibbons, of Wolverhampton, a case of Cæsarian Section. The patient, aged 22, was a dwarf, three feet ten inches high. An incision, six inches long, was made into the uterus, and the fœtus extracted. The placenta was found attached to the posterior wall, and was peeled off without much bleeding. The uterus contracted rapidly under the eye, and its wound was thereby closed. Uncontrollable vomiting commenced in about an hour, and continued with scarcely any intermission till she sank, forty hours after the operation. There was no extravasation into the peritoneum, nor any peritonitis. The pelvis was exhibited to the Society. The child lived nine days.

A case was then read, reported by Dr. Routh, in which a child, born in the twenty-second week of gestation, lived eighteen days.

Dr. Wiltshire read a paper on Tetanus after Abortion. After narrating two cases, the author referred to the great mental depression under which the patients laboured, owing to trouble and anguish of mind, and suggested that although peripheral physical changes were justly regarded as most important factors in the production of tetanus, functional disturbances of the cerebro-spinal centre should be studied in conjunction with them. Illustrations were given of the disease termed Tetany, and reference was made to the recent pathological researches of Clifford Allbutt, Lockhart Clarke, and Dickinson. The question of treatment was then briefly discussed.

Dr. Playfair thought the rarity of tetanus after labour and abortion was chiefly a climatic question, and he doubted its being proportionately more rare than after Surgical operations. In countries in which tetanus was common, it was far from being a rare event after labour, and he had seen many cases at Calcutta.

Dr. Meadows then read a paper on Pelvic Hæmatocele; and,

On the motion of Dr. Barnes, seconded by Dr. Phillips, the discussion thereon was postponed to the next meeting.

MEDICAL SOCIETY OF LONDON.

Monday, March 27.

Dr. Andrew Clark, President, in the Chair.

The President narrated the following cases to illustrate some points in the treatment of Perityphlitis:—Case 1 was given to show the baleful influence of purgatives. The patient was a young lady aged 24, who three nights before the author saw her had been seized with pain in the right side, vomiting, and general disturbance of the system. Powerful purgatives had been given. Dr. Clark recommended that the bowels should be locked with opium, the patient kept quiet, and local sedatives applied freely. The Medical man who had been in attendance on the case took a different view, thinking that the symptoms were still due to an accumulation of fæces. Dr. Clark retired from the case, and another Medical man was called in, who agreed with the gentleman already in attendance; stronger purgatives were therefore ordered. The patient becoming worse under this treatment, Dr. Clark was again called in, but could not attend. His colleague, Mr. Adams, attended, and, finding a swelling pointing, made an incision, when a quantity of fetid pus escaped. Unfortunately the patient died in a few days. At the post-mortem no fæcal accumulation was found, but the mucous membrane of the cæcum was found ulcerated. Case 2 is given to show that serious consequences may ensue from not giving purgatives. The patient was an Eton boy, who was suddenly seized with pain and swelling in the right iliac region; feverish, the temperature 103°, pulse quick, vomiting also. Dr. Clark's opinion was, that in acute cases vomiting occurred, but in chronic cases constipation might come on gradually without vomiting; in this case there was vomiting and constipation. The bowels were kept quiet by means of opiates, leeches were applied to the side of the abdomen, the administration of food by the mouth was suspended, nutritive enemata being given by the bowels. The case progressed very well; the vomiting ceased, and the pain subsided. His friends being anxious to have him with them, he was removed to London. Soon after his arrival he was seized with a sudden pain in the old situation, and a large swelling rapidly formed, which on examination was found to be situated in front of the original tumour. This appeared to the author to be due, not to a relapse, but to an accumulation of fæces; he therefore strongly recommended that the bowels should be cleared by an enema of castor oil. This advice was opposed by his Surgical colleague, who thought it would be unsafe. The advice of the senior was taken. However, as the pain increased and the pulse ran up, an aperient was again urged. Castor oil was administered by the mouth. The patient being in bed, the lower part of his body and hips were raised, and over a quart of water was thrown up into the bowel. Enormous blocks of fæces were discharged, the swelling subsided, and the boy soon recovered. At Eton a year seldom passes without a recurrence of these cases, which may be due to over-exercise. The third case resembled the preceding in its symptoms; the abdomen was leeched, and the patient was fed by the bowel; in three weeks the pulse and temperature were normal. Then arose the question whether the boy might be removed, and as Dr. Ellison reported that there was neither pain nor tenderness for a week, the boy was removed to London; yet the day after he suffered from a relapse, having pain and tenderness in the right iliac region, sickness, and a high temperature. The iliac swelling was still there. This case seems to teach us that a patient ought not to be moved until the pulse and temperature have been normal and settled for some time.

In the discussion that followed, Dr. Habershon said that the paper was very interesting and useful, and if the treatment was borne out in practice many valuable lives might be saved. The first was a difficult and unusual case; suppuration had taken place behind the cæcum. In the other cases a considerable amount of obstruction was present. These cases often commenced with inflammation of the mucous membrane of the cæcum; the fæces accumulated, and the various symptoms followed. He strongly advised soothing remedies. The boys at Eton, he thought, having command of plenty of money, often ate food not suited to them, and among other things more oranges than were proper. This gave rise to the disease. He advised the avoidance of purgatives, and the use of warm applications, leeches, and sedatives of all kinds, the patient being kept quiet and fed by enemata. He thought this complaint especially to be met with in strumous subjects.

Dr. Simms thought that if a boy had taken a piece of indigestible food, which had arrived at the cæcum and set up inflammation there, a dose of castor oil and laudanum given early might remove the exciting cause.

Mr. Maunder said that some years ago he was called to tap an "ovarian cyst," but on coming to examine the case he found it was one of perityphlitis; all the symptoms that the President had mentioned were present. He thought that pus was present, but desisted from any Surgical interference, and in a short time it made its escape at the umbilicus, and the patient recovered. In a second case there were present pain, constipation, vomiting, and an emphysematous swelling, giving a tympanitic note; the fluctuation extended below Poupart's ligament, and was there lessened, but the lower limb became emphysematous, and the patient died. He thought Surgical interference was indicated in many of these cases.

Dr. Rogers had seen a case of perityphlitis, in which the swelling, being tympanitic, was not interfered with, although it was thought that pus was present. In two days pus was discharged with fæcal matter, showing that the cæcum had ulcerated. The patient recovered without a fistula.

The President then narrated a case where a large accumulation of pus took place. Much tympanitis was present. An opening was made, and much fetid pus discharged. The patient died. The post-mortem showed that the matter did not communicate with the bowel.

Dr. Routh said that one remedy that he had found of the greatest possible value had not been mentioned; that was belladonna. He thought no remedy in the world was so effective. It was a good practice to smear the abdomen with extract of belladonna.

Mr. John Daniel Hill communicated a case of Resection of the Elbow-joint, showing the amount of movement attainable after that operation. The wound healed in five weeks, and in three months good motion was restored. The chief points that Mr. Hill laid stress upon were—(1), the long straight incision at the back of the joint; (2), the preservation of the attachments of the muscles, especially the brachialis anticus and biceps; (3), the application of a chain-saw, cutting from within outwards, to avoid manipulation of the soft parts; (4), the separation of the sawn surfaces by slight extension; (5), the retention of the limb upon interrupted rectangular splints, so as to provide for the bones being kept steadily open during the healing process. Mr. Hill stated that the patient had almost complete control over the brachial muscles, the power of flexion and extension being very good, and pronation and supination nearly, if not quite, equal to the corresponding limb. In testing his muscular power it was found that he could carry a bucket of water, and in his trade as a carpenter could use a saw, a hammer, and gimlet; he also could write a good hand. The pathological specimen and cast of the case was also shown.

Dr. Simms read a case of Epilepsy following the passage of a pin through the intestines.

A popular lecture on the anatomy of the human frame was delivered last Sunday morning by a Surgical student, on the ground in the rear of the Prince Consort Memorial, Hyde-park. The subject was practically illustrated with the help of a very nearly complete skeleton.

OBITUARY.

DR. A. D. ANDERSON.

The following notice of this respected Physician appeared in the *Glasgow Daily Herald* of Tuesday, May 16:—"In our obituary of yesterday we chronicled the death of Dr. A. D. Anderson, one of the oldest and most honoured of our Glasgow Physicians. The deceased gentleman was the son of Mr. Andrew Anderson, merchant, Greenock, and was born in that town in 1794. He was a nephew of the late Professor Anderson, founder of the Andersonian University in this city. Having passed through the usual course of Professional studies in Glasgow, Edinburgh, and London, he was admitted a member of the London College of Surgeons in 1816, graduated in Edinburgh University in 1819, became a Fellow of the Faculty of Physicians and Surgeons of Glasgow in 1822, and received the Honorary Fellowship of the Royal College of Surgeons of England in 1844. At the age of 19 he entered the Medical Service of the army as Assistant-Surgeon, being attached to the 49th Regiment, and remained in the Service six years, part of which time he spent in Canada. About the year 1820 he settled to practice in Glasgow, and in 1829 married a daughter of Mr. Thomas McCall, of Craighead, Lanarkshire, who, with four sons and two daughters, survive him. One of his sons, Dr. McCall Anderson, having adopted his father's Profession, is now Professor of the Practice of Medicine in the Andersonian University.

"During Dr. Anderson's long career as a Practitioner in this city he gave many proofs of his skill, ardour, and devotedness in his Profession, and he received not a few tokens that his services were appreciated by his Professional brethren and the public. In 1823 he was elected Surgeon to the Royal Infirmary, and in 1837 he was appointed Physician to the same institution. He was also Physician to the Institution for the Deaf and Dumb. He was the author of an interesting paper on the treatment of burns by cotton, an application of this agent which has since been extended to many superficial injuries. He also wrote useful 'Reports on Surgical Cases,' and other papers on Professional topics. In 1852 he was elected President of the Faculty of Physicians and Surgeons, and held the office for three years. During his whole career he took a warm interest in the affairs of the Faculty, and that corporation last year evinced their appreciation of his services by requesting him to sit for his portrait, which is hung in the Faculty Hall. He took an active interest in the management of several public institutions, especially the Andersonian University. Dr. Anderson enjoyed an extensive share of what is called the 'best practice,' and was a diligent student both at the bedside and in his study. He was endowed with a calm, reflective judgment, was actuated throughout life by the most delicate sense of honour, and always showed himself acutely sensitive in regard to the feelings of others. He was a member of the Church of Scotland; in his religious opinions catholic and liberal; in his public and private life kind, considerate; in every sense of the word charitable—a true example of a Christian gentleman."

Dr. Anderson's funeral took place on the 17th, and, at the request of the Fellows of the Faculty of Physicians and Surgeons of Glasgow, was a public one, at the Faculty Hall.

JAMES HENRY, ESQ., M.D., M.R.C.S., OF BURY-ST.-EDMUNDS.

It is with feelings of the deepest regret, and sympathy with his bereaved family, that we record the unexpected and somewhat sudden death of Dr. Henry, Physician to the Suffolk General Hospital.

Dr. Henry, after a prosperous Professional career in Dublin, where he was widely known and highly respected, and afterwards in Cheshire and Liverpool, finally settled in Bury-St.-Edmunds about three years since, where, in that singularly short space of time, he succeeded in attaining not only an immense practice, but also in winning golden opinions from a numerous circle of patients and friends. His geniality, good nature, and open-heartedness endeared him to all with whom he came in contact; whilst his gentleness, no less than his far-famed Professional skill, made his patients regard him with no ordinary feelings of love, esteem, and respect.

His death cast a deep and pervading gloom upon the town where he practised and its neighbourhood, and the general feeling which prevailed found open expression in the opinion repeated on all sides, that his lamented death was indeed a "public loss."

Dr. Henry's disease was, we understand, a peculiar form of latent gout, which, for the first and only time, developed itself during his last fatal illness, and, attacking his heart, defied all the skill and efforts of his Medical advisers and friends. He died on the morning of April 24, shortly after two o'clock, aged 60 years.

It is much to be regretted that his vast stores of practical experience, accumulated during an incessantly active and energetic life, have found no place in the Medical literature of the country, but his extensive practice, the amount of time he personally devoted to his patients at the bedside, no less than his natural modesty, prevented the possibility of his handing down his name to posterity as an author in a way worthy his high Professional reputation and success as a Physician.

JAMES GRAHAM HILDIGE, ESQ., F.R.C.S.I., M.R.I.A.

We regret to announce the sudden demise of the above eminent oculist, which took place at his residence, Upper Merrion-street, Dublin, on the morning of Sunday, the 14th inst. Mr. Hildige was a Member of the Royal College of Surgeons England, a Fellow of the Royal College of Surgeons Ireland, a Licentiate of the King and Queen's College of Physicians Ireland, and a Member of the Royal Irish Academy. He was also Surgeon to the National Eye and Ear Hospital, and formerly Lecturer on Ophthalmic Surgery in the Carmichael School of Medicine, Dublin. Among his writings we may mention his work entitled "Medical Sketches in Austria, Prussia, and Italy, with Remarks on the Roman Campagna," and a valuable paper on "Yellow Fever." He also contributed articles on Ophthalmic and Aural Surgery to the leading Medical journals of this and the sister country.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 16th inst., viz. :—

Atkinson, Alfred James, L.R.C.P. Edin., and L.S.A., Kew-green, of University College.
Bovill, Edward, James-street, Buckingham-gate, of Guy's Hospital.
Cottle, Ernest Wyndham, B.A. Oxon., Southampton, of St. George's Hospital.
Drake, Cecil, St. Ives, Cornwall, of Charing-cross Hospital.
Furner, Willoughby, Brighton, of St. Bartholomew's Hospital.
Horsford, Joseph Alphonsus, Penzance, of University College.
Iredell, Charles Lesingham Maynard, L.R.C.P. Edin., and L.S.A., Cheltenham, of St. Bartholomew's Hospital.
Johnson, William Murray, B.A. Cantab., Valparaiso, of King's College.
Johnston, John, Newcastle, of the Newcastle School.
Jones, Hugh Thomas, Gaercaen, Anglesea, of the Dublin School.
King, Aloysius Joseph, Bath, of the Bristol School.
Law, William Thomas, L.S.A., Edinburgh, of Guy's Hospital.
Morris, Richard Thomas, Rochdale, of the Manchester School.
Newington, Herbert Francis Hayes, Ticehurst, of University College.
Norbury, Thomas William, Macclesfield, of University College.
Nunn, Philip William Gowlett, Caversham-road, N.W., of St. Bartholomew's Hospital.
Powell, Lionel Lewis, L.R.C.P. and L.M. Edin., Melton Mowbray, of University College.
Smith, George Augustus Cooper Vernon, Paddington, of St. Mary's Hospital.
Thorpe, Lewis, L.R.C.P. and L.M. Edin., L.S.A. Lond., Walsall, of the Birmingham School.
Trent, Thomas, Lower Tooting, of St. George's Hospital.
Waldo, Henry, M.B. Aber., Clifton, Somerset, of the Bristol School.

The following gentlemen were admitted Members on the 17th inst., viz. :—

Allan, Patrick Joseph, L.R.C.P. Ire., Mullingar, co. Westmeath, of the Dublin School.
Blaker, Walter Campbell, L.S.A., Crawley, Sussex, of Guy's Hospital.
Collins, Henry William, L.S.A., Wrington, Somerset, of Guy's Hospital.
Cory, Robert, B.A. Cantab., Carlisle, of St. Thomas's Hospital.
Edmundson, Thomas Robert, L.R.C.P. and L.M. Edin., and L.S.A. Lond., Masham, Yorkshire, of Guy's Hospital.
Ewart, John Henry, Upper Norwood, of Guy's Hospital.
Kendall, Walter Benger, Stratford-on-Avon, of King's College.
Ling, John Mitford, L.S.A., Saxmundham, of University College.
Lloyd, William, M.B. Dub. and L.S.A. Lond., Carmarthen, of the Dublin School.
Mayer, William Lewin, Highgate, of the London Hospital.
Rouse, Ezekiel, L.R.C.P. Edin., Bradworthy, North Devon, of the Edinburgh School.
Simon, Arthur Charles, L.S.A., Jersey, of St. Bartholomew's Hospital.
Stevens, Mordaunt Augustus de Brouquens Capel, M.D. Philad., Paris, of King's College.
Whistler, William McNeill, M.D., Pennsylvania, Brook-street, Grosvenor-square.

Seventeen candidates out of the fifty-four examined having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for six months. For the Fellowship of the College, it is stated that the unprecedented number of seventy-one will this day (Friday) commence their written examination.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 11, 1871 :—

Currie, George, Madras Presidency, India.
Iredell, Charles L. M., Cheltenham.
Moore, Samuel William, Kennington.
Stuart, Henry Ward, Woolwich.
Thorpe, Lewis, Walsall.

The following gentlemen also on the same day passed their first Professional examination :—

Brittin, F. G. M., London Hospital.
Willis, George, St. Bartholomew's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Adams, J., F.R.C.S.E.—Clinical Assistant at the Royal London Ophthalmic Hospital, Moorfields.

Barrett, Mr. F. J., Major Associate of the Pharmaceutical Society.—Dispenser at the South Staffordshire Hospital, *vice* Mr. T. Weaver, resigned.

Bateman, Mr. L. P.—Resident Medical and Surgical Assistant at the General Hospital, Birmingham.

Budworth, Mr. W. S.—Dispenser to the Bolton Infirmary, *vice* Mr. S. Kenyon, resigned.

Calantarients, J. A., M.R.C.S. Eng., has been appointed House-Surgeon and Secretary to the Scarborough Dispensary and Accident Hospital, *vice* Dr. Dinton, resigned. At a previous election, at which Mr. Calantarients was not a candidate, Mr. George Millson, L.R.C.P. Lond., was elected; but he was obliged to decline the appointment, having been appointed Assistant Medical Officer to the Middlesex Lunatic Asylum, Colney Hatch.

Cowell, G., F.R.C.S.E.—Clinical Assistant at the Royal London Ophthalmic Hospital.

Cranny, J. J., M., C.M.—Assistant-Physician to the Rotunda Lying-in Hospital, Dublin.

Davis, Mr. H. W.—House-Surgeon to the Western Ophthalmic Hospital, Marylebone-road, *vice* Mr. W. T. Drew, M.R.C.S.E., resigned.

Hill, Mr. Alfred.—Dental Surgeon to the Dental Hospital of London, *vice* Mr. Robert Hepburn, resigned.

Pavy, F. W., M.D. Lond., F.R.C.P. Lond., F.R.S.—Physician to Guy's Hospital.

Pye-Smith, P. H., B.A. Lond., M.D., M.B., etc.—Assistant-Physician to Guy's Hospital.

Roe, William, M.D., F.R.C.S.I., etc.—Examiner on Midwifery and Diseases of Women and Children to the Royal College of Surgeons in Ireland.

Thomson, J. Roberts, M.D. Edin., M.R.C.P. Lond.—Physician to the Bournemouth Dispensary.

MILITARY APPOINTMENTS.

5th Dragoon Guards.—Staff Assistant-Surgeon John Wickliffe Jones, to be Assistant-Surgeon, *vice* Edward Louis McSheehy, M.D., promoted on the Staff.

7th Hussars.—Staff Surgeon Maximilian Grant, M.D., to be Surgeon, *vice* Surgeon-Major Henry Kendall, M.D., who exchanges.

Royal Artillery.—Assistant-Surgeon William Graves, from 65th Foot, to be Assistant-Surgeon, *vice* Alexander Frederick Bradshaw, promoted on the Staff; Staff Assistant-Surgeon Denis Joseph Canny, to be Assistant-Surgeon, *vice* Arthur Croker, appointed to the Staff.

1st Foot.—Staff Assistant-Surgeon Robert Hyde, to be Assistant-Surgeon, *vice* Matthew Lawrence White, who exchanges.

17th Foot.—Staff Assistant-Surgeon Charles Haines, to be Assistant-Surgeon, *vice* John Henry Halked Tothill, who exchanges.

65th Foot.—Staff Assistant-Surgeon John Williams, to be Assistant-Surgeon, *vice* William Graves, appointed to the Royal Artillery.

Medical Department.—Surgeon-Major Henry Kendall, M.D., from 7th Hussars, to be Staff Surgeon-Major, *vice* Staff Surgeon Maximilian Grant, M.D., who exchanges; Assistant-Surgeon Alexander Frederick Bradshaw, from the Royal Artillery, to be Staff Surgeon, *vice* Staff Surgeon-Major Charles William Woodroffe, placed on half-pay; Assistant-Surgeon Edward Louis McSheehy, M.D., from the 5th Dragoon Guards, to be Staff Surgeon, *vice* Staff Surgeon-Major Usher Williamson Evans, M.D., who retires upon half-pay; Assistant-Surgeon Arthur Croker, from the Royal Artillery, to be Staff Assistant-Surgeon, *vice* Denis John Canny, appointed to the Royal Artillery; Assistant-Surgeon John Henry Halked Tothill, from the 17th Foot, to be Staff Assistant-Surgeon, *vice* Charles Haines, who exchanges; Assistant-Surgeon Matthew Lawrence White, from the 1st Foot, to be Staff Assistant-Surgeon, *vice* Robert Hyde, who exchanges.

BIRTHS.

Dixon.—On May 10, at 108, Grange-road, Bermondsey, the wife of John Dixon, M.D., of a son.

Falls.—On May 11, at Bournemouth, the wife of William Stewart Falls, M.D., of a daughter.

Griffiths.—On the 11th inst., at Swansea, the wife of T. D. Griffiths, M.B., of a son.

Harrison.—On May 14, at 38, Ablewell-street, Walsall, the wife of A. J. Harrison, M.B. Lond., of a daughter.

Hunter.—On May 14, at Stobb House, county of Durham, the wife of Dr. John Gilland Hunter, of a son.

King.—On May 14, at 159, Camberwell-road, the wife of T. W. King, M.D., of a daughter.

Stevenson.—On May 15, at 21, Caversham-road, N.W., the wife of Thomas Stevenson, M.D., M.R.C.P., of a daughter.

Way.—On May 5, the wife of Frederick Walter Way, M.R.C.S., of St. George's-square, Portsea, of a daughter.

MARRIAGES.

Cran—Innes.—On May 11, at the parish church of St. Clement's Danes, John Cran, M.D., of Turriff, Aberdeenshire, to Caroline, eldest daughter of George Rose Innes, Esq., solicitor, of 17, Norfolk-street, Strand.

Ffolliott—Allen.—On March 28, at Umballa, Bengal, Nicholas Ffolliott, Staff Surgeon, to Frances Hastings, daughter of the Rev. J. H. Allen, Cloncara, Limerick.

Kelly—Middleton.—On May 2, at the British Embassy, Brussels, Frederick Kelly, F.R.C.S.L., late of Salisbury-square, Fleet-street, to Emily Ann Middleton, only daughter of the late Mr. Middleton, of Brussels.

Stephenson—Evans.—On May 11, at the parish church of St. Mary, St. Neot's, Huntingdonshire, William Stephenson, Surgeon, of Beverley, to Harriet Emma, youngest daughter of John Jewel Evans, Esq., of St. Neot's.

DEATHS.

Anderson, Alexander Dunlop, M.D., F.R.C.S., at 159, St. Vincent-street, Glasgow, on May 13, aged 77.

Barrack, Harriet, the beloved wife of Alexander Barrack, M.D., at 1, Brackley Villas, Busheyhill-road, Camberwell, on May 11, aged 83.

Evans, Mary Ann, widow of William Evans, F.R.C.S., late of Broomfield, Herne, at 155, King Henry's-road, N.W., on May 13, in her 55th year.

Hawkins, Edmund Woods, M.R.C.S., L.S.A., fourth son of James Hawkins, of 36, Colet-place, E., at Bexley-heath, Kent, on May 12, aged 28.

Macpherson.—By the Indian mail is announced the death of Assistant-Surgeon John Macpherson, M.D., 38th Madras Native Infantry.

Norton, Esther, the wife of J. H. Norton, M.D., at Nantglass, Llanelly, on May 14, aged 51.

Perfect, Cittadini, daughter of the late Mr. Perfect, Surgeon, of West Malling, Kent, on May 12, suddenly, aged 76.

Pollard, Dr. John Henry, at George-town, Demerara, British Guiana, on April 23, in the 51st year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Charing-cross Hospital, West Strand, W.C.—Registrar; must be legally qualified to practise, and be registered. Applications and testimonials to the Secretary, on or before May 31.

Cheltenham General Hospital and Dispensary.—Resident Surgeon to the Branch Dispensary. Candidates must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Mr. D. Hartley, on or before May 20.

Chorlton-upon-Medlock Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Adam Fox, Esq., Hon. Sec., 54, Ann-street, Manchester, on or before May 27.

City of London Lying-in Hospital, City-road, E.C.—Surgeon-Accoucheur. Applications and testimonials to Mr. J. Owthwaite, Secretary, on or before May 24. The election will take place on the same day, at 3.30 p.m.

Cumberland Infirmary.—House Surgeon; must be legally qualified. Applications and testimonials to Mr. John Laver, Secretary, Carlisle, on or before May 27. Election on June 7.

Dundee Royal Infirmary.—House-Surgeon; must be qualified to practise. Applications and testimonials to the Secretary, Mr. D. Gordon Stewart, 18, Meadowside, Dundee, on or before May 31.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

Henley Union.—Medical Officer for the Nettlebed District; candidates must possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. N. Mercer, clerk, Henley-on-Thames, on or before May 23.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Northleach Union.—Medical Officer for the district comprising the parishes of Aldsworth, Bibury, and Coln St. Aldwyns. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. H. Stiles, Clerk to the Guardians, on or before May 24. The duties will commence on June 24.

North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to the Secretary, on or before May 21. Election on June 1.

Royal General Dispensary, 25, Bartholomew-close, E.C.—Resident Medical Officer; must be duly qualified and registered. Candidates to attend at the meeting of the Medical Sub-committee on May 30, at 2 o'clock p.m. Further particulars can be obtained of the Secretary, Mr. E. P. Rowsell, 60, Gracechurch-street, E.C.

Royal Kent Dispensary.—Resident Medical Officer; must have both Medical and Surgical qualifications, and be registered. Applications and *copies* of testimonials to W. Bristow, Esq., 78, London-street, Greenwich, on or before May 20. Election on June 2.

St. Bartholomew's Hospital.—Lecturer on Mental Diseases. Applications and testimonials to Mr. H. Cross, at the Hospital, on or before June 9. Any further information may be obtained of Mr. Morrant Baker, Hon. Sec. of the Medical School.

Salford and Pendleton Royal Hospital and Dispensary.—House-Surgeon; must be legally qualified. Applications and testimonials to the Secretary, on or before May 27.

Samaritan Free Hospital for Women and Children, Lower Seymour-street, Portman-square.—Physician for out-patients; must be M.D., not practising pharmacy. Applications and testimonials to the Secretary, on or before June 3.

Seamen's Hospital Society, Greenwich.—Visiting Physician; must be a Fellow or Member of the Royal College of Physicians. Applications and testimonials to Kemball Cook, Esq., House Governor and Secretary, on or before May 20.

Sunderland Infirmary.—Assistant House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the House-Surgeon, on or before May 25.

Windsor Royal Infirmary.—House-Surgeon; must be legally qualified. Applications and testimonials to Mr. G. Cartland, Secretary, on or before May 24.

CHANGE OF NAME.

I, Daniel George Astle, of Newcastle-under-Lyne, Surgeon, do hereby give notice that, on and after this date, I intend to Assume my Ancestral Name of Astley, instead of that of Astle (for which purpose I have this day enrolled a deed in the Court of Chancery), and that henceforth I shall use the name and style of Daniel George Astley.—Dated this 4th day of May, 1871.—Daniel George Astley.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Worksop Union.—Mr. A. J. F. Russell has resigned the Whitwell District; area 9054; population 2222; salary £20 per annum.

APPOINTMENTS.

Aysgarth Union.—Richard L. Routh, L.R.C.P. Edin., to the Aysgarth District.

Cricklade and Wootton Bassett Union.—Noah B. Langley, M.R.C.S., L.S.A., to the Third District.

Henley Union.—Heygate H. Phillips, M.B. Univ. Dub., L.R.C.S. Ire., to the Caversham District.

Knighton Union.—Henry O. Brown, M.R.C.S. Eng., L.S.A., to the Brampton Brian District.

Newton Abbot Union.—Wm. H. Rawlings, M.R.C.S. Eng., L.S.A., to the Teignmouth District.

Ormskirk Union.—Caleb S. Hilton, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Fourth District.

Wisbech Union.—Arthur B. Ewen, M.R.C.S. Eng., L.S.A., to the Tid St. Giles's District.

University of Glasgow.—Degrees in Medicine.—Mr. Allan Walker, Scotland, was admitted, on the 11th inst., to the degrees of M.B. and C.M., and Mr. John Murray, Scotland, to the degree of M.B.

Professional Examinations.—The following were the questions in Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates for the diploma of Membership of the Royal College of Surgeons on the 12th inst.:—1. Describe the inguinal canal, its boundaries and relations to other structures, including hernial protrusions. 2. What are the causes and the immediate and remote consequences of sudden extravasation of urine? What treatment would you adopt in such a case? 3. Give the pathology of non-traumatic aneurism from its commencement to its termination. 4. Describe the operation known as Chopart's, and the relative position of the various parts cut through in this amputation. 5. How are scirrhus and medullary cancer distinguished in the living subject? What organs does each form specially affect, and at what ages usually do they respectively occur? 6. By what form of accident is dislocation of the head of the femur backwards usually caused? Describe the two dislocations in this direction, the deformity existing in each, and the proper method of reducing them. The following were the questions on the Principles and Practice of Medicine, viz.:—1. Describe a case of tubercular meningitis in a child from the appearance of premonitory symptoms to the termination in death. 2. Give the symptoms of diabetes mellitus, with the methods of analysing the urine; also the treatment by medicines and diet. 3. Write a prescription in full for hæmoptysis, gastrodynia, and dysentery; also a prescription for an aperient draught and a sleeping draught. There were fifty-four candidates, of which number five were rejected on the first day, and twelve on the second.

Association of Medical Officers of Health.—The next meeting, being the last of the session, will be held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Saturday, May 20, at 7.30 p.m. Dr. Humphrey Sandwith, C.B., will be balloted for as an associated member. Dr. Ballard will read a short paper on "The Interment of Stillborn Children." Dr. Letheby will read a paper on "The Quality of the Water-supply of some of the Large Cities and Towns of England in relation to their Sanitary Condition."

West Kent Medico-Chirurgical Society.—At a meeting of this Society, held on Friday, May 12, 1871, Dr. Clapton, F.R.C.P., President, in the chair, Dr. Shepherd, of Victoria-park Hospital, read a paper on "Scarlet Fever." Drs. Carr, Gooding, Purvis, Creed, and Clapton, and Mr. Mitchell took part in the discussion which followed. Dr. H. C. Bastian was unanimously elected an honorary member.

Collegiate Prizes.—The following are the subjects for the prizes offered by the Royal College of Surgeons, viz.:—For the Collegiate Triennial Prize, consisting of the John Hunter Medal executed in gold, to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said Medal executed in bronze, with an honorarium of £50. The subject of this prize is—"The Structure and Functions of the Medulla Oblongata, including the Connexions of the Central Nerve-roots." The dissertation may be illustrated by preparations and drawings. The Jacksonian Prize, between £10 and £11, received from the trust. The subject for the prize for the present year, 1871, is—"The Treatment of Wounds after Operations, including the Arrest of Hæmorrhage Primary and Secondary." The subject for the prize for the ensuing year, 1872, is—"The Diseases of the Nose, including those of the Sinuses connected with it, and their Treatment." The dissertation may be illustrated by drawings, preparations, etc.

University College, London.—On Thursday the prizes in the Faculty of Medicine (for the winter session) were publicly distributed to the successful candidates in the theatre of University College. The following is the list of prizemen in the several departments:—Anatomy and Physiology.—Gold Medal, Edward M. Skerritt; 1st Silver, Walter R. Houghton; 2nd ditto, W. Dyson. Anatomy.—Gold Medal, Alfred Pearce Gould; 1st Silver, Edward M. Skerritt; 2nd ditto, John Appleyard. Junior Class: Silver Medal, Henry Dawson Farnell. Chemistry.—Gold Medal, John W. Elwes; 1st Silver, J. W. Lord; 2nd ditto, John G. Langley. Medicine.—Gold Medal, Leonard Cane; 1st Silver, John Magrath; 2nd ditto, William S. Greenfield and George M. Biggs (equal). Surgery.—Gold Medal, William S. Greenfield; 1st Silver, Rickman John Godlee; 2nd ditto, Henry J. Benham. Comparative Anatomy.—Gold Medal, Lewis John Hobson. Practical Physiology and Histology.—1st Silver Medal, H. G. Jameson; 2nd ditto, Edward M. Skerritt. Fellowes Clinical Medicine.—Gold Medal, P. H. Bindley; Silver Medal, John Magrath; 2nd ditto (given by the Hospital Committee), Leon Moses Finzi and Leonard Cane (equal). Bruce Medal (for proficiency in Pathology and Surgery), now for the first time awarded.—Charles H. Carter.

At the meeting of the City Commissioners of Sewers on Tuesday, a motion was proposed—"That a chamber for the purposes of post-mortem examination would be detrimental to the general use of the mortuary buildings to be erected in Golden-lane, and is not required; and that the plans on which tenders are to be received be altered by omitting the post-mortem chamber." Some discussion followed, but in the result the motion was negatived. Dr. Letheby then read his report on "Spurious Tea." He said he had obtained samples of the damaged and spurious tea which was sold by public auction at the Commercial Sale-rooms, Mincing-lane, on April 4 last. The samples comprised broken-down and rotten or putrid leaves of tea which had already been used for beverage, and, in the case of the so-called "scented orange Pekoe siftings," were made up of the broken leaves of tea, together with a large quantity of the leaves of other plants. Besides this, there are samples of so-called scented tea-dust, which contains a large proportion of earthy matter and iron filings. The samples were sold as Congou, scented orange, Pekoe siftings, scented tea-dust, and Moning, there being in all about 600 half-chests. They were purchased for country use, and he had received from the Medical Officer of Health for Liverpool a sample of the scented orange siftings which were exposed for sale at that place. The price realised at the sale was from five-farthings to seven-farthings a pound. He submitted that the matter should receive the attention of the Sanitary Committee, with a view to legal proceedings, especially as he had been informed on good authority that a large quantity of a similar description of spurious and damaged tea is now on its way to this country from Shanghai.

The Pharmaceutical Conversazione.—The Pharmaceutical Society gave a *conversazione* on Wednesday evening at the South Kensington Museum. As half the Medical Profession in London were there we need not attempt to describe what was one of the most brilliant gatherings of the season. Upwards of 3000 guests were present.

Mr. Serjeant Simon and two other Members have brought in a Bill which would make an important change in the law relating to compensation for personal injuries. The object of the Bill is to declare that owners of dogs shall be liable for injuries done by their dogs without proof of knowledge of mischievous propensities, etc. Damages under £5 may, under this Bill, be recovered before magistrates.

The Ulster Medical Society. — At the annual meeting, held on Saturday last, the following gentlemen were elected office-bearers for the ensuing year:—Dr. Murney, J.P., President; Dr. W. MacCormac, ex-President; Drs. Stewart and Browne, R.N., Vice-presidents; Dr. Fagan, Treasurer; and Dr. J. Walton Browne, Honorary Secretary; and the following members were elected on the Council: — Dr. McWilliams, Dr. H. S. Purdon, Dr. Hill, Dr. Wales, Dr. Porter, and Surgeon M'Cleery.

Leeds General Infirmary.—During the year 1870, 271 operation of all kinds were performed in this Institution; of these patients, 137 were males, and 74 females, cured; 74 males, and 13 females, relieved; and 20 males, and 11 females, died.

Baby-farming.—The Select Committee, of which Mr. Spencer Walpole is chairman, met for the first time on Monday last, and adjourned till Monday next.

The Surrey County Lunatic Asylum at Wandsworth.—The annual report for 1870 states that, at the commencement of the year, there were 910 patients in the Asylum; and that, during that year, 224 additional patients were admitted, making a total of 1134. Of these, 43 males and 30 females were cured, 15 males and 19 females uncured, and 46 males and 28 females died; leaving, at the close of the year, 953 patients, of whom 408 were males and 545 females.

Health of Scotland for April.—The deaths of 2510 persons were registered in the eight towns during the month, of whom 1231 were males and 1279 females. This number, after allowing for increase of population, is 34 above the average number for April during the last ten years. The zymotic (epidemic and contagious) class of diseases proved fatal to 474 persons, constituting 18·8 per cent. of the mortality of the eight towns. This rate was slightly exceeded in Edinburgh, where measles to some extent prevailed, and in Dundee, from hooping-cough and fever combined. The proportion from this class of diseases in Leith was only 7·4 per cent. Fever caused 111 deaths, constituting 4·4 per cent. of the mortality. In Dundee 7·9, and in Paisley 8·2 per cent. of the deaths were from this cause. Of the 111 deaths, 51 were registered as typhus, 29 as enteric, 22 as relapsing, 4 as simple continued, and 5 as infantile remittent fever. Measles was the most fatal of the epidemics, causing 122 deaths, or 4·8 per cent. of the mortality. The number of deaths from small-pox seems to be on the decrease, only 29 having been recorded during April, as compared with 36 in March.

The Academy of Sciences, Paris.—M. Drouet claims the premium of £4000, offered by M. Breant, for curing cholera, his cure being the covering of the stomach of the sufferer with a mixture of collodion and castor-oil, or, in fact, the stoppage of perspiration. The *rationale* of this we must confess we do not understand.

Sanitary State of Germany.—Dr. Frerichs, of Berlin, a well-known high Medical authority, says that the present sanitary condition of Prussia must be considered satisfactory; that there are no accounts of epidemic and other infectious diseases, and that small-pox, which prevailed among the French prisoners of war, and in some places also spread among the civil population, has been decreasing everywhere, through the operation of sanitary measures. The results of investigations made by the Governments of Bavaria, Würtemburg, Baden, and Hesse are equally satisfactory.

M. Longet, the celebrated physiologist, member of the French Institute, and of the French Academy of Medicine, died suddenly at Bordeaux a few days since, at the age of 68. M. Longet is the author of works on the nervous system.

THE seventh report of the Institution for Infectious Diseases, Netherfield House, Everton, is most satisfactory, and has in every way answered the object for which it was established—viz., the prevention and spread of infectious diseases.

THE Abbeyfeale Dispensary Committee has increased the salary of Dr. MacAuliffe £25 per annum, "owing to the excess of duty which Dr. MacAuliffe has to perform, together with his unwearied care and attention to the poor."

THIRTY-ONE insurance offices have paid during one year £20,000 in fees to Medical Practitioners for their reports in connexion with life policies.

THE Metropolitan Asylums District Board have been instructed by the Poor-law Board to provide 700 more beds for accommodation for patients, owing to the continued prevalence of small-pox.

ADMIRAL HAY CURRIE, the chairman of the Asylums District Board, begs of the public presents of newspapers and other periodicals for the small-pox convalescents of the *Dreadnought* Hospital.

THE small-pox epidemic in Malta has, on the whole, somewhat abated. Stringent orders have been issued that all officers and men shall be immediately vaccinated or revaccinated.

M. GUSTAV BISCHOP has been appointed to fill the "Young" chair of technical chemistry in the Andersonian University, Glasgow. M. Gustav Bischop is the son of the late Professor of Chemistry at Bonn, the well known author of "Chemical Geology."

THE Rev. Fred. Chas. Edward Hill, curate of St. John's, Lock's-fields, Walworth, died last week from small-pox, caught in visiting in the thickly populated parish of Lock's-fields. He was seized on Saturday, and died the following Wednesday.

MR. MONFOR, a chemist, lecturing at the Pavilion, at Brighton, a few evenings since, referred to the mud-butter question, and said: "You may be even more astonished to know that butter has been made from flint. I speak with authority when I say this, for I have seen a pound of 'fine fresh dairy butter' (so-called) analysed, and from it was taken half a pound of flint."

THE death is announced of Dr. Bruce, resident Surgeon of the Dundee Infirmary; it occurred last week from the effects, it is supposed, of an overdose of chloral hydrate taken to relieve the pain of a finger which, in some dissecting operation, had been poisoned. Dr. Bruce succeeded Dr. M'Ewan at the Infirmary, and has only held the office for about three weeks.

TYPHOID fever prevails at present in certain parts of Taunton, from causes well known. The river Tone, as it exists at present, is an outstretched cesspool for a considerable length above and below the town. The sewerage of the town and the state of the river are thoroughly bad. Captain Beadon's solicitor has once more written to the Board of Health to apprise them that, if a satisfactory scheme be not adopted within the next three weeks to abate and remove the nuisance, a prosecution will take place.

BENEVOLENCE.—The London Hospital has received £100 from "J. H." The National Hospital for Consumption, £50 from Sir James Tyler. The St. Peter's Hospital for Stone, ten guineas from Messrs. Stein Brothers. The Victoria Hospital for Sick Children, thirty guineas from H. S. Bosanquet, Esq. The Clothworkers' Company have sent £21 to the Royal Cambridge Asylum, ten guineas to the Charing-cross Hospital, and ten guineas to the Seamen's Hospital.

THERE were two prosecutions under the Sanitary Act on Tuesday. At Marlborough-street, an owner of some house property was fined two guineas and costs for keeping her premises in a filthy condition injurious to health. At Marylebone, a contractor was fined £2 12s. for allowing a barge containing vegetable matter to remain on the Grand Junction Canal to the annoyance of the inhabitants. Afterwards, at the same Court, William Young, chemist, of 8, Neeld-terrace, Harrow-road, was fined 20s. for neglecting to have his child vaccinated. He refused to have the child vaccinated because his sister had a violent eruption on the face after being vaccinated. In his business he saw a great number of children who were very bad after being vaccinated, and he had sent to the committee now sitting at the House of Commons on this subject nine cases of injury and death from vaccination. Arthur White, of 75, Waverley-road, and George Stone, of 37, Chippenham-mews, Paddington, were also fined 20s. each for neglecting to have their children vaccinated.

AT Teheran (Persia) the famine is very distressing, and cholera prevails as an epidemic. In the villages the poor are dying by hundreds.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN APRIL, 1871.—The following are Dr. Letheby's returns to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	18·73	0·057	0·184	0·001	15·0	4·1
West Middlesex .	19·10	0·026	0·190	0·001	15·2	4·0
Southwark & Vauxhall . . .	20·27	0·085	0·161	0·001	15·4	4·4
Chelsea . . .	18·27	0·051	0·191	0·001	15·0	4·1
Lambeth . . .	19·63	0·067	0·181	0·002	15·4	4·2
Other Companies.						
Kent	27·83	0·029	0·281	0·000	21·0	5·9
New River . .	19·00	0·026	0·187	0·000	15·0	4·0
East London . .	20·41	0·067	0·211	0·001	15·4	4·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—viz., in the case of the Grand Junction and Lambeth water.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 101,555,774 gallons; and the number of houses supplied was 473,941. This is at the rate of 31·2 gals. per head of the population daily.

HY. LETHEBY, M.B.

TEST FOR PURE CHLORAL.—The purity of the hydrate may, it is said, be tested by a concentrated solution of potash. Pure hydrate does not colour this at all (or, at most, only of a feeble yellow), and the pure smell of chloroform is given forth. Should the liquid assume a brown colour, and a smell of chloroacetic acid be combined with that of chloroform, or should gases of a pungent odour be disengaged, which is not seldom the case, the product is impure and unfit for use.—*Boston Journal*, March 30.

APPARENT DEATH FROM LETHARGY.—Doubtless many during the recent war have been consigned to the grave whose death was only apparent. Professor Nussbaum, of Munich, writing to a friend from Orleans, said—"I experienced a terrible emotion after the battle of Orleans, during October 10 and 11, when one dark, cold night gave rise to so many lethargic deaths. We returned several times with four or five porters to wounded persons who had been left for dead, while the heart's pulsation could still be easily perceived, and who by the aid of warmth and refreshment we restored to life. Loss of blood, exhaustion, hunger, cold, and fear seem to me to have been the causes which gave rise to this lethargy; and if on the field of battle long pins cannot be employed to prick the apex of the heart (which is the best means of verifying death), at least, here, as in all other possible cases, the ear might be applied to the chest, a practice very easily taught to all bearers of the dead."—*Journal de Méd. de Bruxelles*, Feb. 7.

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon.*

G. W.—St. Bartholomew's Hospital was founded in 1539, and incorporated as an Hospital 1546.

L.S.A.—At the last pass examination for the diploma of Membership of the College of Surgeons, there were twelve gentlemen possessing the licence of the Hall.

Inquirer.—According to the Registrar-General's statistics, the average daily mortality of Melbourne for 1870 was 7·29, and the total mortality equivalent to 1·62 deaths to each 1000 of the population.

An Old Subscriber.—It is clear our correspondent was actuated by the best motives, but we think that he fell into a mistake.

Church-near-Preston.—The *Preston Evening News* of Monday last contains a report of an inquest on a police sergeant, with the following sub-heading:—"Dispute between Doctors." We have no hesitation in emphatically stating that such "disputes" are highly discreditable to us; it is scarcely necessary to enter into the particulars of the case—it is the old, old story of Doctors disagreeing. Though such disagreements have given origin to what is now regarded as a preverb, nothing is more offensive to good taste or more inimical to our true position than the publication of such petty and contemptible squabbles. The coroner, Mr. Hargreaves, was evidently of this opinion, and very properly refused to admit evidence, which, had it been received, could have been productive of nothing but a wordy war, without any good result. When are we to be united in the good and righteous cause of protecting and upholding our just rights and privileges? Division amongst us is weakness, union is strength. No Acts of Parliament can effect for us what, if we were united, we could effect for ourselves. It would be well if we could always bear in mind, and act upon, the axiom of the Great Napoleon, that "It is better to wash one's dirty linen at home."

Studens.—Metallic tinkling is the clear ringing metallic echo produced when in a large cavity containing air with a layer of fluid at its bottom, a drop of fluid falls from the upper part of the cavity into the fluid below. Metallic tinkling is best heard when a vomica or tuberculous cavity, situated near the surface of the lung, has communicated with the pleura by perforation. Fluid finds its way into the pleural sac, or is effused by the irritated pleura and gravitates to the bottom. Air also escapes into the pleural sac through the perforation. If then a drop of fluid fall from the vomica or cavity through the pleural sac into the fluid beneath, it produces a note of a clear ringing character, which is echoed by the pleural walls, to which the name of "metallic tinkling" has been given. The same sound may also be produced in large cavities in like manner. This is the mechanism in the most perfect examples of metallic tinkling. By some authors, however, the term metallic tinkling is applied to a shrill metallic sound, which may accompany respiration, or voice, or cough, when air and fluid coexist in a large cavity. If a person breathe into water by an elastic tube, the bubbling which results will have a metallic tinkling character. Hence De Castelneau and Louis considered metallic tinkling "as nothing more than mucous or cavernous rhonchus, resounding through a spacious cavity, by means of a communication established between that cavity and the bronchi." Dr. Walsh regards metallic tinkling as the echo of a bubble or, at least, of a sound generated within liquid.

Cambridge.—There can be no doubt that the charges brought by Dr. Ransom against Dr. Buckenham, one of the Surgeons to the Cambridge Union, were of the most frivolous character, and ought never to have been submitted to the Board of Guardians. The Board, however, dealt with the subject in a manner highly honourable to them, and by a large majority—14 to 4—passed the following resolution:—"This Board, having heard the explanation of the charges brought by Dr. Ransom, are perfectly satisfied that Dr. Buckenham has not neglected his duty, and regret that he should have been summoned to answer so groundless a charge." It is gratifying to read the report of the proceedings of the Board, as given in the *Cambridge Chronicle* of the 13th inst. The speech of Mr. Cooke, in particular, is worthy of commendation, not only on account of the good feeling which pervaded it, but for the keen sense which the speaker entertained of what was due from one Medical gentleman to another. He laid down, in a few words, some principles of Medical etiquette, which did him honour. How many acts of injustice and oppression might be prevented if the rules of conduct laid down by Mr. Cooke were more generally observed, not only by boards of guardians, but by members of our Profession! We read, with feelings of deep regret, the statement that "during Dr. Ransom's absence from this Board no charge whatever was made against Dr. Buckenham for neglect of duty. But no sooner did Dr. Ransom get there, than he gave notice of an attack on one officer of the Board, which resulted against Dr. Ransom, who then preferred a charge against Dr. Buckenham." If we are not true to ourselves, how can we expect the public to be true to us? We do not criticise the motives which influenced Dr. Ransom—it may be assumed they were good; but after the lecture he heard from Mr. Cooke, it is to be hoped he will be a wiser, if not a sadder, man.

Sir Dominic Corrigan's Bill for obtaining Remuneration for the Examination of Lunatics and Superannuation for the Medical Officers of Lunatic Asylums in Ireland.

The following letter has been issued by the Poor-law Medical Officers' Association, Ireland:—

"1, Harrington-terrace, Dublin, May, 1871.

"Dear Sir,—Will you have the goodness to obtain the signatures of all the members of the Medical Profession resident in your neighbourhood to the accompanying document, which fully explains itself, and return it to me at as early a date as possible, in order that it may be forwarded to the Members of Parliament for your county, city, or borough, as the case may be. Should you be personally acquainted with them, kindly forward one to each, yourself as well. It is of the utmost importance that no time should be lost in so doing, as Sir Dominic Corrigan intends introducing the Bill alluded to without delay; and, for its success, it is most desirable that all the Irish M.P.'s should support it on the occasion of its introduction. We are also in communication with the Parliamentary Committee of the British Medical Association, and the English Poor-law Medical Officers' Association, from both of whom we have received assurance of every assistance in their power.

"You will perceive that the subject of the superannuation of the superintendent resident Physicians of the district lunatic asylums is introduced into this Bill; this is quite in accordance with the Third and Fourth Regulations of our Association, which I beg leave to append:—

"1. That the Medical officers of each union shall elect from amongst their number a union representative.

"2. That the union representatives of each county shall elect from amongst their number a county representative, who shall be in communication with the Parliamentary representatives of that county.

"3. That the county representatives shall invite every member of the Medical Profession in each county to join this Association, their interests (as far as they go) being identical with those of the Poor-law Medical Officers.

"4. That in any union or county in which it may be deemed advisable to do so, any member of this Association, although not being a Poor-law Medical Officer, may be elected by ballot to be either the union or county representative.

"5. That the thirty-two county representatives shall form the Council of the Association.

"6. That a meeting shall be held quarterly and alternately in each of the provinces of Ireland.

"7. That an annual meeting shall be held, when the General President, Treasurer, and Secretary for the year shall be appointed.

"8. That the annual subscription for each member shall be 2s. 6d. (There being 1000 Poor-law Medical Officers in Ireland, this would produce an income of £125 per annum, which would cover printing, postage, and stationery.)

"Most of these gentlemen have already joined the Association, and our mutual co-operation will, no doubt, lead to very important results. I would impress upon you the desirability of your using your influence to obtain as many new members for the Association as possible in your vicinity, and of establishing a good working branch in your county, as without union we can hardly hope for success; and the frequent calls upon the funds of the Association, for the purpose of communicating with individual members on various important matters relating to our Profession, as they arise, are very considerable, and can only be carried out in accordance with our programme by united action and support. It is possible that you may not as yet have realised the responsibility and risk of examining and certifying for alleged dangerous lunatics; but several have experienced it already to their very considerable pecuniary loss, and all are liable to be called on to undertake this onerous and troublesome office at any moment.

"Besides, it must be borne in mind, that the great principle—viz., that Medical men should be paid for their time and services rendered, as well as the members of other professions—is at stake. The present time affords an opportunity of establishing this precedent; and, as we have in Sir Dominic Corrigan a Medical representative both able and willing to assist us, as we have already experienced in his successful opposition to Lord O'Hagan's Bill, which resulted in the removal of those clauses obnoxious to Medical men, I trust that you will, therefore, warmly and heartily co-operate with us in this movement, in which, if we are only unanimous, we have every prospect of success. I remain yours very truly,

"D. Toler T. Maunsell, Secretary."

Effect of Electrisation on the Extensor Carpi-ulnaris.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The notice in your issue of March 11, of Dr. Duchenne's lecture given at St. Thomas's Hospital on the electrisation of muscles, reminds me of an observation I made some time ago as to the action of the extensor carpi-ulnaris.

In an aged female subject, the primary action of this muscle certainly appeared to be adduction of the hand, and it also seems to be the same in my own case.

I should like to know the result of the electric test on this muscle, and trust Dr. Duchenne's observations will be published in extenso.

I am, &c.,

Kamptee, April 13. E. H. Lloyd, F.R.C.S., Assistant-Surgeon R. A.

Scottish Morality.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Allow me to make some remarks of a general nature on so-called Scotch morality, and especially to refer to Dr. Whitelaw's letter on sexual morality, or rather immorality, among the labouring classes of Scotland, premising that however truthfully he may have represented the shocking depravity of Kirkintilloch, yet that I consider it unfair to apply observations on such a very small scale to the country generally. Perhaps the condition of Kirkintilloch is exceptional, and the cause of this admits of explanation. Indeed, a statement of Dr. Whitelaw's seems to me to indicate that the state of the people there is exceptional; for he says, that of thirteen women who had illegitimate children four were Irish, from which it is fair to infer that in the locality in question the population is a mixed one with respect to nationality. If this be so, then such a locality is not adapted for studying the Scotch national character, since the immigrants must have had a modifying influence on the habits of the natives.

As an Argyleshireman, and besides as knowing well, from long residence, the counties of Perth and Inverness, where for the most part and for all practical purposes the race is pure and unmixed, it is my opinion, from observation and from common belief of the people, that marriage is of frequent occurrence between the parents of illegitimate offspring. This applies not only to the common people, but also sometimes to the wealthy and high-born, when they marry those beneath them in social rank in an irregular way. A reference to the comparative frequency of legal disputes about family honours and estates will show this. Furthermore, since the Scotch law makes a child born in bastardy legitimate when at any time the parents form a legal marriage, I think it not unlikely that in many instances couples who have given way to illicit passion defer marriage till a more convenient time, knowing that things can be made decent by marriage at some future time. It is also to be remarked that the registration of births is very exactly carried out in Scotland.

According to my experience, too, it is rare for the seducer among the working classes in country districts to desert the woman he has betrayed, and still more rare for the woman who has lost her character to receive the embraces of a new lover.

A word in conclusion about the much-vaunted chastity of Irish girls. It is well known that the Irish encourage early and improvident marriages, while the Scotch do not. Now, if this be the explanation of Irish chastity, I at least do not value it much. I am, &c.,

Hastings, May 11. Wm. Campbell, L.R.C.S. Edin.

COMMUNICATIONS have been received from—

Mr. W. Campbell; Dr. W. Roe; Dr. J. Russell; Dr. Phillips; Dr. H. G. Dalton; Mr. F. Webster; Dr. Armstrong; Dr. Acland; Mr. Metcalfe Johnson; Dr. F. R. Hogg; Mr. Lewis Thompson; Dr. Purvis; Dr. Stothard; Mr. W. Hunter; Dr. Whidborne; Dr. Chartres; Mr. F. H. Welch; Mr. E. H. Lloyd; Mr. A. H. Smee; Mr. J. Chatto; Dr. R. Douglass Powell; Dr. Day; Mr. H. Arnott;

Dr. J. Hughlings-Jackson; Dr. F. A. Hartsen; Mr. J. C. Steele; Dr. McCall Anderson; Mr. W. D. Michell; Dr. Brakenridge; Mr. G. Lawson; Mr. F. T. Procter; Mr. C. F. Maunder.

BOOKS RECEIVED—

Contributions towards the Materia Medica and Natural History of China, by Frederick Porter Smith, M.B. Lond.—Army Medical Department Report, 1869—Dr. James D. Gillespie on the Resection of the Wrist-joint—Remarks on Mr. Clark's Calcutta Drainage Scheme, by Dr. David B. Smith, Sanitary Commissioner for Bengal—Handy-book of the Treatment of Women's and Children's Diseases according to the Vienna Medical School, by Dr. Emil Dillnberger, translated by Patrick Nicol, M.B.—Our Baths and Wells: the Mineral Waters of the British Islands, with a list of Sea Bathing-places, by Dr. John Macpherson—The Surgery of the Rectum, third edition, by Henry Smith, F.R.C.S.—The Co-operative System of Society, by Dr. Henry Travis—The Physiology and Pathology of Mind in the Lower Animals, by Dr. W. Lauder Lindsay—Dr. R. A. Duhring on the Study of Dermatology—Dr. Wm. Murray on the Rapid Cure of Aneurism by Pressure.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Preston Evening News—Belfast Evening Telegraph—Nature—Pharmaceutical Journal—The Chemist and Druggist—American Journal of Insanity, April—Liverpool Mercury—Glasgow Herald.

APPOINTMENTS FOR THE WEEK.

May 20. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Association of Medical Officers of Health, 7½ p.m. Dr. Ballard, "On the Interment of Still-born Children." Dr. Letheby, "On the Quality of the Water-supply of some of the large Cities and Towns of England, in relation to their Sanitary Condition."

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

22. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

23. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 4 p.m. Anniversary.

Royal Institution, 3 p.m. Rev. Prof. Haughton, M.D., F.R.S., "On the Principle of Least Action in Nature."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Elam, "On Partial Acute Idiopathic Cerebritis." Mr. L. S. Little, "On Subcutaneous Section in Bony Anchylosis of the Knee-joint."

24. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 8 p.m. Meeting.

25. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Gresham College, 7 p.m. E. Symes Thompson, M.D., F.R.C.P., "On the Water-supply of London."

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

26. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Clinical Society, 8½ p.m. A Paper by Dr. Meadows. Mr. Holthouse, "On some Cases illustrating the Treatment of Herniæ temporarily Irreducible." Dr. Baümler, "On Cases of Partial and General Idiopathic Pericarditis."

Gresham College, 7 p.m. E. Symes Thompson, M.D., F.R.C.P., "The Heart and Lungs in Health and Disease."

Royal Institution, 9 p.m. Prof. Rankine, F.R.S., "On Sea Waves."

EXPECTED OPERATIONS.

London Hospital.—The following Operation will be performed on Saturday (this day) at 4½ p.m.:—

By C. F. Mr. Maunder—Ovariotomy.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 13, 1871.

BIRTHS.

Births of Boys, 1048; Girls, 1023; Total, 2071.
Average of 10 corresponding weeks, 1861-70, 2056·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	716	625	1341
Average of the ten years 1861-70 . . .	682·8	650·1	1332·9
Average corrected to increased population .	...	...	1466
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	12	3	9	...	4	...	3	1	2
North ...	618210	85	1	6	1	5	6	3	...	4
Central ...	383321	13	1	5	...	2	...	1	...	1
East	571158	36	2	4	1	8	...	1	1	...
South	773175	88	9	11	...	6	5	1	2	6
Total	2803989	232	16	35	2	25	11	9	4	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·974 in.
Mean temperature	47·6°
Highest point of thermometer	72·9°
Lowest point of thermometer	34·0°
Mean dew-point temperature	40·3°
General direction of wind	N.E.
Whole amount of rain in the week	0·15 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 13, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending May 13.	Deaths Registered during the week ending May 13.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	2071	1341	72·9	34·0	47·6	8·66	0·15	0·38
Portsmouth ...	125464	13·2	63	43	72·8	36·2	50·1	10·06	0·00	0·00
Norwich	81787	10·9	48	32	63·0	35·8	45·3	7·39	0·03	0·08
Bristol	173364	37·0	108	68	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	62	16	73·0	32·2	48·2	9·00	0·00	0·00
Birmingham ...	378574	48·3	274	166	75·0	37·2	49·0	9·44	0·00	0·00
Leicester	101367	31·7	82	33	72·7	39·5	48·8	9·33	0·12	0·30
Nottingham ...	90480	45·3	43	17	73·4	38·5	50·4	10·22	0·02	0·05
Liverpool	526225	103·0	370	318	68·2	37·4	48·9	9·39	0·00	0·00
Manchester ...	379140	84·5	236	201	...	...	...	...	...	...
Salford	123851	23·9	96	73	72·5	33·8	48·1	8·94	0·00	0·00
Bradford	148030	22·5	206	66	71·5	35·0	49·3	9·61	0·00	0·00
Leeds	266108	12·3	169	118	68·0	38·0	49·4	9·66	0·00	0·00
Sheffield	255247	11·2	193	127	70·0	37·0	47·8	8·78	0·00	0·00
Hull	135195	38·0	89	39	68·0	37·0	45·9	7·72	0·03	0·08
Sunderland ...	103037	31·2	94	54	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	82	70	...	...	...	...	...	...
Edinburgh	179944	40·6	131	118	67·7	33·0	48·7	9·28	0·00	0·00
Glasgow	477627	94·3	390	324	73·4	34·5	50·2	10·11	0·07	0·18
Dublin (City, etc.)	322321	33·1	†145	†151	...	...	...	...	...	...
Total of 20 Towns in United Kingd'm	7336961	34·4	4952	3375	75·0	32·2	48·5	9·16	0·03	0·08

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·97 in. The highest was 30·21 in. on Sunday morning, and the lowest was 29·77 in. at the end of the week.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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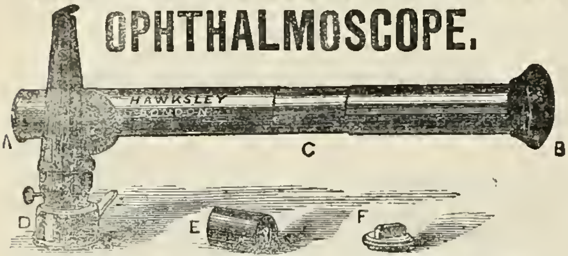
* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

† The usual return from Dublin not having come to hand, averages of the births and deaths in that city in the five previous weeks have been used in order to make totals for the 20 towns.

THE SELF-ILLUMINATING OPHTHALMOSCOPE.



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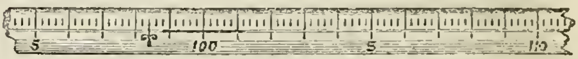

Section showing actual size, range 90 to 110.

Vide "Lancet" Report, July 3rd, 1869; Brit. Med. Association Reports, 1869.

At the last meeting of the British Medical Association, in a paper read by Dr. Cornelius Fox, on "Clinical Thermometers," it was announced that this instrument was far superior to that of any other maker. Prices of the Improved Clinical Thermometers, with indelible divisions, in similar cases to the patent instrument, 6-inch, 10s. 6d.; 5-inch, 12s. 6d.; 3-inch (Prof. Beale's), 15s. Post free. Temperature charts bound for the pocket. Descriptive circulars forwarded. Inventor, Patentee, and Sole Maker, **HAWKSLEY**, Surgical Instrument Maker, Blenheim-street, Bond-street, London, W.

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(Vide "The Lancet," Feb. 19th and May 14th, and "Medical Press and Circular," Feb. 23rd, 1870,)

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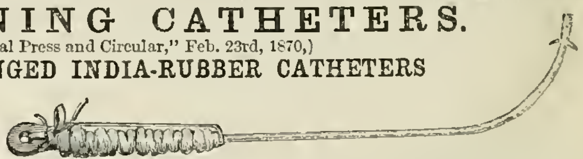

PRIZE MEDAL, 1862.

JOSEPH F. PRATT,

PRIZE MEDAL, 1865.

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ORIGINAL LECTURES.

ON THE INFLUENCE OF THE NERVOUS SYSTEM ON DISEASES OF THE ORGANS AND TISSUES.

By THOMAS LAYCOCK, M.D., etc.,
Professor of the Practice of Medicine, of Clinical Medicine, and of Medical Psychology and Mental Diseases, in the University of Edinburgh.

(*These lectures have been revised, and somewhat extended, by Dr. Laycock.*)

Lecture III.

THE DIAGNOSIS OF TROPHIC NERVOUS DEBILITY —CUTANEOUS TROPHESIES—METASTASIS— COUNTER-IRRITANTS.

(*Concluded from page* 536.)

The case just noted illustrates the trophic functions of the spinal cord, but like clinical facts show that the encephalon regulates trophic changes. I call your attention to a case of cardiac dropsy, as an instance, recorded in the *Medical Times and Gazette* of December 28, 1861, and to the cases of neurotic dropsy and œdema which I detailed in a paper read to the Royal Medical and Chirurgical Society of London, on April 25, 1865, subsequently published in an extended form in the *Edinburgh Medical Journal* for March and April, 1866. The nature and causes of nervous and local œdemas and of serous metastasis were also discussed in a clinical lecture on the physiognomical diagnosis of dropsies, published in the *Medical Times and Gazette* for May 31, 1862. In those papers I demonstrated the influence of the nervous system on the production, prevention, and removal of dropsical effusions.

None of the vaso-motor theories of dropsy recognise the relations of the nervous system to the lymphatics and absorbents; they are complex and contradictory, but all are more or less founded on hydrostatics and hydraulics. There is, it is alleged, a venous reflux on the weakened capillaries and small vessels, in consequence of the interrupted transit of the blood through the veins or the heart; then, the blood being watery (hydræmia), the watery serum oozes hydraulically, or, in the lower extremities, hydrostatically, through them, and so collects in the cellular tissue or shut sacs. The weakening of the capillary walls may be due to vaso-motor paresis, by which congestion and diminished retentiveness are caused, aud so watery exudation takes place. This is Virchow's theory of nervous influence. Now, in the case of cardiac dropsy referred to, a woman, aged 30, had mitral constriction with paraplegic dropsy, but no renal disease. As the anasarca of the legs and thighs was distressing, an incision was made over the left ankle, and punctures over the right. In a day or two she had an attack of hemiplegia of the left side, the arm and left side of the thorax being chiefly affected, and before death anæsthesia of that side. With the hemiplegia, the left arm as well as leg became very œdematous, but the œdema of the right leg and thigh disappeared, and the right arm was little affected. Here, then, was a case not only of aggravation of anasarca, but of cessation and disappearance, for which none of the theories of dropsical effusion gives an explanation. For this purpose another hypothesis is needed. To explain the disappearance, it could be alleged that the case was an example of a well-known morbid phenomenon—namely, that of serous metastasis; it was the serum of the palsied side transmitted to the brain by "metastatic action" which caused the palsy-stroke. It so happened, however, that on post-mortem examination a clot was found in the right middle cerebral artery (as, indeed, was diagnosed during life), and no serum. In truth, this theory of serous metastasis is a mere figment of the imagination. The state of the right brain due to the plug was the proximate cause of the absorption of the fluid from the left side. Here was a new fact in vaso-motor pathology of wide practical significance; for precisely similar results are seen in cases of "metastatic" rheumatism, "retrocedent" or "suppressed" gout, "repelled" eruptions, and dried-up ulcers, from, as I think, similar causes—namely, changed conditions of the nerve-centres. In none of these instances of alleged transference of a *materies morbi* is there any proof of the fact of such transference, any more than in this case of "metastatic" dropsy. The theory rests almost solely on the fallacious *post hoc ergo propter hoc*, and is inconsistent with itself and with therapeutics. On the other hand, the theory that metastasis is neurotic in origin is sufficient, and is practically available in all cases of the class. All we have to bear in mind is, that there are two conditions of the nerve-centres diverse in results and different in seat in cases of dropsy—the one condition favouring the occurrence of certain changes, the other inhibiting it. This is the state of things when pain and inflammation cease in one joint and begin in another in gout and rheumatism. There are cases of hemiplegic jaundice, and of eruptive fevers, as measles, in which there is a phenomenon of the same class—on the one side there is a predisposing neurosis; on the other, an inhibiting condition, just as in cases of hemiplegic dropsy. To this class also belong those cases in which there is no eruption, or in which it appears and disappears like an urticaria evanida. A neurotic condition seems to be the reason why tubercles are absent in anæsthetic leprosy. We thus explain, also, why those cases of syphilis in which there have been no cutaneous affections are most predisposed to syphilitic diseases of the nervous system, as in the case of paraplegia just referred to. That patient had had chancre and bubo, but never other results of syphilitic infection. It is only when grave symptoms coincide with a so-called repelled eruption that the neurosis upon which the cessation of the inflammation depends is of serious omen. To this class belong other metastatic phenomena—as, for example, the cessation of the pulmonary symptoms in a case of phthisis when brain disease comes on. These clinical facts are illustrated by and illustrate the well-known experiments of Claude Bernard on the sympathetic cervical ganglia. It is usually said that the increased heat and congestion which result on the same side as the injury are due to a palsy of the vaso-motor nerves of the part, and no regard is had to an equally constant yet diverse condition—the coldness and pallor—on the opposite side. As a simple fact, we find that, on the one side, vascular activity is intensified, on the other inhibited, with corresponding changes in heat-production and nutrition, just as occurs in the hemiplegic and metastatic cases of dropsy referred to. For an outline of my views on metastasis, I must refer you to my text-book.(a)

So far I have endeavoured to guide your observations at the bedside in regard to the morbid results of trophic neuroses, and more especially as to their operation as predisposing causes of disease. Let us now see what practical lessons in the use of remedies may be deduced from the facts and the conclusions therefrom. One class—viz., that of counter-irritants, including "rubefacients"—may be taken as illustrative of others; and as they are in daily use, and their *modus operandi*, after numerous recent discussions, very obscure, I shall devote a few minutes to an endeavour to elucidate their application. First, What is meant by counter-irritation? The question is not so simple as it appears, for the solution of various and wholly distinct problems is included in it. I think, however, we may affirm generally that the change we induce by counter-irritants locally is of the nature of inflammation, either with or without effusion, exudation, and, I may add, suppuration, in the case of setons and issues.

In all observations of this kind we must not, however, forget a general fact deduced from clinical observation and experimental research, and very manifest in the growth of cutaneous hair and scales—viz., that not only do the tissues themselves undergo normal vital changes independently of nerves or of a nervous system, but also that nerves and nerve fibrils perform their appropriate functions independently of nerve-centres. Nerves are produced anew in organised plasma, and join on to the general trunk in accordance with the order of embryonic development of the nerves from the periphery to the centre. MM. Philipeaux and Vulpian made numerous researches, which prove that nerves separated wholly from the nerve-centres, and completely altered as to nutrition, may become regenerated, although remaining separate, and recover all their vital properties.(b) Numerous experiments, also, on the nerves of muscles show that these motor nerve-fibrils have their own inherent properties in entire independence of brain, spinal cord, or nerve-centres, and not only in separated limbs, but in muscles that have been cut from the limbs. Unless these facts be borne in mind, it is not possible to appreciate the influence of even the sympathetic ganglia on morbid changes in organs and tissues.

Again, varying results follow, according to the nature of the irritant used. When certain drugs are the means, then, besides their local action, there is that which results from their absorption, as, for example, spirit of turpentine, which, when used as a "rubefacient," gives a peculiar odour to the urine, or that element of the cantharides-blister which excites strangury.

(a) "Principles and Methods of Medical Observation and Research." Second edition, p. 283.

(b) *Comptes-Rendus*, Oct. 10, 1859.

Leaving this point out of consideration for the present, we may ay further that, as to the tissues affected, all counter-irritants (amongst which heat and cold and other physical irritants must be included) act either locally on the tissues, including the nerves and bloodvessels, or else on the nerve-centres through the nerves, and thence by reflex action on the same, or a distant organ or tissue. *We thus arrive at this general principle—that the laws of reflex action adapted to a trophic anatomy and to neurotic changes in tissues and organs, must be our guide in the use of counter-irritants and rubefacients.*

This being so, one practical conclusion follows directly—viz., that for the purpose of effective counter-irritation, beyond merely local results, it is necessary that there be continuity of sensory or afferent trophic nerve between the surface irritated and the nerve-centre to be acted on, otherwise no change can be effected therein. Again, if there be no continuity of efferent or motor nerve between the part to be modified and the nerve-centre which modifies, no counter-irritation will avail, although the sensory communication be continuous. Thirdly, since any surface may be made available for exciting reflex action, so in like manner other surfaces than the surface of the body may be available for counter-irritation. Hence, when we excite vomiting by tartar emetic, purging by croton oil, scammony, or other drastic purgatives, and strangury by cantharides, we counter-irritate as certainly as when we apply sinapisms to the feet, fumes of ammonia to the nostrils, and fly-blisters, turpentine, or chloroform to the skin. Fourthly, we may go further, and say that certain inflammations of these surfaces, induced otherwise than by counter-irritants, will have a diastaltic action analogous to that of counter-irritation.

Having thus, then, widened our view of matters, let us take up a few practical points. Firstly, we desire to alter the condition of the nerve-centres in centric diseases by counter-irritants. The time-honoured use of sinapisms to the feet and wrists in apoplexy and comatose affections generally is a familiar example of direct irritation through afferent nerves; so, also, the irritation of the nasal branches of the fifth nerve in cases of failure of the heart's action; but you may widen much the sphere of these remedies. For example, I have seen cephalic snuffs of great use in epilepsy, and I have no doubt they might be applied with advantage in other encephalic diseases of defective nutrient and vascular activity. The ancient Greeks used this class of remedies so systematically in head affections that they invented a double-piped syringe for the purpose of injecting counter-irritants into both nostrils at once. In cases in which it is advisable to stimulate the nerve-centres through the afferent nerves, hot applications, as Donovan's button, may be applied, or rubefacients, which excite more or less pain and tingling. In certain cases of paraplegia I have found it very useful to cover the lower extremities with sinapisms for half an hour two or three times a day, so as thereby to excite vaso-motor activity in the motor cord through the sensory nerves. In these cases it is necessary that there be at least sufficient integrity of the sensory nerves and nerve-centres to evolve and transmit the regulative or sensory vis nervosa. If there be complete anæsthesia from structural change, little good will be done; but if the lost or diminished sensibility be only functional, you may re-excite centric sensory activity by stimulating the sensory nerve-fibrils, in accordance with the Wallerian law of line of physiological activity that I previously explained to you; for, just as sensory centric disease may begin at the periphery, so, also, may the cure. This rule applies to all those trophesies in which there is sensory defect, but not to the extent of absolute anæsthesia—a mere trophic debility being the result. In this numerous class there is commonly a defective evolution of both motor and sensory vis nervosa; but as the evolution of the one is excited by the other, it is plain we must act therapeutically upon the sensory system in the first instance, and this can be done by counter-irritants. It will be a daily problem for you to determine how far pain or tenderness on pressure should indicate or contra-indicate the use of counter-irritants. The facts to ascertain are the causes of the pain. Is it due to local causes, as when a wound is inflicted, or, if there be local causes, has pain preceded or followed them? It is too often assumed that the pain is wholly due to local changes; whereas it either precedes or coincides, as in certain sensory trophesies. The connexion between pain, as neuralgia, and metastasis in rheumatism and gout, shows how certain trophic changes are dependent on the sensory system. A morbid change is often the more dangerous, in fact, because painless, as in the case of paraplegia I quoted, or because it ceases with cessation of pain, as in metastasis. In examples of this kind, pain is only a stage to that trophic palsy which is indicated by complete anæsthesia. Hence the importance of studying morbid-tissue change in relation to pain and painful states, whether of body or mind, and under this head the relations of neurotic diseases of organs and tissues to mental work, and to mental pleasure and pain.

It may be held as a general principle that diminution and loss of sensibility are associated with defect in that centric regulative property by which tissues and organs resist causes of disease. Now, rubefacients and counter-irritants are such causes; so that, when applied to the skin, when there is that defect I have termed trophic nervous debility, the results may be a ready morbid reaction to the counter-irritant far beyond that desired. This kind of ready reaction is seen in the skin in cases in which there is lowered innervation—as in measles and other exanthemata, in low forms of typhus, diphtheria, and influenza. In such specific fevers fly-blisters for pneumonia are worse than useless, being likely to bring on low inflammation, if not sloughing. There is a like tendency in this class of diseases to low inflammatory action of the skin from pressure, and of the cornea from slight irritants, just as is seen in paraplegia and in the eye and nostrils in disease of the Gasserian ganglion. Such facts alone would indicate that in specific fevers the trophic nervous system is involved.

On the other hand, in a numerous class of cases—in those, for example, termed "idiopathic inflammations"—there is a healthy or normal reaction against injurious agencies, and, of course, a comparatively healthy nervous system. How shall we use counter-irritants in these? I think we can still fall back upon the laws of reflex action for guidance. When an irritant is applied to a nerve, and excites reflex movements, they are of a conservative character; so, also, when it excites the reflex nutrition, which is the result of its action on the trophic system. But this is only seen when the regulative or sensory system retains its functions; otherwise there is no healthy reaction, but rather a tendency to what is unhealthy. If, then, the counter-irritant fails to excite the afferent and regulative system normally, it is useless, and may be injurious. Pain is a natural sign of injury. When, therefore, there is tenderness on pressure, or pain referred to the region of an inflamed organ, would that indicate the use of counter-irritants? Here, again, the question is more complex than it appears on first consideration. In some cases there is hyperæsthesia of the skin only, and no pain in the organ than what may arise from over-distension or other local and merely mechanical causes. Further, the pain is not always referred to the seat of the inflammation, but elsewhere. Thus, occasionally, in both pleurisy and pneumonia it is not experienced in the affected side, but in the opposite; so that the question arises whether decussating nerves are affected sensorially, and direct trophic nerves motorially. Upon the whole, in acute cases, both experience and theory are opposed to violent (*i.e.*, inflammatory) counter-irritation—rubefacients, at the most, are all that are needed; but even these are more doubtful than local sedatives with warmth and moisture to the skin. The local morbid condition has already caused those centric changes upon which pain depends, and the normal reaction has followed; this being so, it seems advisable to relieve the pain rather than increase it. In this way the great additional suffering may be spared the patient which the "heroic" use of blisters, tartar emetic, croton oil, and other inflammatory counter-irritants inflicts.

I think we can also make these views available to a better comprehension of the uses of counter-irritants when applied to induce absorption of fluid in dropsical joints and elsewhere. Do they act directly and solely on the absorbents, as is generally believed, or on the nerve-centres as well? When a blister is applied to the side to excite absorption, it is more difficult to understand how it acts locally than through the nervous system, if we remember that the so-called serous metastasis is nothing more than the rapid absorption of serum from a change in a nerve-centre, as in the case of dropsy I alluded to, in which rapid absorption followed on embolism of the middle cerebral artery of the same side. Again, if we give the so-called hydragogue cathartics in acute hydrocephalus, ascites, and general dropsy, we use very active counter-irritation of the intestinal surfaces, and in this way act as certainly on the nerve-centres as when blisters and rubefacients are applied to the skin. So, also, when we use the hot-air bath in dropsies we do much more than stimulate locally; we apply a powerful agent to the nervous system. On the other hand, blisters applied to joints under certain conditions will excite effusion.

I could multiply illustrations of this kind, if necessary. Irritants to the stomach, for example, act as counter-irritants on the lungs as well as on the brain; irritants to the kidneys, urethra, and cervix uteri are counter-irritants to both brain and spinal cord—in short, all the diastaltic actions of irritated mucous surfaces and of morbid viscera are of the nature of counter-irritation, and may be induced artificially. I will only mention one curious illustration:—Irritation of the urethra not unfrequently excites violent rigors. The New Zealanders adopt a coarse means for this purpose, as a counter-irritation for the cure of tetanus.

LECTURES
ON THE PRINCIPLE OF LEAST ACTION IN NATURE,
ILLUSTRATED BY ANIMAL MECHANICS.

DELIVERED AT THE
Royal Institution of Great Britain.

By the Rev. SAMUEL HAUGHTON, M.D., F.R.S., etc.
(Corrected by the Rev. Professor.)

TUESDAY, MAY 23, 1871.

LECTURE I.

Science of Animal Mechanics defined as the application of the Principles of Geometry and Mechanics to Comparative Anatomy—General Principle of Least Action, as observed in Astronomy and Physics—Application of this Principle to Animal Mechanics—Illustration of the Pleasures and Difficulties of the Study of Animal Mechanics, from the Lecturer's Adventures in search of the Co-efficient of Muscular Force.

LADIES AND GENTLEMEN,—I take for granted that there are none of those now addressed who have not read, both with pleasure and profit, the remarkable volume called "Gulliver's Travels." But of the many who have read that charming book, there are few who know the real circumstances of its production. It is only the fragment of a greater work, which the world has lost for ever—a work which would have been the result of the combined genius of three of the most remarkable men which the world has produced—an Englishman, a Scotchman, and an Irishman. More than 150 years ago, in the good old times when Queen Anne reigned in England, and when Science, Literature, and Art were patronised in her Court, three remarkable men were companions—Pope, an Englishman; Dr. Arbuthnot, a Scotchman; and an Irishman, you will permit me to say greater than either, the illustrious Swift. It was proposed by Pope that a novel should be written by these three men. Pope was to have taught *Martinus Scriblerus* logic, grammar, and metaphysics; Dr. Arbuthnot was to have taught him Medicine, while the great Swift was to have written his travels. "Gulliver's Travels" were produced, but, in consequence of the troubles which separated these illustrious men, they appeared alone under that name. The accession of George I. not only destroyed the prospect of the world's seeing the complete adventures of *Martinus Scriblerus*, but it lost for England a great work on Animal Mechanics.

Dr. Arbuthnot was a most skilful geometer as well as an expert anatomist, and he conceived the project of uniting these sciences into one, and of so creating a new field of discovery. His appointment as Court Physician to George I. withdrew him from the ranks of Science, and England lost the work on animal mechanics.

It was left for the Italian, Giovanni Alphonso Borelli, to lay the foundations of this remarkable science. He taught mathematics and Anatomy in the University of Naples at the close of the seventeenth century, and his writings, showing the union of anatomy and geometry, were approved by the reigning pope, and declared to contain nothing dangerous to faith or morals. He produced his remarkable book, "De Motu Animalium," in 1680, but he died before it was given to the world, and unfortunately without knowing what Newton had discovered as to the composition of forces. Although this book contains traces of the most brilliant genius, it is full of mistakes in consequence of its author's ignorance of the composition of forces; but it remains with all its errors the only book published since 1680 that can be called a scientific treatise on animal mechanics.

In later times an attempt was made by two remarkable Germans—Edouard and Wilhelm Weber, Professors of Mechanics and Anatomy—to forward the new science. From conversing together, these two men came to the conclusion that if these two sciences were brought together they would make a third. They produced a treatise on the motions of the human body, which will always be quoted as a model of accuracy; but, from the necessary want of unity, in consequence of two minds being brought to bear upon the two subjects instead of one, their labour was frustrated.

The progress of science in the present day has rendered it inevitable that the science of animal mechanics shall arise and become worthy of taking its place among the other modern sciences; but its great want is the discovery of *some general principle.* I believe that I have succeeded in finding the true principle upon which this science must be founded, although it must remain for abler mathematicians and anatomists to fill up its outlines and bring them to perfection. This principle is one of almost universal application; it is the principle of Least Action. It is well known in its application to inanimate nature; and, with your permission, I shall call your attention to some applications of the principle well ascertained in physics and astronomy before I apply it to the study of animal nature, and particularly to muscular mechanics.

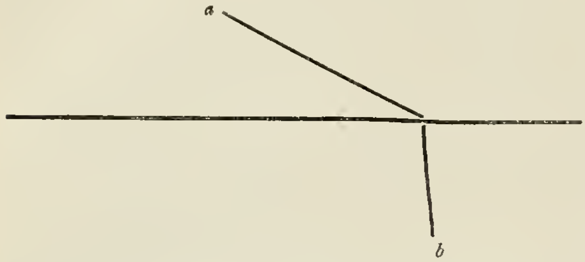
The celebrated Kepler, who died before Sir Isaac Newton's laws of gravitation were published, discovered the laws of the motions of the planets. He discovered the important law that a planet revolves round the sun in an ellipse, the sun occupying one focus of the ellipse, each portion of the planet's path being characterised by a velocity of its own. But it is not necessary for me to explain this to you, as Kepler's laws are now well enough known. It is extremely interesting to us, with the light of Newton's genius, to read Kepler's writings, and to see in what manner he regarded his own discoveries. Kepler was a scholar as well as a mathematician, and was charmed with the beautiful fiction of Plato that the earth and planets were great animals, and that the gods Neptune and Mercury, and all the others, were deities subordinate to these greater beings. Kepler was caught with this great fiction that the earth is an animal, and he discusses the question in his book. But he goes further than his master, and endeavours to prove that the earth must be an animal, because—

1. The earth moves uniformly on her axis.
2. The earth describes a particular path round the sun, and no other, moving at a particular velocity. It can only do this by observation of the planetary angles.
3. The earth must be an intelligent animal, for the highest and best of reasons, because it is a great geometer. The earth produces within its bosom many crystals, having certain specific forms, as shown in this diagram of *Euclidean solids.* No one can know or make these five solids except an intelligent geometer; but the earth produces these, and therefore by the rule *de opifice testatur opus,* "the carpenter is known by his chips," the earth must be a geometer. Kepler goes further still; he discusses what kind of an animal the earth is. It is no lap-dog frisking about our feet in joyful glee, but it is like a lazy and laborious ox, or an elephant if you will. The celebrated principle of least action is well known to astronomers. If I take certain points in the earth's course round the sun I can gather from the principle of least action the path of the earth, even to the millionth part of an inch, on the supposition that it is a lazy animal trying to swim round the sun with the least possible trouble to itself.

This idea seemed to me to afford a possible key to unlock the science of animal mechanics. This law is similiar to that of Kepler, and will be replaced by a higher and better law when the science is more understood, just as Kepler's laws have been replaced by Newton's. It is as follows:—In every arrangement of bones, muscles, joints, and parts of animals, the arrangement must be such as to produce a given result with the least expenditure of labour.

We can calculate with a certainty as perfect as the path of the planet the position of the bones and muscles which produce this result. But before proceeding to apply this principle to the muscles, I must give you some further illustrations.

When a ray of light passes from one medium to another, it always describes a bent path at the junction of the two bodies. If I take a point upon the ray of light in the air and a point in the glass, and if I imagine a fiction, that the molecule of light is a lazy animal wishing to exercise the minimum of trouble to itself, I can predict the path which it will describe. This principle has been actually applied by Sir Isaac Newton to describe the path of the ray of light, and it can be applied to many other branches of science. It can also be applied to intelligent animals like ourselves. I saw this some years ago while watching the movements of a few extremely unintelligent old women—the oyster-women of the Mumbles Harbour at Swansea. These women carried their oyster-baskets down to the oyster-beds empty, but they had to carry them back laden to the Mumbles along a road which had two paths—the slippery shingles and the smooth common. The velocity of these women on the rough shingles was rather impeded, but I saw them making a tack to some point, which they seemed to guess, and get to their homes faster than they could have done in a straight line. I do not suppose that these poor women had any more consciousness of their saving themselves trouble than a ray of light passing into a different medium or a planet in its course. I can hardly call them lazy animals, but they were performing a great amount of work with the least effort, and they did so by the guidance of Him who makes both planets and light.



I shall take another example from organic nature—the well-known cells of the bee. Everyone knows that the cells of the bee are constructed as hexagons, and that the ends of these cells are terminated with rhombic dodecahedra. Plato admired this very much. He thought that the tetrahedron represented fire, the cube water, and so on; but that this remarkable structure represented the earth itself. Another ancient geometer—Pappus—was so struck with this that he called the bee *the mathematician;* but he says—"I cannot admit that the bee, however, is so expert as man, for we can do more than it." There is in this an unconscious supposition that the bee makes the cell by some intelligence of its own. The cell of the bee possesses remarkable properties. The largest quantity of cell-space is produced with the least quantity of wax. It is work with the least trouble to the bee. It costs the bee labour to make wax, and, if it acted upon the principle of least action, it would not only produce the wax with the least trouble, but economise the wax in securing the greatest space.

In all these cases, then, you see the same principle. Nature aims at a given quantity of work with the least material. The same principle applies to muscular mechanics. Nature has to produce a certain quantity of muscle to do a certain work; the production of the muscle costs her labour, and it has to be fed and nourished and sustained. It is obviously the interest of Nature to make her creatures with the least quantity of muscle, and the principle of least action is, *that the arrangement and mutual position of all muscular fibres, bones, and joints must be such as to produce the effect wanted with the minimum amount of muscular tissue.* I hope to show you in my next lecture, from the limbs of the tiger and the wings of the albatross, the complete demonstration of this, and in my concluding lecture I shall show you its action in the heart and other important muscles.

Before proceeding to apply this principle of least action to nature, it is necessary to obtain *the co-efficient of muscular force.* If you take a rope of hemp or silk or iron, or of any other material, and tear it across, engineers want to ascertain its co-efficient of force, or the weight necessary to tear it across. A rope of muscle contains many fibres, and these fibres may be arranged like a rope. Imagine such a rope as that, one square inch in thickness, hanging from the ceiling to the floor—what weight will it lift from the ground? To determine this cost me twelve years of hard work, and I now place before you the result. The power of the muscles of the arm and leg and abdomen are represented in pounds per square inch.

Co-efficient of Muscular Force.

Arm	94·7 lbs.
Leg	110·4 ,,
Abdomen	107.0 ,,
	104·03 ,,

I have only been able to get the result in man, as not even the hairy quadrupeds with long tails will submit to the processes necessary for its discovery. The final result—104 lbs. square inch—is an approximation to the real force exerted in men.

I undertook two extremely laborious classes of observation to determine this co-efficient, for without it I can take no step further in the application of geometry to anatomy. It depends upon two things—first, the force of the muscles during life; and, secondly, to make most careful measurements after death of these muscles.

Now, making observations in life is not so easy as many might suppose. I cannot lift my hand to my head, or walk across this room, without requiring the aid of many muscles. And although we can determine the force used in rowing a boat, etc., when we come to distribute that force among the many muscles employed it is difficult to obtain the result. We can only get empirical results, but we cannot get what science demands.

Again, the measurements of the muscles after death presented difficulties much greater than you would imagine. I often found, in my search for the actions of muscles in life, phenomena presented in disease that solve problems in muscular mechanics. In the contortions of the body produced by the agonising spasms of cholera or lock-jaw, or in the spasms of poisoning by strychnia, you can gain information while helping the sufferer on his bed of pain. You need not be the less kind in helping him while taking note of the efforts which he is exerting; and I must say that, partly for this cause, and partly, I hope, from higher motives, I became personally and intimately acquainted with all the phenomena of cholera, hydrophobia, and lock-jaw. It is necessary for the student of animal mechanics to expose himself to some risk to study the science at the bedside, and to become acquainted with that most interesting class of the community—the poor. It would be wrong to proceed in my lecture without bearing them the highest testimony. I am not acquainted with the poor of England, but I can bear ample testimony to the better qualities of our Irish poor. Their devotion to their friends and neighbours in time of trouble is most extraordinary. Those who have quarrelled in prosperity become friends in adversity. Their hearty thankfulness to their benefactors and their brave cheerfulness in facing death are wonderful. In time of sickness and in trouble the extreme devotion of the poor to the poor is remarkable. The rich often will give money, sometimes kind words, but the poor always give all they have — their food, their money, their hearts. I am sure that my experience is that of every Physician who hears me. Those sufferers who have drank the bitter cup of sorrow to the dregs are the readiest to offer a cup of cold water to another in the name of the Divine Master.

My efforts to obtain a co-efficient of muscular force were not confined to the poor in the Hospitals. I had to come into contact with a less interesting class—the criminals in our gaols. It is necessary for us to know how to work the treadmill, and how to use the crank. I have tried these, and know them from personal experience. My object was to work the treadmill with least trouble to myself, and I assure you I can do so as well as the laziest burglar known, with all the skill of *least action.* I can do my hated task with the least trouble to myself. How did I learn this and other things? I have been taught the use of the crowbar, and all the mysteries of housebreaking. I learned them by a plan extremely simple, and which I would heartily commend to our criminal reformers—it is by an ounce of tobacco! This will draw the dearest secret from the heart of a burglar; it will make the worst man behave well for a week. The occasional offer of a reward like this to our prisoners would do more to reform them than all our stripes. I have found them, as a class—both English and Irish thieves—much better than I ever expected.

Having made my observations upon work done by groups of muscles, I then had to proceed to the examination of the measurements of these muscles after death. My observations of the force employed were made upon men in health, generally young men in their full vigour, because I was anxious to obtain the co-efficient in healthy muscle. But the examination of muscles after death was made necessarily on persons who were long wasted with sickness. I saw very quickly that if I relied upon such muscles I would get a co-efficient much too great, because the cross-section in life of a muscle is much greater than after illness. I had my choice, therefore, of watching for persons who had died suddenly, or of waiting for a person who had died violently by the hands of the law. But in Ireland there are many impediments to both these processes of inquiry. I got early notice of every bad accident from the ten Hospitals in Dublin; but the cause of death was so apparent in such cases that the coroner could not order a legal investigation of the body. The cause of death was so obvious, and the desire of friends to "wake the dead" so great, that it was quite impossible to examine them. A wake is generally considered necessary in Ireland, but particularly where the sympathies of the friends are excited, and the Surgeon would be very brave who should attempt to make an examination. Social or private crime is so extremely rare in Ireland that I could hardly find a case for examination. In the majority of cases the crime for which execution takes place is of an agrarian nature, and the criminal is generally held by the multitude to be a patriot. I thought to myself, What is to hinder my taking a farm in Westmeath, deliberately refusing to pay my rent, shooting the agent when he called, and dissecting him at my leisure, instead of eating him as they do in New Zealand? I did not take this course, because public opinion in Ireland would not authorise the shooting of a landlord in order to find the coefficient of muscular force.

In conclusion, I have shown you that the planet moves in the course which a lazy animal would take; that the ray of light acts on the same kind of instinctive impulse; that the bee makes its cell with the least amount of trouble and the greatest room for storage. The tendons in the legs of animals are constructed on the same principle, and I hope to show you that the muscular organs obey the same law, as if each one of these things were instinct with reason.

Does the light travel in its path by its own intelligence? Does the bee build by her's alone? No. Who placed the tendon also in its exact position, enabling its muscle to perform its task? It is not by their instinct or by their intelligence they act. There is instinct; there is knowledge; there is foresight; there is recollection; but it is the knowledge, the foresight, the wisdom, and the recollection of the Great Architect and Geometrician of the Universe.

ORIGINAL COMMUNICATIONS.

NOTES ON THE PATHOLOGY OF MALIGNANT NEW GROWTHS.

By HENRY ARNOTT, F.R.C.S.,
Assistant-Surgeon to the Middlesex Hospital, and Lecturer on Surgical Pathology in the School.

I.

(*Continued from page* 568.)

On the third or highest degree of malignancy, in which there seems to be a general infection of the system, growths springing up in various parts of the body, there is not much to be said that is not commonly received without question—for the bearing of the point upon the doctrine of the local or constitutional nature of cancer need not be discussed here. The theory of a constitutional disease with local manifestations is a pure hypothesis, and need not detain the practical Surgeon for its discussion, since such a view should not for one moment deter him from adopting such means as are at his disposal for the removal of such local manifestations. Granted, that a certain taint of the system—a "blood disease," or what not—is the cause of the appearance of the tumours, still it is the tumour which kills. Mention is, indeed, not unfrequently made of death from cancerous cachexia; but who ever saw such a death? Surely the only obvious causes of death in cancer are the pain, the exhausting discharges, the mental anxiety, the enforced deprivation of fresh air and exercise, and all such unavoidable results of the presence of a rapidly growing malignant tumour. And it has been well and forcibly said by one who is himself a believer in the predisposing cancerous cachexia, that he who would hesitate about removing a cancerous tumour, because of the constitutional taint underlying it, would show about as much wisdom as the man who, discovering an escape of gas through the wall of a given pipe in his house, should refuse to stop it because, with gas circulating all over the dwelling, fresh escapes might be expected at any moment, either at the patched place or elsewhere!

It should be mentioned that the secondary growths are always essentially of the same nature as the primary. I lay some stress upon this fact, because it has been stated by writers of repute that this is not an invariable rule—that, for example, the secondary growths of epithelioma or epidermis cancer assume the form of encephaloid cancer. This is, I believe, erroneous. The secondary formations in epithelioma will always be found to present more or less closely the characters of the primary disease, when subjected to microscopic examination, and I have myself seen in the muscular tissue of the heart as perfect "nests" of squamous epithelium as are to be met with in the most typical "sweep's cancer" of the scrotum. In making this statement, however, I am reminded of a case in which a primary cartilaginous growth in the testicle was followed by secondary spindle-cell growths in the lungs. This sounds at first like a contradiction of what has been already stated, but I believe that it may be readily explained in the following way:—

It has been said that there is no pathological product which has not its prototype in some normal tissue of the body, either in adult life or in the embryonic condition. Hence there is suggested a convenient classification of tumours or neoplasms, on the basis of the corresponding classification of the normal histological tissues. Now, the physiological groups are three, of which the first includes all the connective tissues, the second muscle and nerve, and the third the epithelia, surface and glandular. It is with the first of these groups that we have mainly to do in the investigation of tumours, and great light is thrown upon the varieties and admixtures of certain growths by a due consideration of the normal development of the tissues from which they spring. Thus, if we remember that the group of connective tissues includes not only fibrous, areolar, and elastic tissues, but also mucous tissue, fat, cartilage, and bone, we shall be prepared to find any given peccant portion of connective tissue which is developing into a tumour producing, at different times or in different spots of such new growth, rudimentary fragments of any or all of these structures, which, springing from a common stock, are yet so widely separated in their physical characters. In this way I am in the habit of explaining, in the lecture-room, the curious mixture of cartilage, mucous, and fibrous tissues so often met with in the soft enchondromata of the parotid region. And, in like manner, much of the apparent confusion in certain ossifying sarcomata becomes easily intelligible. And applying this reasoning to such cases as that under consideration, in which a primary cartilaginous tumour gave rise to secondary growths of spindle-cell tissue (in many of which, by the way, nodules of true cartilage were developed), we see that the same disposition to morbid development might perfectly well produce a cartilage mass in one place, whose cells, by transplantation, might, without any departure from recognised laws of development, grow into a spindle-cell, a fatty, or an osseous tumour in another part.

As to how this transference of tumour germs takes place, and to the difficulties attending the universal application of such an explanation to many of the cases of malignancy coming before us, these are questions from the investigation of which we may again take refuge under the cloak of the avowed practical scope of these notes.

Before proceeding to the discussion in detail of the several varieties of malignant growths, it may be well to dwell briefly upon the importance of examining tumours by means of thin sections of hardened specimens rather than by scrapings from the fresh surface. It is unnecessary here to describe the requisite mode of procedure with this object. Suffice it to say that the softest growths can be readily hardened by immersion of fragments in a pale straw-coloured solution of chromic acid, and if this solution be changed daily, three or four days at most will usually effect the purpose. If the chromic acid, carmine solution, glycerine, etc., be kept in some convenient place with a few watch-glasses, the whole process of cutting sections, staining, and mounting need occupy only a few minutes, and involves very little trouble or difficulty—certainly no trouble which is not amply repaid by the more accurate knowledge of structure so gained. The most useful magnifying power for general employment is the $\frac{1}{4}$-inch objective with a low eye-glass, magnifying together about 220 diameters. The sketches illustrating these papers will be cut from drawings made on the blocks of tumour-sections so magnified. But an inch or two-inch objective is also very convenient for giving a general view of the structure, and with a double nose-piece, carrying both lenses, these powers may be varied at pleasure without any loss of time.

In thus advocating the working with sections, however, I am anxious not to underrate (as it is just now somewhat the fashion to do) the value of scrapings where more elaborate examination cannot be had. There is unquestionably much to be gained from such stray elements as are to be scraped up from the freshly-cut surface; and when one has to give a diagnosis at once, a very shrewd guess can be made by comparing the naked-eye characters of the tumour and its mode of growth with the appearances presented by its juice. In fact, the moment a tumour is cut out, a scraping of its cut surface should always be examined with a $\frac{1}{4}$-inch glass, for this will often render further examination unnecessary for purposes of diagnosis.

Thus, I have shown in Fig. 1 a tolerably typical scraping from a scirrhous tumour of the breast. Given such a scraping from a tumour having the ordinary characters of hard cancer, and yielding an abundant milky juice on scraping, and I think the diagnosis might be almost made with safety. The chief points about such a scraping are—the diversity of the cell forms, with the tendency to an epithelial type, and the large proportion of elements in a state of fatty metamorphosis. The scraping should be made near the margin of the tumour. If from the centre, little but fatty *débris* will be seen, and if from the extreme edge, smaller cell forms, and more uniform, and consequently less characteristic, will be obtained. In like manner, such a scraping, as is shown in Fig. 2, will also throw much light upon the tumour yielding it. Here the juice is less abundant, and one is at once struck with the comparative uniformity of shape of the cells—not that in the scraping of a spindle-cell sarcoma one gets necessarily only spindle cells. There are usually some few round and oval forms present, but the one type largely preponderates, and—unless the central parts of the tumour have been selected—there is much less evidence of oily change than in the former case. And, thirdly, I suppose that there could be very little uncertainty about pronouncing a growth yielding a scanty ground-rice-like juice, with the characters shown in Fig. 3, to be an epithelioma of the squamous variety. Here the large flattened cells—some of them cohering by their margins, some clustered tightly in a manner suggesting a fragmentary "nest," and many others seen edgeways, looking like hard broken fibres—are sufficient to stamp the nature of the growth without the necessity of making sections. So, also, the juice of a lymphoma, showing only small round and oval corpuscles with shreds of delicate fibres, but with no large cell forms, would amply justify a temporary diagnosis pending a more elaborate examination.

FIG. 1.

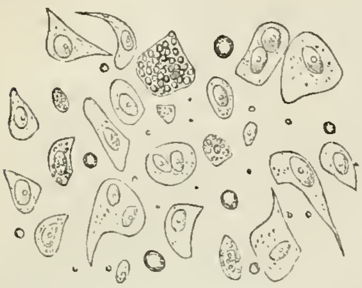


FIG. 1.—From a scraping of a freshly-cut scirrhus of the breast. Magnified 220 times.

FIG. 2.

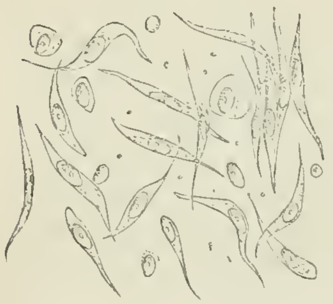


FIG. 2.—Cell-forms obtained by scraping a spindle-cell sarcoma. Magnified 220 times.

FIG. 3.

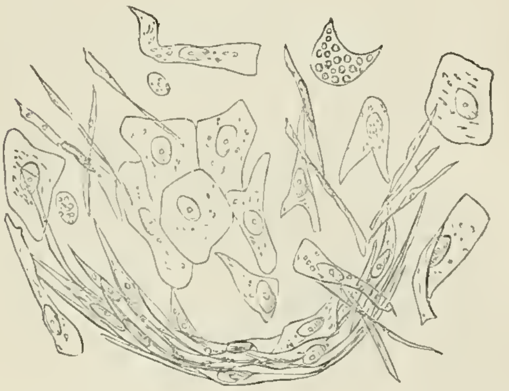


FIG. 3.—Scraping from an epithelioma of the arm. Magnified 220 times.

(*To be continued.*)

NOTES ON AN

ABERRANT FORM OF THE SUPRA-COSTALIS OF WOOD.

By J. BESWICK PERRIN, F.L.S., etc.,
Demonstrator of Anatomy at King's College, London.

IN a moderately muscular female subject, aged 65, recently dissected at the Royal College of Surgeons for the primary examination in anatomy and physiology, I noticed a peculiar muscle on the left side only, which arose from the cartilage of the second rib along with the corresponding fibres of the pectoralis major muscle. It was about half an inch wide at its origin, gradually tapering to a tendinous expansion as it passed obliquely upwards and outwards, perforating those fibres of the pectoral which arose from the first rib and sternum; (a) it then passed behind the portio-attollens to be inserted in the costo-coracoid membrane, close to the clavicle, and immediately over the subclavius muscle. In this instance, especially on the left side, the pectoralis major was very much differentiated. The interval between the clavicular fibres of the pectoral and deltoid was much wider than usual. There was a second interval between the portio-attollens and the sterno-costal fibres, and a third areolar interval between the fibres arising from the manubrium sterni and the first rib, and those arising from the second rib, cartilage, and sternum, the latter being caused by the passage upwards and outwards of the peculiar muscle already described.

The pectoralis major had also associated with it an epigastric slip, which arose from the aponeurosis of the external oblique opposite the seventh rib, and which joined the lower fibres of the former muscle, opposite the centre of the axillary cavity.

This muscle is nothing more than an eccentric and aberrant form of the supra-costalis muscle of Wood, which is so persistent in the carnivores and some of the rodents.(b)

CATARACT, AND ITS TREATMENT BY THE SEMILUNAR CORNEAL INCISION.

By JABEZ HOGG,
Surgeon to the Royal Westminster Ophthalmic Hospital, etc.

IN placing before the Medical Society of London(c) the results of thirty-three extractions by the semilunar corneal incision, and the experience of my last year's operations, I have been mainly influenced by a desire to show that this well known method of extraction has in no way lost its hold upon the Surgery of the Royal Westminster Ophthalmic Hospital; neither has it forfeited the confidence it inspired before the introduction of alleged modifications and improvements, which we were told would supersede the old flap operation, and also that of more modern date, lineal corneal section, both of which were so successfully practised by Adams, Travers, Ware, Gibson, Guthrie, Mackenzie, and others equally well known in this department of Surgery. Indeed, what Mr. Travers wrote of semilunar section some fifty years ago is quite in accordance with my view of it at the present time. He says:—"This operation is by far the most perfect ever devised for the cure of cataract, but it is one of considerable difficulty, and the several modifications which have been at various times suggested owe their origin to the disappointments and defects which operators meet with in learning to execute it with success."

Soon after iridectomy was fairly established in the practice of eye-Surgery, it was proposed to engraft it upon all the operations for extraction of cataract; and this was followed by a (so-called) modified linear extraction, made by cutting out through the sclerotic, excising a portion of iris, and assisting the delivery of the lens by the aid of the hook or scoop. By such means it was said that the percentage of our failures would be considerably lessened. I am not so sure that published statistics bear out the assertion. Professor Hasner's statistics of, I believe, some 2000 cases give an average of 10 per cent. of failures. I believe that if the statistics of the flap operation in this country were carefully collected and compiled, it would give the same percentage, and not, as has been stated, 20 per cent. But whichever way this may ultimately prove to be, it is pleasant to find that the feverish stage of excitement which ushered in iridectomy has entirely passed away, leaving us free to discuss it and judge of it solely on its merits, which are no longer denied in certain cases. In our Profession experience goes a very long way in toning down the most ardent and enthusiastic admirer of any particular operation or mode of treatment; and, however obstinately blind we may be to a weak point, time generally induces a more generous estimate of opinions thus gleaned. I am about to offer you my own experience on the flap operation, but I shall take care not to weary you by a too lengthy description of my cases, or mode of operating, which, in truth, differs very little from that with which perhaps most of you are perfectly familiar. Neither do I intend to make an extended comparison between it and other methods practised. I shall rather confine my remarks to the results of operations performed at the Royal Westminster Ophthalmic Hospital, between April and November of 1870.

(a) This is a remarkable instance of a muscle passing from a superficial to a deeper plane.

(b) My thanks are due to Professor Flower for allowing me the privilege of publishing this.

(c) Paper read March 20, 1871.

It is pretty well known that the mode of performing the operation for the extraction of cataract, like every other in Surgery, has undergone a variety of changes. The instruments also have received various modifications in form and character. Nevertheless, some of the earliest known modes of operating still maintain a place in our *ars chirurgicus.* The well-known couching (needle operation), described by Celsus, and which was in vogue long before his day, is still largely practised in India and other Eastern countries. The removal of a cataract by extraction is of much later date, and was first regularly introduced by Daviel, a French Surgeon, in 1747. In his excellent essay on "A New Method of Treating Cataract by Extraction," he acknowledges that he "caught the idea from Petit, who in 1708 opened the cornea to extract an opaque lens, which, having reascended after depression, had fallen into the anterior chamber, and that he felt himself urged to devise some new mode of operating by the want of success which he found to attend couching, and the destruction of the internal textures of the eye disclosed upon dissecting the eyes of those who had been operated upon in that way."

Daviel commenced his operation for extraction by passing a small, narrow, lance-shaped knife into the anterior chamber at the junction of the cornea and sclerotic. Curiously enough, Von Gräefe's modified linear extraction is commenced in the same way, and with a sharp, narrow-bladed knife; so that we are asked to return to a knife, and, I may almost say, an operation, which Surgeons of great practical experience long since determined to abandon for that more perfect knife introduced by Von Beer, and which seems to most of us so well adapted for the corneal incision.

The successes of those who have preceded me in this field of Surgery point to the brilliancy of the results obtained by semi-lunar section pure and simple; and so far as my observation enables me to offer an opinion, I feel certain that, in cases free from local or constitutional complications, extraction by the old flap operation is to be preferred to any other. Moreover, it is the only one which secures a circular movable pupil to the patient—a matter of some moment, as in this way a limited power of accommodation for viewing distant objects is preserved; while in all the more modern operations, preceded by an iridectomy, the pupil becomes fixed, and accommodation is very nearly destroyed. Extraction by semi-circular corneal section, then, possesses the advantage of rendering the sight clearer and quicker than most other methods, while its disadvantages are comparatively unimportant. One of these, particularly dwelt upon by those who do not follow this plan of operating, is that with a large semi-circular section we are very likely to have an escape of vitreous. My answer is that it is not always necessary to make a large corneal section; it should be made of a sufficient size to admit of an easy delivery of the lens, and not larger. The probable size of the lens can generally be fairly estimated by fully dilating the pupil before attempting the operation.

Dilatation serves another useful purpose: it lessens the danger of wounding the iris, and it renders the capsule more accessible, while it facilitates the delivery of the lens. I look upon the instillation of a drop of atropine a day or two before the intended operation as a precautionary measure—in another way, that of determining suspected adhesions; it, therefore, greatly assists a diagnosis, and clears up a doubt as to which operation will be the safest, or attended with the best possible results. A patient having once had a rheumatic attack, is very likely indeed to suffer from rheumatic iritis after the most carefully performed operation. An iridectomy in such a case will often be attended with a greater amount of success than the simple flap operation. In such instances, I do not scruple to resort to the two operations at one sitting rather than follow the practice of allowing a week to elapse between the iridectomy and the extraction.

In so much, then, my cases may be said to be selected; but this remark applies only in a very restricted sense, for it would be extremely difficult to say so when we have a frequent complication to deal with, a fluid vitreous, which might escape detection in any examination. By a careful inquiry into the previous history of the patient, we avoid the risk of failure from diabetic and other causes. I lately had a patient sent up from the country for operation with a fully formed cataract in the right eye, and the sight of the left much diminished. Upon making the usual inquiries into his general health, I discovered what had previously escaped observation—that he was passing a considerable quantity of sugar in his urine. The opacity was due to the diabetic state of the patient, and any kind of modified operation would, in all probability, fail to restore vision.

In my thirty-three operations, three total failures occurred; these were due to causes over which it may be fairly said I had no control. In the case of Elizabeth H., admitted to the Westminster Ophthalmic Hospital, July 20, 1870, the House-Surgeon reports—"The operation, by the usual flap method, was perfectly successful, and everything went on exactly as could be wished until the third day, when the patient accidentally struck her eye rather violently, which caused considerable pain. Belladonna was applied and warm fomentations. The next morning there appeared a suspicious swelling of the lids, and on making a more careful examination the corneal flap was found turned down. Inflammation ensued, and ultimately sloughing of the cornea. In the second case a nervous restless patient uncovered the eye and attempted to use it on the second day after the operation; inflammation and separation of the flap followed, and the eye was lost. In the third case failure arose from an extremely fluid vitreous, the greater part of which escaped during the operation, causing collapse of the eyeball, and probably tearing the retina, as on the third day erysipelatous chemosis of the lids and deep-seated inflammation supervened, and the eye was lost.

It by no means follows that a large loss of the vitreous during the operation will be attended by such results as those just narrated, as I shall show you in the case of Maria C., admitted to the Hospital November 16. She was nervous about the operation, and, therefore, wished to have chloroform administered, and it was not until after a considerable quantity of the anæsthetic had been inhaled that she became unconscious and quiet enough to permit me to attempt the section. Having completed this, I was about to rupture the capsule, when she gave a plunge, and out popped the lens, followed by a considerable quantity of vitreous humour, and a prolapse of the iris. As, from the restlessness of the patient, the iris could not be returned, I snipped it off. On the following day the patient complained of much pain; this was relieved by the administration of full doses of opium. On the fourth day the bandage was removed, and the eye open, but as the patient complained of intolerance of light, it was reapplied. A few days later an examination was made, and the eye was found to be going on well, the pupil being quite clear, and she could count fingers. At the end of six weeks, with a convex glass of two and a half inches focus, she was able to read ordinary-sized print with comfort.

I may observe that I prefer, for two or three reasons, to operate without chloroform. In the first place, the natural resistance of the recti muscles gives firmness to the eyeball, and the corneal section is made with a rapidity and cleanness, if I may so express it, quite unattainable when an anæsthetic is administered. Sickness often follows the use of chloroform, and then the vitreous either escapes, or rupture of the hyaloid membrane or of the internal vessels produces hæmorrhage, and seriously compromises the operation. The risk of sickness is, however, lessened by the use of bichloride of methylene.

I look upon loss of the vitreous as a much less serious affair than some operators do. I have repeatedly noticed that the eyeball has been restored to its normal size, after the loss of a considerable quantity, in twenty-four hours, and as complete a recovery made, with a good pupil, in an ordinary period of time, as if no such accident had happened.

Adhesions of the iris are not unfrequently the cause of an escape of vitreous, and, if we fail in detecting them, the operation is not only rendered more difficult, but the convalescence of the patient is liable to be retarded.

This was the case with a patient, aged 52, in whom I met with the additional difficulty of an unusually large lens, and attachments to the iris at its inferior border. Our House-Surgeon reports of this case as follows:—

"Ellen H., double cataracts. On July 18, Mr. Hogg extracted a very large hard lens from the right eye. In attempting to deliver the lens, extensive adhesions were found to exist, and, on careful pressure being made, a large quantity of the vitreous humour escaped. With some difficulty the lens was scooped out.

"July 19.—The patient complains of great pain, to relieve which I gave twenty minims of nepenthe, which in half an hour afforded considerable relief. The eyelid is a little swollen, but no tenderness of the eyeball. Ammonia and bark mixture prescribed three times a day, and four ounces of brandy in the twenty-four hours.

"25th.—Gradually improving.

"August 5.—With a two and a half inch convex glass, can read ordinary print."

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

OPERATIONS.

Removal of Exostosis from Upper Surface of First Rib; Amputation of Leg for Injury (by Mr. Birkett)—Amputation of Thigh for Gangrene (by Mr. Cooper Forster).

On Tuesday, May 23, Mr. Birkett operated upon a very interesting case of exostosis. The patient was a girl, aged about 20, who had suffered from obscure pains about the neck and arm for some months, and who had first noticed a swelling on the left side of the neck last January. The Doctor to whom she applied at first painted it with iodine, as usual, and—as usual—the tumour was not notably affected by the application. Finally, the pain increasing, the girl was sent up to Guy's Hospital, and placed under the care of Mr. Birkett. There was now a hard swelling felt, deeply placed in the left side of the neck, close to the main artery, and with the cords of nerves going to the brachial plexus passing over it so that they could be felt rolling upon the tumour. Mr. Birkett pointed out to the students that the case was clearly one of exostosis, but the seat of the growth was not so easy to define. It was most likely connected with the first rib or with some portion of one of the lower cervical vertebræ, and it had not been possible to come to a definite opinion as to which of these bones gave rise to it; for such tests as deep inspiration to move the first rib, and motion of the neck to affect the vertebra had neither of them produced any perceptible effect upon the tumour. The external jugular vein coursed along its anterior margin, and the incision was therefore made behind the growth parallel to the vein, and as little use made of the knife as possible when once the superficial incisions had laid bare the nervous cords. The carotid artery was found to lie in a groove in the anterior surface of the tumour, and had to be cautiously moved aside. Mr. Birkett remarked that he thought it right to sacrifice the beauty of the specimen to the patient's safety, and to remove the growth piecemeal rather than risk injury to the vessels by cutting through its broad base; for it could now be clearly felt to spring from the surface of the first rib, close to the margin of the scalenus. He accordingly took it away in two bits, and closed the wound, having twisted one or two small bleeding vessels. In his after-remarks, Mr. Birkett dilated upon the instructive nature of the operation for the students, on account of the grave anatomical connexions of the part, and reminding them that the rough surface left by the action of the bone-nippers would be speedily smoothed down by the reparative process, mentioned that he had never known an instance of return of a bony growth of this kind when it had been removed by operation, a result which he attributed to the damage caused to the periosteum and other bone-forming tissues about the growth. The sources of anxiety remaining now were the possible result of the irritation of the nerve-trunks, and the difficulty of affording a free vent for the pus from a wound in this situation. The growth itself seemed to have an ordinary cancellous osseous structure, with a thin layer of investing cartilage.

Mr. Birkett also amputated the leg of a man who had met with an accident causing severe compound comminuted fracture of the right tibia and fibula. There was pulsation of the anterior tibial at the foot, but there had been already much hæmorrhage, the parts were greatly bruised, and some bone had been already removed. The amputation was performed by lateral skin flaps and a circular sweep of the muscles, a method usually practised in this Hospital, and the arteries were secured by torsion, great delay and difficulty being occasioned by the retraction of the vessels out of reach of the forceps, so that an extra bit needed to be sawn off the fibula before the vessels could be secured.

Mr. Cooper Forster afterwards amputated a thigh in the same manner. The patient was an old man, with gangrene of the foot and leg reaching half-way up to the knee. The line of demarcation being now well marked, Mr. Forster thought it safe to amputate close above the knee. There was very little bleeding, the larger arteries even in this position being mostly blocked. The dresser twisted the vessels and sewed up the flaps. We learned that a few days before Mr. Forster twisted the femoral artery in a similar case, in which the vessel was highly atheromatous—brittle indeed, with chalky nodules. Two and a half turns sufficed to safely close that artery. The rule at this Hospital is never to twist the end of the vessel completely off, but to turn it slowly round and round until the coats are felt to "give" under the forceps, and this in healthy large arteries is accomplished in four or five complete twists.

Amongst other recent Surgical experiences here, there have been two cases of excision of joints, in which a stream of carbolic acid solution was kept constantly playing upon the parts during the operation, and the after-dressings conducted carefully after Lister's method, with the result of securing primary union in both instances. Mr. Bryant has also had a very instructive case of gunshot injury. A marker at Woolwich was shot through the arm last week, at 600 yards' distance, the conical bullet comminuting the bone and forming typical "apertures of entry and exit." The wounds were closed with benzoic acid dressings, and hitherto the case has progressed without an unfavourable symptom, the dressings not having been touched as yet.

MATER MISERICORDIÆ HOSPITAL, DUBLIN.

CASE OF BRONCHOCELE CAUSING URGENT DYSPNŒA—OPERATION—RECOVERY.

(Under the care of Mr. P. J. Hayes.)
[Reported by Mr. Robert P. Curran.]

E. W., age 18, a healthy-looking girl, was admitted into the Mater Misericordiæ Hospital on January 10, 1870, and placed under the care of Dr. Curran. She was suffering from extreme difficulty of breathing, accompanied by stridor, the consequence of pressure upon the trachea exerted by a large bronchocele, which, the patient stated, had very rapidly increased in size. The chief bulk of the tumour occupied the middle line of the neck, the median lobe of the thyroid body being the part principally hypertrophied, though the lateral lobes were also much enlarged. She noticed increase in the size of the thyroid during three years, and Dr. Curran prescribed for her at different periods, but, about six months previous to her admission at the Hospital, rapid growth of the tumour began to cause difficulty in breathing, and as this increased she was cautioned that it might become necessary for her to seek relief by operative means. During the earlier period of her stay in Hospital various measures were tried to reduce the size of the bronchocele, relieve any tendency to laryngeal spasm, and cause reappearance of the menstrual discharge, which had been absent for some time. Despite of Medical treatment the difficulty of breathing became more marked each day, on February 25 amounting to orthopnœa, with total loss of rest, and accompanied with difficulty in deglutition, so that no solid food could be taken. On the 26th a consultation was held, at which it was decided to postpone operative interference, to apply ice to the tumour, and to administer internally lobelia and bromide of potassium. The tumour was at this time very large and tense, extending in front of the thyroid cartilage above, and close to the supra-sternal notch below; it was apparently very vascular, and large veins ramified over its anterior surface. Mr. Hayes being the Surgeon on accident duty, the girl was placed in his care, and on the afternoon of the 27th, as her condition was becoming worse, he decided at 4 p.m. to divide the tense cervical fascia covering the tumour, so as to allow the gland to start forward, and relieve the trachea from dangerous pressure. Mr. Hayes made a vertical incision three and a half inches long over the middle line of the tumour; this incision was carried down as far as the sternum, and much of the thickened subjacent fascia was carefully divided. The hæmorrhage was trifling, not exceeding eight or nine ounces of venous blood, and as the wound allowed the tumour to protrude with a fair degree of relief to the patient, further proceedings were postponed, principally on account of the great difficulty experienced in operating by artificial light when the condition of the patient required that she should be supported in a sitting posture. At ten o'clock the same night the girl was decidedly worse, for the improvement which followed the operation soon gave place to symptoms of exhaustion, the pulse became small and intermittent, the respiration hurried; but there was no lividity of the face or lips. The patient being so weak, stimulants were prescribed, and taken satisfactorily, as the difficulty in swallowing was much less than before the operation.

February 28.—Patient still weak; pulse small, but not intermittent; breathing much easier, but requires to be more fully relieved. Mr. Hayes further and completely divided the fascia, and to some extent the sterno-hyoid and sterno-thyroid muscles, until the thyroid gland was freely exposed, the patient immediately expressing herself as feeling such relief that she was able to lie down with comfort. Nine hours after the second operation the pulse gained strength, and became slower; the breathing easy; no distress in swallowing; and the patient was able to sleep well. Dr. Curran again took charge of the patient.

March 1.—Breathing continues easy; pulse 140, small and weak; tongue furred; respiration 40 in the minute; some bronchial râles audible over the chest.

2nd.—Difficulty in breathing, caused by mucus in the air passages, accompanied with pain in the left side, cough, and a sense of constriction over the anterior part of the chest. Beef-tea and stimulants taken freely; pulse 120; tongue still coated.

3rd.—Patient feels better to-day; hoarse cough, with muco-purulent expectoration; pulse 120; tongue furred.

4th.—Lost about nine ounces of blood last night from the wound, caused by ulceration extending to a small artery; the bleeding ceased on the application of cold; pain in the chest still continues, but the cough is much better.

5th.—Breathing easy; cough slight; wound suppurating freely; treatment stimulating and tonic.

The patient steadily improved, and on March 20 was able to sit up. She was able to leave the Hospital on April 12. The catamenia, which had been very irregular, became established. The bronchocele gradually diminished in size, the wound cicatrised quickly, and the tumour became quite soft. She visited the Hospital occasionally, but no longer required Medical treatment.

Remarks.—The particulars of this case are interesting in many respects. The girl was the child of healthy parents. She resided in a dry, elevated locality, favoured with the name of "Constitution-hill"; and she enjoyed very fair health, save in the particular that the menses were always irregular, and, for a time, suppressed. With irregular menstruation, enlargement of the thyroid body appeared, and, during the period of amenorrhœa, rapid hypertrophy of the gland took place, so that, interstitial growth of the cervical fascia being much slower, the tumour was caused to press upon the trachea, and less directly even upon the œsophagus. Owing to the mechanical cause affecting injuriously so important a function as respiration, and causing the whole organism to feel consequent ill effects, we may readily understand why remedies failed at first to restore the uterine functions. Yet, when, by mechanical means, the pressure was removed from the trachea, and the system generally became improved, then, under skilful Medical treatment, the uterine functions became active, and, in turn, affected favourably the abnormally enlarged thyroid. The operation of dividing the tissues covering the median portion of a hypertrophied thyroid body reads as a very simple proceeding—in practice it was found by no means easy of accomplishment, and for the following reasons:—Firstly, the surface of the tumour was remarkably convex from above downwards, especially near the upper end of the sternum, where the sense of pressure was most marked, and where the knife required to be most carefully though extensively used. Secondly, the patient could not tolerate the recumbent position, owing to extreme dyspnœa; and the operator had to kneel during the performance; also, it was difficult to expose the lower angle of the wound to a sufficient amount of light. Thirdly, enlarged veins had to be avoided; and, when this was impossible, they were doubly ligatured and then divided. Fourthly, though the patient displayed admirable fortitude throughout, yet the almost convulsive respiratory movements necessitated very guarded action on the part of the operator. The division of the cervical fascia in cases of bronchocele is usually viewed as a palliative proceeding; in this instance, however, it proved more or less curative, as has been already pointed out. Again, it is an operation that has been rarely performed, if we may judge from the absence of recorded cases. It may not be out of place to mention here that, at the time of the operation, the tumour resembled, both in form and bulk, half of a fair-sized melon. Now (May, 1871), it is hardly the size of a small orange.

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Medical Times and Gazette.

SATURDAY, MAY 27, 1871.

THE BRITISH MEDICAL ASSOCIATION.

A memorandum is in circulation amongst the Members of the Council of the British Medical Association, which, whatever its worth as a statement of facts, may at least serve to point a moral. The paper we allude to is a draft for a report by the Sub-committee of Finance and Organisation of the British Medical Association, drawn up by Mr. G. F. Hodgson, of Brighton, who proposed the formation of the sub-committee. If this draft memorandum contain an accurate representation of the organisation and financial condition of the British Medical Association, it is at least clear that there is ample room for its improvement. The allegations of Mr. Hodgson and the Sub-committee, with whom he acts, are that certain resolutions appointing committees on various subjects passed at the annual general meeting of the Association have not been carried into effect by the proper officer of the Association; that no minutes had been kept of the most important business meeting held during the annual meeting of the Association; that a collector, for whom no guarantees had been obtained, had absented himself, and it had been discovered that there was a deficiency to the amount of £500 in his accounts; and that the number of members suspended for non-payment of subscriptions had yearly increased, so that the amount of arrears at the end of 1870 amounted to £2103. Now, we know nothing as to the truth of these allegations. We presume that they will be made the subject of full inquiry by the Association; but the fact that they have been brought thus prominently forward at least is evidence that the working of the Association does not give satisfaction to certain of its members, that its system requires supervision, and that its present condition evidences a great want of cohesion and stability. In this we see nothing at which to be surprised. Experience teaches that no great professional or scientific association can be long held together unless it acquire substantial property, and also be recognised by the Government of the country, and by Charter or Act of Parliament acquire a legal standing. These are the advantages which have given stability to the great Medical institutions of this country—institutions which it is now the fashion to decry, but which have made the Medical Profession what it is, and have separated it from the fraternity of barber-Surgeons, simplers, and quacks. It must not be forgotten that every one of our Medical Corporations has begun in one way. Certain men carrying on the same business unite and form an Association for the defence of their rights and the promotion of their branch of knowledge. After a time, to become a member of one of these implies a certain status. Society prefers Practitioners guaranteed by membership. Then Government gives a charter, and endows the chartered Corporation with privileges, and commits to it the exclusion of ignorant and unworthy persons. But to all intents and purposes the Colleges remain in their original function, as the Professional centres of thought, and charged with the education and protection of their members. Time flows on; abuses set in; and subordinate societies start into existence to reform the errors of the corporate bodies; but the subordinate societies follow the same course, and can nohow be ensured against corruption, jobbery, favouritism, and drowsiness. There are in the British Medical Association no greater guarantees for purity and efficiency than in the College of Surgeons. But the Association has missed its point. In lieu of helping, by liberal expenditure in the cause of Medical science, to promote the interests of British Medicine, the British Medical Association has sunk into little more than a commercial speculation for the publication of a weekly Medical journal—of acknowledged excellence, truly, but claiming and possessing no higher distinction than that of an ephemeral scientific newspaper, competing with, but in no way surpassing, other papers of the same class. Again, the British Medical Association has to a great extent lost its original character, and has failed of its original purpose. It was started to meet the want felt by provincial Medical men of a common meeting-ground, where they might exchange the results of their labours and experience, get rid of the insulation implied by provincial Medical practice, and promote the science which they knew they cultivated as ardently and as successfully as their brethren in the metropolis. But the Provincial Medical Association no longer exists; it has been changed into the British Medical Association, with London virtually for its head-quarters, a journal published in London reflecting metropolitan rather than provincial Medicine and Surgery, and with a Metropolitan Branch which undoubtedly overshadows and leads the rest of the Association. We may be tóld that one of the chief officers of the Association resides at Birmingham. This is true; but the *fiasco* revealed in Mr. Hodgson's paper is a telling commentary on the system which places a general secretary at Birmingham, and the head-quarters of the Association in London. The Provincial Medical Association existed for a definite and needed object—the cultivation of British provincial Medicine and Surgery. When it became the British Medical Association it abandoned this object, lost its special character, and seems to be gradually but surely sinking into a mere publishing firm which invites its subscribers to an annual picnic.

CHINESE MATERIA MEDICA.

It is a matter of some interest to the student of the history of Medicine to know the direction which the art of healing has taken amongst a people like the Chinese, too often set down in a rough way as the very antipodes of European peoples. The elucidation of the subject of Chinese Pharmacology, as an important branch of it, has been left very much to the occasional labours of such men as Cleyer, Keferstein, Tatarinov, and the solitary English investigator Hanbury, who have given only occasional attention to what seems to be the concrete and only definite form of Chinese Medical study. It is, therefore, with peculiar pleasure that we hail the publication of a work(a) which promises to afford ample opportunities to those who, in the absence of a knowledge of the Chinese language, have been checked at this point of their studies in what we may be permitted to call Comparative Pharmacology.

The author of this interesting work is apparently a practical man, who, enjoying the advantages of long residence and direct communication with the natives of the "middle kingdom" of China, gives us the results of his examination and employment of the common drugs of the country. We gather from the preface, which precedes the alphabetical arrangement of the plants, minerals, and animal substances employed in Medicine, that several objects are desired to be met by this work. In addition to the introduction to the notice of European students of these sample drugs of the Chinese Pharmacopœia—as one, at least, of the works largely quoted by Dr. Porter Smith may be called—foreign drugs, as quinine, chloroform, and ipecacuanha, are introduced into the list, and fitted or found with Chinese names.

It may be hoped that in this way interchange may take place between the two countries of their medicinal products, though vastly, we expect, to the advantage of the Chinese. Such a country as China, with some eighteen provinces worthy of being ranked with European countries as to particular extent and peculiar dialect, and a great variety of climate, must have a rich flora.

Of the benefits of this flora we hourly partake, in the shape of that dietetical and medicinal article, tea. If Dr. Smith shall have made known any suchlike substances as tea, rhubarb, and musk, which western countries draw with so much advantage from China, his labours will immortalise his name.

The Chinese Medical Faculty seldom employ mineral substances internally. Safe bitters, mild demulcents, sweet diluents, gentle purgatives, and warm derivatives make up the sum of their Medical substances, generally derived from the imperial kingdom of Flora. Many of the drugs used by the Chinese Faculty are the simples of a past generation of Practitioners, or the domestic nostrums of the country people of the present day in Europe. Chemicals, such as calomel, corrosive sublimate, sulphuret of mercury, Æthiop's mineral, minium, white lead, sulphuret of silver, and a few other such drugs, are made on a large scale for use in the arts and in Medicine. Cups of rhinoceros horn, melted sulphur, realgar, sulphurised silver, and other materials are used to impart medicinal properties to wine or water by Chinese Doctors.

Many interesting references to the Sanscrit names of Indian drugs, or the Sanscrit synonyms of drugs common to both India and China, are met with in the *Pun-ts'au-kaung-muh*, a work largely drawn upon by Dr. Smith in his "Contributions." The peach, pear, and many other trees and plants were introduced into India from China, and much interesting information will be found in Chinese works about Indian drugs imported into China along with Buddhism, the common religion of the two great countries.

The study of Chinese herbals reveals many curious resemblances between the popular and Professional notions about plants held by Eastern and Western peoples. The Sedum, or common stone-crop, called *Donnerblatt* in German, is thought by some to ward off lightning. The Chinese plant these same *Crassulaceæ* upon housetops, with the notion that they ward off fire. Opium is a drug now produced on a large and increasing scale in China, and might well be exported to England, where the price of this drug is something dreadful. It is hardly necessary to say that a lot of abominable messes are recommended in Chinese works on Medicine to be employed in orthodox practice. Such substances are still employed in the rural districts of Western countries by the old women, who readily prescribe nasty remedies for all sorts of evil diseases.

(a) "Contributions towards the Materia Medica and Natural History of China, for the use of Medical Missionaries and Native Medical Students." By Frederick Porter Smith, M.B. Lond. Trübner and Co., Paternoster-row, London.

THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

At the meeting of the Association on the 20th inst.—the final meeting of the present session—two papers were read. The first was read by Dr. Ballard for the author, Mr. F. W. Lowndes, of Liverpool, upon the subject of "The Interment of Still-born Children." Mr. Lowndes, in this paper, detailed his observations as to the arrangements in force for the burial of still-born children at the cemeteries belonging to Liverpool. The special points to which he directed his attention were—the number of children interred as still-born in the year 1868; the fees required in the case of still-born children and those that had lived; the regulations, especially as regards certificates; and the opinions of the cemetery officials regarding the present system. In the year 1868 he ascertained that at five cemeteries 864 still-born children were interred, but remarked that this is by no means to be taken as the total number of still-births actually occurring within the borough, as there are many others of which he could obtain no account. He was satisfied that the total number would considerably exceed 1200; and, taking the number of births annually in Liverpool as between 19,000 and 20,000, this would give a ratio of about 6 per cent. —2 per cent more than the highest averages of foreign countries. The general result of his inquiries were briefly as follows:—1. That at all the Liverpool cemeteries there is a difference, ranging from 1s. 6d. to 7s. 6d., between the fees required for interring a still-born child and one which has lived, which is an inducement for fraud. 2. That while a certificate is always required, a large number, probably about one-half, are received from midwives, and of these many were from the lowest and most ignorant women. 3. That no penalty attaches, either under the Registration Act or any existing law, to any person giving a false certificate. The only way by which anyone can come within the law is when a sexton or other person inters as still-born the body of a child without a registrar's order, wilfully, knowing at the same time that the child was born alive. 4. In Liverpool we see the result of having a system of check, as in the case of the parish cemetery, the result being the detection of fraud, falsehood, and foul play. The suggestions of the author for amendment are—1. That the registration of births should be compulsory. 2. That still-born children should be registered. 3. That, when no Medical certificate was produced, the midwife in attendance should, in conjunction with the father of the child or occupier of the house, register the still-birth, and be liable to the usual penalty for making a false declaration.

A bundle of curious original certificates from midwives was exhibited; among them were the following:—

"60 Mount Plesent Liverpool this is to Sertify that i a tended Annie Croot No 26 Chapell Lane a Boy Primature Birth Still Born M D Jones Sep the 22 Born this morning 10 ockock"

"SepterBer 22 1807 i here serify that i Broght forth a still Born Bady Be longing to Merrey poole Wife of thoumes poole a sailor no 2 court Southwell street

i Misses hactherston
Mid Wife"

Liverpool oct 13th 1870

"I hereby sertify that I Delivried Elibath Duneen Wife of William Duneen No 27 Grafton street on the 12xt of A still Born Male child

Mrs Watson
Midwife
To The Ladies Chariety"

In the discussion which followed, Mr. Holland, of the Burial Acts Office, said that he did not see how still-births were to be registered; for where was the line to be drawn between a miscarriage and a still-birth? He thought that the temptation arising out of the great difference in charge for the burial of a still-born child and one that had just breathed, was too great for poor people to withstand. He suggested that this might be removed by burying young babies without formal service at reduced fees. With respect to the registration of still-births, Dr. Ballard pointed out that there could be no very serious practical obstacle, inasmuch as such births are registered as a matter of course in New York, as well as in some places on the Continent; and that, although it may be difficult to draw a precise line, yet there was a popular distinction drawn between miscarriage and still-birth which might suffice for the purpose of registration.

The next paper was by Dr. Letheby, on "The Quality of the Water-supply of some Large Cities and Towns of England, in relation to their Sanitary Condition." This was a long paper, and consisted of a commentary upon a series of letters in the *Scotsman*, by "A Physician." Dr. Letheby maintained throughout the superiority, in a sanitary point of view, of a hard-water supply to towns over a soft-water supply. His arguments were based first upon physiological considerations. He maintained that the earthy matters in the hard waters were essential elements to be provided for the construction of the osseous tissues, and that they supplied much of the calcareous salts necessary for the nutrition of the frame, and that by repudiating their use we should be throwing away one provision of nature for this purpose. No one could say that a hard water was not far more agreeable to drink than a soft water, while it certainly was cooler, and also quenched thirst better than a soft water. He maintained, in the second place, that the finest specimens of the English race were to be found in regions where the waters were hard, from flowing out of or over calcareous strata. The same was the case with cattle and horses—witness those reared in such counties as Durham and Leicester, and the horses of Flanders, while the Shetlands only produced a race of ponies. But his principal argument was that on distributing the towns of England, so far as their water-supply was known, according to the degrees of hardness of the waters, the average of the death-rate was least in those towns supplied with hard water, and increased as the waters became softer and softer, until it was highest in those where the water supplied was most soft. The following table was exhibited in proof of this assertion:—

Tables showing the Quality of the Water-supply as regards Hardness, and the Death-rates in Sixty-five English and Scotch Cities and Towns.

Hardness over 10 *Degrees*—

Places.	Death-rate per 1000.	Degree of hardness.
Banbury	21	16·9
Bedford	19	24·3
Birmingham	27	15·5
Bristol	28	17·1
Canterbury	23	18·0
Cheltenham	19	12·0
Congleton	23	11·9
Croydon	19	16·4
Deal	20	18·4
Derby	24	14·4
Dover	20	17·0
Guildford	19	18·5
Leamington	20	18·5
Lincoln	20	11·0
London	24	15·5
Newcastle and Gateshead	26	19·5
Norwich	25	14·5
Rugby	19	11·1
Runcorn	21	17·7
Southport	19	19·5
Sunderland and South Shields	24	12·6
Wakefield	23	16·0
Warrington	24	12·7
Worthing	18	17·3
York	23	14·3
Average	21·9	16·0

Places.	Death-rate per 1000.	Degree of hardness.
Hardness from 10 *to* 6 *Degrees*—		
Accrington	29	6·9
Ashton-under-Lyne	27	9·9
Birkenhead	19	8·3
Carlisle	23	6·1
Durham	23	7·5
Edinburgh	25	7·0
Leeds	28	7·5
Leicester	25	9·4
Leith	23	7·0
Liverpool and West Derby	28	9·6
Macclesfield	25	5·9
Northampton	24	7·2
Northwich	22	9·8
Preston	27	6·3
St. Helens	26	8·9
Wigan	27	8·4
Worcester	23	10·0
Average	24·9	8·0
Hardness from 6 *to* 2 *Degrees*—		
Blackburn	29	4·1
Bolton	27	3·4
Bury and Radcliffe	23	3·8
Chorley	22	3·8
Chorlton	24	2·5
Dundee	29	4·3
Manchester and Salford	29	2·5
Maryport	24	2·3
Oldham	25	4·9
Over Darwen	34	4·4
Paisley	28	2·9
Plymouth	24	3·0
Preston	27	5·5
Rochdale	24	3·6
Stockport	26	5·8
Average	26·3	3·8
Hardness less than 2 *Degrees*—		
Aberdeen	26	1·4
Cockermouth	33	1·5
Glasgow	31	0·6
Greenock	32	1·3
Lancaster	30	0·6
Perth	26	2·0
Sheffield	28	2·0
Whitehaven	22	1·0
Average	28·5	1·3

SUMMARY ABSTRACT.

Degree of Hardness.	Average Death-rate per 1000 of Population.	Average Degree of Hardness.
Over 10	21·9	16·0
10 to 6	24·9	8·0
6 to 2	26·3	3·8
2 and under	28·5	1·3

Several speakers, among whom were Dr. Tripe, Mr. Wanklyn, and Mr. Holland, criticised Dr. Letheby's inferences as drawn from this table, pointing out that several of the towns indicated as having a high death-rate with soft-water supply were notorious for their general unsanitary condition; that several of them were seaport towns; and that before any inference could be drawn from such a tabulation, the causes of death in the several towns should be distinguished, together with the ages of the populations both living and at death. The preference of hard water over soft water for drinking was held by one speaker to be a mere matter of habit, and by others it was shown that the problem was very complex, and not to be solved by calculating any one factor.

THE SMALL-POX EPIDEMIC.

THE fatal cases of small-pox in London, which in the previous week had declined to 232, rose again last week to 267. Distributing these, with the Hospital deaths, into districts, the West furnished 16 fatal cases; the North, 79; the Central, 20; the East, 51; and the South, 101. Although in every district except the West there has been an increase over the previous week, proportionally greatest in the North and Central districts, yet in none, except the Central district, have the numbers of the week before last been exceeded. The Registrar-General further tells us that the greatest fatality from small-pox again prevailed in Somer's-town, St. Pancras, Bethnal-green, Mile-end Old Town, Southwark, Walworth, Lambeth, and Battersea. In the latter sub-district, during the past seven weeks, no less than 96 deaths have been referred to small-pox, showing an annual rate of mortality from this disease alone equal to 13 per 1000 of the enumerated population in April last; the death-rate from small-pox in the whole of London has averaged 4 per 1000 during the six weeks ending last Saturday. He adds, for our comfort doubtless, that, high as this death-rate is, it is still small compared with that which prevails in the large Dutch towns, and in many other parts of the Continent. Referring to the provinces, he gives 50 as the small-pox deaths last week in Liverpool, 14 in Newcastle, 10 in Manchester, 9 in Sunderland, and 5 in Salford. Its fatality has declined in Croydon, Brighton, North Meols, Stockton, Hartlepool, South Shields, and Llanelly. In Great Grimsby the disease became epidemic towards the end of last quarter, causing 18 deaths; in the six weeks ending the 13th, no less than 70 were registered, showing an annual death-rate of 21 per 1000 upon the enumerated population at the recent census. The Registrar also reports that 17 more fatal cases occurred between the 13th and 17th inst. This epidemic approaches in severity that which has been raging in the large Dutch towns with which Great Grimsby is in intimate communication.

At Stockwell and Homerton, marquee tents are being used for the accommodation of the overflow of cases at the Hospitals. At Stockwell they are used, like the Hospital corridors, for those patients who have passed the acute stage, and Dr. Barbour reports of them favourably. At Homerton there are six marquees erected, and acute cases are being treated in them. Six beds are put into each, the allowance of cubic space being thus 660 feet for each patient. In one tent Dr. Collie had placed twelve children. With the two sides and the two ends of the tent open, and a free flow of air through, there appeared nothing objectionable; but the children's tent, open only at the sides, had, when we visited it, a decidedly offensive atmosphere. There certainly were two very severe cases in it at the time; but, this offensiveness being one of the concomitants of bad small-pox, there is the more reason for doubting the propriety of treating such cases in a tent with other patients, where a ventilation cannot be maintained sufficient to ensure a proper purity of the air within. When the tents are closed at night the ventilation must be of a most imperfect description, and the danger to those treated there must be commensurately enhanced. We think that the beds in each tent should be reduced in number to one-half, if acute cases are to continue being treated in them. We hear that Dr. Collie proposes putting some of the acute cases out of doors altogether in the day-time, protecting them, we presume, in some way from the direct rays of the sun. To this we see no objection—quite the contrary. The patients would probably be benefited, and the tents purified by freeing them from their tenants for several hours daily. Each tent has its own nurse. The bedsteads are folding iron bedsteads, and the beds are of flock; each patient is provided with extra blankets—a necessary precaution, since Dr. Collie finds that the cold at night penetrates into the tents.

THE WEEK.

TOPICS OF THE DAY.

IN the list of promotions in, and appointments to, the Order of the Bath, on the occasion of her Majesty's birthday, published in the supplement to the *Gazette* of Friday last week, we notice that David Dumbreck, Esq., M.D., C.B., has been promoted to be an Ordinary Member of the Military Division of the Second Class, or Knights Commanders of the Most Honourable Order. Sir David Dumbreck, K.C.B., whose long and valuable services are thus fittingly rewarded, will receive the congratulations of his Professional brethren both in and out of the army. The following Medical officers have been appointed Ordinary Members of the Military Division of the Third Class, or Companions of the Order:—Inspector-General of Hospitals Joshua Paynter; Deputy Inspector-General of Hospitals Richard James O'Flaherty; and Surgeon-Major John Ashton Bostock, M.D., Scots Fusilier Guards.

The election of Members of Council of the Royal College of Surgeons is to take place on Thursday, July 9. At present it appears there will be four vacancies to be filled. Mr. Cock, whose presidency last year gave him an extra tenure of office, now retires, and with him Messrs. Busk, Lane, and Le Gros Clark, whose terms of councillorship have also expired. These gentlemen have, of course, the option of presenting themselves for re-election, and some, if not all, will most certainly again ask the suffrage of their Fellows. At present we believe their intention has not been made known, unless, indeed, Mr. Lane's refusal of the vice-presidency of the College denote a wish to slip off the coils of office. We have heard the names and claims of three new candidates principally canvassed. They are Mr. Spencer Wells, Mr. Critchett, and Mr. Holmes Coote. The first-named of these gentlemen has claims to the highest honours of British Surgery. Ovariotomy is the one great contribution of British Surgery to the healing art which will especially mark the nineteenth century, and Mr. Spencer Wells is the British Surgeon who, *par excellence*, has demonstrated that it can be performed with the practical certainty of success in a large percentage of cases. Next to the discovery of anæsthetics, which cannot be placed to the account of the pure Surgeons, ovariotomy appears to us to be the Surgical achievement of the age, and, as we have said, no Surgical honours can be too high for the man who has been the main instrument in establishing the operation. But, besides this, Mr. Wells has other claims, which must not be overlooked. It is well known that for a long period he conducted this journal with skill, judgment, and fairness, which secured the favourable verdict even of opponents. He is well acquainted with the state of Medical politics, and with the different motives which are at work in directing them. We believe that no fitter or more representative man could be found amongst the Fellows of the College to fill a seat in the Council; and, to judge from the large number of votes he obtained last year, we think that our opinion will be shared by a majority of the Fellows.

The scheme for a Conjoint Examining Board of the College of Physicians, to which we drew attention last week, is still, we understand, under the consideration of the other Corporations. The difficulties to which we drew attention last week do not, on closer inspection, it seems, resolve themselves into thin air. We conceive that, if the scheme is not to follow its predecessors into the land of shadows, it must be radically modified. The power which it would give the Universities is disproportioned to their influence in the Profession. They are not Medical institutions in the sense in which the Medical Corporations are Medical institutions; they exercise no more influence over the Profession of Medicine than they do over the profession of the law or engineering. The four Universities together in a year do not confer so many Medical diplomas as one of the Corporations grants in a quarter, whilst one of them very rarely gives a Medical degree at all. It is not to be expected, therefore, that the Corporations will quietly consent to give the Universities so large a share in the government of Medical examinations and Medical education. It is conceded on all sides that the Universities should have some representation in the matter upon certain conditions; but to give them so many as four votes in a committee of ten is, as we have said, to give them an amount of influence quite disproportioned to their just claims. Besides this, the scheme, as it stands, is too artificial. It has not the simplicity which promises success. The Committee of Examinations which it proposes, unless its action were very carefully defined, would certainly be in frequent collision with one or other of the Medical Licensing Bodies, which, acting under Royal Charter or by Act of Parliament, would have legal and definite powers and rights which it could not relinquish. We firmly believe, however, that even now, out of the schemes which, one after another, have been framed, discussed, and cast aside, one might be constructed that would meet the requirements of the case, be acceptable and useful to the Profession, and, at the same time, not diminish the prestige or prosperity of the time-honoured institutions which represent Medicine in the eyes of the law and of the public.

A case of suicide by swallowing an ounce of chloroform is reported from Australia, which presents some points of interest. The deceased man was suffering from delirium tremens, brought on by a long course of drinking, and in this state procured and swallowed the chloroform. He immediately became insensible. His eyelids could be opened and pupils touched without the slightest proof of sensibility being manifested. When things were at the worst, and the man apparently dying, Mr. Gillbee and Dr. Neild, the Medical men in attendance, determined to try the injection of ammonia according to Professor Halford's plan of treating snake-bites. Ammonia, in the proportion of one part to two parts of water, was injected four times into the veins of the arms. Two drachms were injected altogether. The effects were most promising. Sensibility returned, and after five hours the patient could sit up and talk. He died, however, suddenly next day, apparently from syncope. The brain was found to be highly congested, and smelt of alcohol. The liver was diseased.

A complaint was lately forwarded to the Poor-law Board by one Mr. John Stallard, of Worcester, against Dr. William Woodward, Poor-law Medical Officer of that town, on the ground that Dr. Woodward had advised a poor woman, who was very ill, to apply to the Worcester Dispensary for relief, in place of attending her himself on account of the parish. Dr. Woodward's reply to the charge was a complete one. The woman had not procured an order for parochial Medical relief, and had been previously attended by one of the staff of the Dispensary. The Poor-law Board very properly dismissed the complaint by informing Mr. John Stallard that the circumstances did not render their interference necessary.

Much interest is felt in the forthcoming elections at St. Thomas's Hospital. We hear that Dr. John Harley and Dr. Payne are likely to be candidates for the Assistant-Physicianсies, and for the Assistant-Surgeoncies Mr. Wagstaffe, Mr. Arnott, and Mr. Bellamy. Mr. Wagstaffe has the claim of long service at the Hospital, a claim which we should think the Grand Committee will not overlook. There are only two fresh appointments to be filled up.

At St. Mary's, the Medical Committee having determined to support Dr. Meadows for the Obstetric Physiciancy, Dr. Edis has retired from the contest.

We are informed that the authorities of University College Hospital do not at present intend to make the contemplated appointment of an Assistant Obstetric Physician.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

On Tuesday, June 13, we are promised a Surgical evening at the Medical and Chirurgical Society of unusual interest. The meeting will open with a paper by Mr. Paget on "Removal of Tumours of Bone," and a paper by Mr. Spencer Wells is to follow on a "Fourth Series of 100 Cases of Ovariotomy, with Remarks on the Diagnosis of Ovarian from Uterine

Tumours." Of late years the discussions in this Society have become very tame, owing partly to the absence of the *Dii majores* from the meetings, and partly to a tacit understanding that the Society ought not to become a debating Society. We have never had any doubt that, if our leading men would attend this Society as our brethren in Paris attended their Academy, the discussions would be infinitely more valuable than the papers; and we trust that the time is coming when our wise men will not disdain to utter the words of wisdom, or shrink from the criticism of their juniors.

THE REV. PROFESSOR HAUGHTON'S LECTURES.

We publish to-day the first of a series of lectures "On the Principle of Least Action in Nature, illustrated by Animal Mechanics," which are now in course of delivery on Tuesday afternoons at the Royal Institution. Whoever knows Professor Haughton will be well aware that these lectures will contain conclusions rigorously drawn from observation and measurement, and will throw new light upon many of the most remarkable points of construction in the animal frame. But it were not easy to represent in any report the gratification which these lectures afford to all who, whether they care for animal mechanics or not, can relish the admirable *facundia*, the humour, the sarcasm, the abundance of anecdote, the wit that flickered around the subject like the sunshine on a gem, culminating in the grave assertion that really in Ireland public opinion would not justify the shooting of landlords for promoting scientific inquiries. As our readers know, Professor Haughton is at once a priest, a Physician, and a philosopher, and the graceful tribute which he paid to the humane and unselfish instincts of the suffering Irish poor, as well as his reverential allusions to the Creator whilst describing His works, showed him a master of every chord that finds an echo within the human heart, and produced that genuine emotion amongst the auditory which is only caused in presence of a great orator.

GERMAN APPRECIATION OF RED-CROSS SERVICE.

It is not a little satisfactory to find that now, when the Germans have a breathing-time, and are able to look round them in peace, they begin to appreciate more highly than at one time they seemed to do the aid so lavishly extended by the British public to the sick and wounded on both sides. The ill-feeling which Prince Bismarck and Count Bernstorff excited by their assertions that we persistently broke the laws of nations and exceeded the rights of neutrals, tempted Germans to look upon these kindnesses merely as sops to the great German nation, with a view to induce them to overlook our peccadilloes. Now, however, the mists of rage are passing away from their mental vision, and they see more clearly that, however done, our kindness was well-intentioned and free from any taint of self-interest. There has been no more satisfactory proof of this than the farewell the people of Darmstadt have just given Dr. Mayo and Messrs. Galton and Rundle on the occasion of their giving up charge of the Alice Hospital. This Hospital, though small, has done eminent service, and the people are duly grateful. It is well known that Dr. Mayo has been decorated for his services. That is one thing, and shows the Court cognisant of those services; but, owing to the intimate connexion existing between the house of Hesse and our royal family, that might be explained away. Not so the popular farewell given to these gentlemen; for, though the Prime Minister of Hesse was present, that was in his private, not in his public capacity. The *Main Zeitung* of May 18 gives an account of this entertainment. The chairman, in proposing the health of the Medical gentlemen, alluded not only to the bounty of the English Aid Society, but to the care and attention lavished by these gentlemen on the sick and wounded, day and night, for nine long months. Dr. Mayo, in returning thanks, gallantly toasted the ladies of Darmstadt, without whose aid he assured the company their work would have been too much for them. Finally they parted well pleased with each other, Messrs. Galton and Rundle going on to Munich and Vienna. For the meantime Dr. Mayo stays behind a little while longer, for the purpose of establishing a permanent Hospital and institution for nurses on the foundation of the temporary Alice Hospital. On this good work the Princess Alice has set her heart, and there can be no doubt of its accomplishment.

THE UNITED HOSPITALS' ATHLETIC SPORTS.

Over and above the sports of each Hospital club, there are now annual sports got up by members of different Hospitals banded together. Our opinion of these sports within moderate limits has long ago been pronounced, just as it has been when they are cultivated to an injurious extent. A healthy athleticism is undoubtedly good, were it only that it precludes an inordinate devotion to pipes and beer; but carried to an immoderate excess it tends to convert mind into muscle, as has perhaps been too vividly pictured by Wilkie Collins in his recent novel of "Man and Wife." The annual sports of the United Hospitals above referred to will take place on June 1, at the grounds, Lilliebridge, West Brompton, and we would bespeak some little interest on the part of the public in the proceedings. The band of the Grenadier Guards is to perform on the occasion, and that alone, with the fine weather which we trust will be vouchsafed for the day, is enough to draw a crowd of visitors. Nevertheless, the sports themselves are well worthy of a visit, and we trust they will prove in every respect a success.

REMARKABLE INQUEST AT DUBLIN.

The Dublin *Daily Express* of the 22nd inst. contains an account of an inquest held an Saturday last, at Dublin, on the body of a lady who had died on the preceding Sunday. The deceased was the wife of a gentleman of position in the County Armagh, but had for some months been residing in Dublin in delicate health, on account of which she had been attended by Mr. Ledger Erson, an unregistered Practitioner, who described himself as a Doctor of Medicine of the College of New York, and a Licentiate in Midwifery, but who admitted, on cross-examination, that he had neither studied in New York nor, in fact, ever been there. His qualification in midwifery is a diploma from the Coombe Lying-in Hospital; but it was not in his capacity as accoucheur that he had been attending the deceased lady. Mr. Erson is also a Justice of the Peace for the borough of Dublin, and appears, from the advertising columns of the same paper which contains the account of the inquest, to combine with his Professional and magisterial functions the sale of "Church Missionary" arrowroot at one shilling per pound, feeding-bottles, breast-glasses, violet powder, puffs, homœopathic preparations in variety, sago, spice, nursery-lamps, and lamp-oil. The inquest appears to have been held because the following statement had been made by the deceased lady a few days before her death, in the presence of her servant and Mr. Erson, who wrote it out—but not in his capacity as magistrate—and the deceased attached her signature:—

> "Thursday, May 12, 1871.
>
> "Mr. —— struck Mrs. —— with a newspaper on the head with his fist, which has left a black mark; told her to go to hell; said he wished she was in hell; said he was cursed with her."

After the patient's death, Mr. Erson says he called on the husband. "I told him," says the report, "that I had a sad duty to perform, and gave him a copy of the document, which I told him was made from memory." The husband of the lady having put the case into the hands of his solicitors, those gentlemen wrote to Mr. Erson, requesting him to state in writing whether he considered an inquest necessary, and declining to receive any verbal communication on the part of their client. Mr. Erson, however, only replied verbally that it was for the husband to decide whether there should be an inquest or not. The inquest was therefore held, and, according to the evidence of Dr. R. W. Egan, who had made the post-mortem examination, and of Dr. Edward Hamilton, who had attended the deceased lady since January, it was decided that death was the result of exhaustion caused by constant vomiting, the result of hepatic disease. The jury also added their opinion that there was no necessity for an inquest, although the coroner, having been put in motion, was bound to act as he had done. Mr. Erson added his testimony that the husband of the deceased was a most excellent husband in general matters, and that death arose from natural causes, although he thought that under his treatment she might have been alive and able to walk and drive on that day had she not been over-excited by domestic differences. It must also be highly satisfactory to Mr. Erson's brother-magistrates to observe that, on his cross-examination, he denied having ever made any claim on the husband of the deceased lady, or sent to say that he had a document in his possession, and that it would be better to settle quietly with him, and that he had never sent a demand for £700, or any other sum. He, however, expects £100 for his attendance; we hope he may get it—as a honorarium, as he cannot recover by law. It is clearly no part of the "sad duty" of a Medical Practitioner to receive a private statement of a married woman's alleged grievances. It should have been handed to the husband at once, if at all; there was no use in producing it after the patient's death, and the doing so gave rise to suspicion. We observe, by the way, the names of several gentlemen of very high standing in the Profession in Dublin are mentioned as having met Mr. Erson in consultation in this case; and we are tempted to inquire whether there is a by-law of the College of Surgeons and Physicians in Dublin, forbidding their Fellows and Licentiates to meet unqualified men in consultation. The Poor-law Commissioners of Ireland are the only body, we believe, which recognise the diplomas of the Rotunda and Coombe Lying-in Hospitals as qualifications to practise Medicine and Surgery.

PRESENTATION TO DR. EVANS, OF BIRMINGHAM.

On Friday last, two presentations were made to Dr. Evans, of the General Hospital, Birmingham, in recognition of his services to that institution during thirty-four years as Physician, and of the high esteem in which he is held by all classes in the borough. The presentation was made by the Hon. and Rev. G. M. Yorke, in a very eloquent speech, which was responded to by Dr. Evans in appropriate and feeling terms. The two pieces of plate are the work of Messrs. Elkington, of Birmingham, and the value of them is £211 10s. They each possess the following inscription, and are enclosed in beautiful cases made of oak :—" To George Fabian Evans, M.D., F.R.C.S., for thirty-four years Physician to the General Hospital, Birmingham, and 'beloved Physician' and generous friend of many households, this salver is presented, in order that there may remain in the possession of his family a proof of the high esteem in which he is held by men and women of all classes of society in the borough of Birmingham and the neighbouring counties, who, to the number of 420, in order to provide a suitable testimony to his many virtues, contributed a sum of money, the greater portion of which he has devoted, with that noble generosity that forms so large a feature in his character, to the founding of a Medical library, keeping this small portion only for himself and heirs, in memory of the affection of his friends.—May 1, 1871." A meeting was subsequently held, at which numerous patrons and friends of the Infirmary were present, when a portrait of Dr. Evans was presented to the governors. The work was painted by subscription, and is considered an excellent likeness. We congratulate Dr. Evans on his well-earned honours.

HEALTH REPORT OF GEORGETOWN, DEMERARA.

Dr. H. G. Dalton, Officer of Health for the city of Georgetown, in his report for the half-year ended June 30, 1870, states that of 747 deaths recorded during the six months, only twenty-nine are put down to fever; liver disease caused only two deaths, but fifty-two are attributed to dropsy. Notwithstanding that the mortality from diarrhœa was larger than might have been expected, that dysentery has prevailed as an epidemic in the city for about two years, and that phthisis, which not many years ago was almost unknown among the Creoles of the colony, has exhibited a startling frequency among the causes of mortality, ninety-one deaths, or one-eighth of the whole, having been attributed to it, Dr. Dalton sees no cause at all for the general depreciation as regards healthfulness in which this colony is held, especially by strangers, He also hopes, with more correct and extended returns of the births and deaths, and with ordinary attention to sanitary measures, to be able to establish the fact that the colony can vie with many other countries in the satisfactory exposition of statistics as to disease and mortality. The death-rate of the population, exclusive of children under one year old, was about 20 per 1000, while of children of that age, 160 per 1000 died. Although he has not yet the statistics necessary to prove his statement, Dr. Dalton considers that the number of twin-births occurring in the city is much greater than in most other countries.

FROM ABROAD.—PREVALENCE OF DRUNKENNESS IN THE FRENCH ARMY.

At the meeting of the Académie de Médecine on May 9, M. Jeannel read an important paper on the "Repression of Drunkenness in the French Army." He observes that during his long sojourn with the French armies, and especially during the campaign of 1870-71, he has had ample means of observing the much-to-be regretted fact that drunkenness among soldiers is neither reproved nor repressed, but encouraged by public opinion, and indulgently tolerated by the officers from the subaltern to the general. At the commencement of the campaign, the troops as they passed through the towns or along the railways were everywhere plied with drink, so that numbers of them were in a state of complete drunkenness along the route. The majority of the officers regard this state as a kind of consolation to the soldier for the miseries, privations, and fatigue which he is subjected to, and think that it would be unjust and cruel to restrain him as long as he does not quarrel and is still able to obey the commands. Drunkenness was indeed often admitted as an excuse for the commission of many faults in discipline, and numbers of officers did not regard the habit as necessarily opposed to the possession of the qualities essential to form a good soldier. While on march, therefore, at every halt the soldiers, under the eyes of their officers, rushed in crowds to the cabarets, while every battalion was officially accompanied by a cart (decorated with flags, on which might be read the name of the *cantinière* and the corps) containing barrels of spirit, which, by addition of water, was extemporaneously converted into cognac. A crowd of nomad *cabaretiers* was always found along the roads or in the midst of the camps, and a brisk competition was maintained with these by ragged girls from the neighbouring towns with baskets filled with bottles of spirit. Moreover, some of the generals relied less on firm courage, patriotic devotion, or military honour, than on a large distribution of brandy when the moment arrived to attack the enemy and carry a position—maintaining that commencing drunkenness was a highly useful stimulus to bravery. That under these circumstances habits of drunkenness have become propagated throughout the army, is only what might be expected. And M. Jeannel shows in addition, by quotations from the military regulations, that drunkenness is by them regarded with a very lenient eye, to be punished as little as possible.

"It has become evident to all," M. Jeannel observes, "that the habit of drunkenness, become thus generalised among our troops, has contributed a great share in the sapping of discipline which has been attended with such disastrous consequences. At the same time that it demoralises the army, it ruins its physical condition, diminishing the power of resistance to fatigue, to exposure to weather, and to privations, aggravating the effects of wounds, impeding the success of operations, and contributing to the mortality from epidemic causes."

He regards, then, the "repression" of drunkenness as one of the primary conditions of military regeneration; and no matter what improvements in this respect may be going on amidst the civil population, these will be of no avail if authority and discipline do not succeed in arresting the habits of intemperance in the army itself—for it is not until he enters the army that the young soldier, as a general rule, contracts habits of debauchery and drunkenness; and it is there that is recruited the fearful band of drunken and debauched *ouvriers* which dishonour and disorganise national industry. Any regulatory dispositions intended for the repression of drunkenness will, however, be of no avail whatever in the army if the bad examples given by officers and sub-officers are not sternly restrained by penalties. "To those who would exclaim against this I can only say that during the last campaign I knew, intimately, a *chef d'escadron* who frequently furnished a scandalous example of drunkenness, bedizened though he was with decorations." M. Jeannel terminates his paper by enumerating the various penalties which, he suggests, should be enforced in counteraction of this monster evil, so destructive of all military efficiency.

M. De Ranse, editor of the *Gazette Médicale*, reporting M. Jeannel's observations, observes—

"We have several times had occasion to signalise in these pages the sad and painful spectacle which has only but too often presented itself to us during the siege of Paris when we have made excursions beyond the walls. One was really astonished and distressed at meeting with, up nearly to the very outposts of the enemy, so large a number of drunken soldiers, and especially in observing the tolerance which was extended towards them."

PARLIAMENTARY.—ASSESSING AND COLLECTING THE INCOME-TAX—WATER SUPPLY OF LONDON—ADULTERATION OF FOOD, DRUGS, ETC., BILL—QUESTIONS TO BE ASKED.

On Thursday, May 18, in the House of Commons,

Mr. Chadwick moved for a select committee to inquire into the mode of assessing the Income-tax. In the debate which arose on Mr. Chadwick's motion, Mr. Lowe offered, if Mr. Chadwick would furnish him with a list of thirteen grievances, with his comments, at once to make a searching inquiry into such of them as were not of a speculative or metaphysical character. This compromise was declared unsatisfactory by Mr. M'Cullagh Torrens. On a division the motion was rejected by 56 to 47.

In committee on the Income-tax Bill there was a protracted conversation on a clause moved by Mr. Hermon, providing for the collection of income-tax in two instalments. It was resisted by Mr. Lowe, and ultimately negatived by 76 to 37.

On Tuesday, May 23,

Mr. Kay-Shuttleworth moved a resolution declaring that water supplied to householders in London should be derived from pure sources, and delivered on the "constant supply" system. Though dealing only with the metropolis, he treated it as a part only of the great question of sanitary reform for the whole country, and the key-note of his speech was struck in the assertion that 100,000 preventible deaths occur annually in this country (for which he held the House of Commons to some extent liable), and that the Metropolis Water Bill of the Government is incomplete. In the first place he showed that the present supply was derived from impure sources, and for this purpose, with the avowed object of disgusting the House and the country with the present state of things, he read some startling extracts from the reports of the Rivers Pollution Commission, of Mr. Simon, Dr. Farr, and other authorities. From these he drew the conclusion that the consumption of Thames water is a fertile source of cholera and typhoid fever, that no process of filtration or re-oxidisation can make the Thames water fit for drinking purposes, and that we ought to go for our supply to head waters or spring wells. Next he examined the alternative plans of supply—for instance, the plans for bringing water from Wales, Cumberland, etc.—pronouncing decidedly in favour of drawing on the chalk formation about London. To obtain two hundred millions of gallons daily from this source he calculated would not cost more than 400,000*l.* a year, and the softening process necessary for chalk water would amount to about 600,000*l.* But he pointed out that this would be counterbalanced by a great saving in soap, amounting, according to a distinguished water authority, to half a million a year in London. Dealing next with the continuous system of water-supply, he dwelt on its advantages on the score of health, in the case of fires, etc., and from the example of Glasgow and Manchester, where the system had been successful, he showed that it was attended with a great saving of water, and no increase of rates.

Dr. Playfair, in seconding the motion, maintained that no Bill on the subject would be satisfactory which did not join the control of the metropolitan supply with the Conservancy of the Thames and Lea, so as to prevent us drinking the refuse of the upper riparian population. He argued, also, in favour of the continuous system, and the transfer of the supply to a public trust.

Mr. Clay dissented from the conclusion that the present supply was derived from impure sources. At any rate, considering the discrepancies which he pointed out in the evidence, instead of a direct condemnation Mr. Kay-Shuttleworth ought to have moved for a commission or a committee to reconcile them. Not going so far as to characterise the idea of drawing water from the chalk as Utopian and absurd, he held that the evidence in favour of it was utterly inconclusive; and he maintained that the water companies were ready to try every improvement required by Parliament.

Mr. Hardy, who confessed that he was a New River shareholder, did not object to any amount of inquiry, but deprecated the passing of an abstract resolution which was opposed to all the decisions of past commissions and committees. He denied that the chemists had yet come to any unanimous conclusion that the water-supply was fatal to health. The adverse judgments pronounced on it were not drawn from analysis, but from a mere assumption that a certain ascertained condition of health was due to the water-supply. To draw the water from the chalk would be to exhaust the rivers, and the great objection to a constant supply—which was not demanded by the rich—was the neglect of the landlords to provide the pipes and fittings for the purpose. The quality of the Thames water, too, would be much improved if the upper towns carried out the powers given to them.

Mr. Bruce entirely approved the language of the resolution, but at the same time he held that many of Mr. Kay-Shuttleworth's quotations did not apply to the present condition of the water-supply. There was no evidence to show that the Thames water was absolutely deleterious. Mr. Bruce also explained and defended the principle on which the Government Bill was framed.

Mr. Dalrymple believed that the Thames water, properly purified, was wholesome, and the very soft water was only good for laundresses and tea-drinkers.

Mr. Cave, seconded by Mr. M'Cullagh Torrens, moved the "previous question," and after some remarks from Mr. Young, Sir John Lubbock, Mr. Cawley, and Mr. H. Lewis, the motion was disposed of in this way.

Mr. Muntz moved that the House should go into Committee on the Adulteration of Food and Drugs, &c., Bill.

Sir C. Adderley moved as an amendment that the House should resolve itself into the said Committee on this day six months.

Mr. Cave opposed the Bill, which, in his opinion, would prove wholly inoperative in small towns and villages, because the burden of prosecuting offenders was thrown upon their customers.

Mr. Bruce, on the other hand, supported the Bill, because it increased the penalty for adulteration, and was a useful measure as far as it went. Another Bill might be subsequently introduced to establish a central authority, which should be charged with the initiation of prosecutions.

The amendment having been negatived without a division, the House went into Committee on the Bill *pro formâ*, but progress was immediately reported, and the House resumed.

The following notices were given on Tuesday, May 23:—

Mr. Wilmot,—To ask the Secretary of State for the Home Department, whether Mrs. Ingham, who was tried at Derby

Assizes in July, 1869, for the murder of her child, and acquitted on the ground of puerperal insanity, has been certified by the Medical officer of Derby County Gaol to have become perfectly sane within a few days of her trial; whether the visiting justices have, on the strength of this Medical certificate, twice applied for her discharge; whether, in answer to their last application, on April 4, 1871, they were informed that if her health was suffering she might be received into a criminal lunatic asylum; and whether, if this is the case, he does not think such a course would be likely still more seriously to injure the health of a sane woman; and if he will be good enough to state to the House on what grounds he does not fee justified in granting her discharge after her recovery has lasted for seventeen months.—Friday, May 26.

On going into Committee of Supply:—Mr. Clare Read,—To call attention to the operation of the Contagious Diseases (Animals) Act, and the recent orders relating to foreign stock, and to move for a select committee to inquire into the cost, constitution, and working of the veterinary department of the Privy Council.—Friday, June 2.

Dr. Lush,—To ask the President of the Poor-law Board if he proposes to bring in a Bill to enable him to extend the system of Poor-law dispensaries to the provinces; and, if so, when. (Deferred to Monday, June 5.)

Mr. William Fowler,—Contagious Diseases Acts (1866 and 1869) Repeal,—Bill to repeal the Contagious Diseases Acts 1866 and 1869.—Tuesday, June 20.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	April 15.	April 22.	April 29.	May 6.	May 13.	May 20.	May 20. Sent to Hospital.
WEST—							
Chelsea	9	9	9	4	16	—	—
St. George, Hanover-square	16	19	23	14	11	9	6
St. James, Westminster	8	6	2	8	?	?	—
Paddington	?	24	12	20	24	15	7
NORTH—							
St. Pancras	102	121	89*	104	101	117	?
Islington	69	67	59	64	59	42	25
Hackney	?	46	30	?	18	?	—
CENTRAL—							
City of London	16	14	13	5	13	11	2
St. Giles-in-the-Fields	11	2	14	5	5	?	—
Holborn	8	8	9	5	13	10	8
St. Luke's	20	17	25	12	13	17	15
EAST—							
Whitechapel	14	17	23	7	4	23	?
Poplar	?	?	?	?	?	11	6
SOUTH—							
St. Mary, Newington	34	37	47	25*	28	22*	27
St. Olave, Southwark	3	3	5	3	2	2	2
St. George-the-Martyr, Southwark	30	31	26	?	?	?	—
Lambeth	24	?	32	20	?	?	—
Clapham	28	23	32	29	13	16	8
Wandsworth	6	6	8	4	4	1	1
Putney	1	?	?	?	?	?	—
Streatham	7	2	?	?	?	?	—
Greenwich	?	?	—	?	?	12	6
Plumstead	5	3	3	—	6	6	—

* Return imperfect.

THE Peterhead correspondent of the *Aberdeen Free Press* says, "We are at present overrun with quack Doctors, who, if report speaks truly, are making a rich harvest off the more credulous of our townsfolk. There is no disease known that they are not prepared to cure. It is astonishing that sensible people could allow themselves to be duped in such transparent fashion."

THE APPLICATIONS OF ELECTRICITY TO MEDICINE.

I.

PRELIMINARY CONSIDERATIONS.

THE almost simultaneous appearance of a number of valuable treatises on the subject of Medical electricity, certain of which will fall into the hands of special students, and render them service, but which are too bulky and too full of detail to aid the busy Practitioner, has induced us to give an outline of some of the principal facts relating to electricity in its applications to Medicine.(a)

To do this with full effect, certain preliminary considerations are necessary, so as to give a proper understanding of the kind of force thus employed, its mode of generation, of transmission, and of action.

In accordance with modern scientific notions, we must teach that Force is one, variously modified, it is true, and in its modifications variously manifested as motion, heat, light, electricity, magnetism, or chemical force, but that the total quantity of this kind of force in the universe is invariable. True, it may be stored up so as not to be appreciable—or, as it is called, become latent; but it is still capable, under appropriate circumstances, of being again rendered manifest. To take the case of a projectile ejected from the mouth of a gun; this, if the gun is pointed straight up into the air, will pass upwards with constantly decreasing velocity, until the initial impulse is completely expended. If left to itself, it will then, again, descend towards the earth with constantly increasing velocity, until at last, when it reaches the ground, this will equal the force of the primary impulse, minus a certain small proportion expended in overcoming the resistance of the atmosphere in the ascent and descent, and which will appear as heat. But, if we can suppose the ball caught just as it began to descend, when its force was *nil*, and retained at that elevation, we should have an example of latent energy. When caught, it had no force, but its elevation above the ground was acquired by a certain expenditure of force—an expenditure which can, in great measure, be recouped by allowing it to again descend. So long, therefore, as it is retained at that elevation, this force will remain latent; the moment the bullet is set at liberty and begins to fall, force again becomes patent, *pari passu* with the fall of the body.

Electricity is one of the forms of this omnipresent Force; and it can only be developed at the expense of some other mode of its manifestation, especially of motion or chemical force. It has been known almost from time immemorial that certain bodies rubbed against certain others acquired new properties whereby they are able to attract to them small and light objects. Thus, if a stick of sealing-wax be rubbed on the sleeve of the coat, it will acquire this property; so, also, if a glass rod is rubbed with a silk handkerchief. On the other hand, if an ordinary metal rod be so rubbed, it will become quite hot, but will never acquire this property. Whence arises the difference? In both cases a certain amount of force has been expended in rubbing; but in the one case both heat and electric force have been developed—in the other, apparently heat only. Really, however, as in both cases energy has been expended in rubbing, so in both heat and electricity have been produced; but in the latter the electricity which has been developed is dispersed as fast as produced by means of the metal rod and the human body—both fairly good conductors of electricity; in the former it has been retained, and so made manifest, because glass and resin are bad conductors of electricity.

We are to conclude, therefore, that by thus rubbing any non-conductor we may secure the manifestation of force partly as heat, partly as electricity. But it is to be noted that, in certain of its properties, the latter varies. Thus, that produced by the glass rod is called *positive;* that produced by the sealing-wax is called *negative*. And of these it is to be said that, whilst bodies electrified negatively attract those electrified positively, negative repels negative, and positive, positive.

(a) A Treatise on Localised Electrisation, and its Applications to Pathology and Therapeutics. By Dr. G. B. Duchenne (de Boulogne). Translated from the Third Edition of the Original by Herbert Tibbits, M.D., Medical Superintendent of the National Hospital for the Paralysed and Epileptic. Part I. London: Hardwicke. Pp. 322.

A Treatise on Medical Electricity: Theoretical and Practical. By Julius Althaus, M.D., M.R.C.P., etc., Physician to the Infirmary for Epilepsy and Paralysis. Second Edition. London: Longmans. Pp. 676.

Electricity in its Relations to Practical Medicine. By Dr. Moritz Meyer, Royal Councillor of Health, etc. From the Third German Edition, by W. A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine in the Bellevue Hospital Medical College, etc. New York: Appleton and Co. Pp. 497.

A Practical Treatise on the Medical and Surgical Uses of Electricity; including Localised and General Electrisation. By George M. Beard, A.M., M.D., etc., and A. D. Rockwell, A.M., M.D., etc. New York: William Wood and Co. Pp. 698.

This form of electricity—that is, the one produced by friction—is commonly called Static electricity or frictional electricity. By means of appropriate apparatus it may be collected, and stored up in glass jars of peculiar construction, called Leyden jars. These may, in turn, be combined in groups, and in this fashion sufficient electricity may be stored up to produce, on discharge, effects similar in kind to those of lightning, and, when a considerable number of jars is used, even approximately in degree, inasmuch as they may give rise to fatal effects. Such a combination constitutes a true *electric* battery.

But other kinds of force, besides motion coupled with friction, may exhibit themselves as electricity, especially chemical force. It is perfectly well known that all our artificial modes of producing heat depend on the energy stored up in bodies kept apart from, or uncombined with, each other, and which, when brought in contact under favouring circumstances, give this latent force forth as heat. In certain instances, however, a proportion of this energy developes itself as electric force. Thus, if we take a plate of zinc and a plate of copper, and introduce the two into a liquid such as dilute sulphuric acid, which has a strong tendency to combine with the zinc, these two will unite, and so set free a certain amount of energy, part of which will appear as positive, part as negative electricity; for the one plate will be positive, the other negative. But if the two metallic plates are brought in contact, either immediately by touching each other or mediately by means of a wire, these two varieties will constantly tend to again unite through its conducting agency; but, being as constantly broken up by virtue of the chemical combination going on, an electric current will be formed. Electricity so produced is called *contact*, *current*, or *dynamic* electricity. When the two plates are united in this fashion, the zinc is more vigorously attacked by the acid than is the copper. That portion of its surface above the fluid seems to give off negative electricity; from that below the surface positive electricity passes through the fluid to the copper plate, and exhibits itself where the copper is joined by the connecting wire, through which the hypothetic electric current is supposed to flow from the copper to the zinc. As it is the course of the so-called positive electricity we always follow, that of the negative is tacitly ignored. An electric current is invariably produced when two metals are introduced (in contact) into a fluid which affects one metal more than the other. The one most affected is called the positive or generating plate; from it the electricity passes through the fluid to the less affected or negative plate. But any number of couples, as they are called, may be thus connected; and by this means the quantity of electric force produced is proportionately increased. The whole collection of couples is called a Voltaic or Galvanic battery, after the names of those concerned in the discovery and primary elucidation of this form of energy. If the wire joining the copper and the zinc of the extremes of this battery be cut, the electricity produced will tend to accumulate about their cut extremities, which are consequently called poles. Hence, the wire connected with the copper would become the positive pole, that with the zinc the negative pole. The term electrode is now very often used as synonymous with that of pole.

(*To be continued.*)

MR. CORRANCE, M.P., AND POOR-LAW MEDICAL REFORM.

We learn that Mr. Corrance is at present travelling in Ireland, whither he has gone purposely to investigate the administration of the poor-law, and particularly the working of the Medical Charities Act, and, with the object of making his inquiries more complete, has sent to the Medical and Poor-law Inspectors as well as to several Dispensary Physicians the form of questions which we append. Mr. Corrance will, at an early day after the Whitsuntide holidays, call the attention of the House to the unsatisfactory state of English Medical relief, and urge the expediency of assimilating the system here to that which has existed with so much advantage to the community for many years in Ireland.

"Carlton Club, Pall-mall, London,
"May 24, 1871.

"Dear Sir,—You would much oblige me if you would kindly answer the following questions and return them to me, at the above address, at your earliest convenience:—

"1st. Has the operation of the Medical Charities Act (Ireland) enabled the guardians to enforce a system of indoor relief without undue hardship towards the indigent classes?

"2nd. Has it led to a diminution of pauperism arising from sickness?

"3rd. Has it exercised a controlling effect in diminishing the severity of epidemic outbreaks and the amount of zymotic disease?

"4th. Have the Medical Profession, acting as general Practitioners, any just ground of complaint arising out of its operation?

"5th. What is the feeling of the Medical Profession generally in Ireland respecting it?

"6th. Has there been any appreciable falling off in poor-relief expenditure in any district since it came into operation, the diminution of population in such district being taken into account?

"7th. Has it led to a better administration of the poor-laws?

"8th. Are there any, and if so, what are its principal defects?

"9th. Are you favourable to its operation, and would you recommend it for general adoption?

"I am, yours truly,
"F. T. Corrance,
"M.P. for East Suffolk."

THE EFFECTS OF CHANGE OF CLIMATE ON THE HUMAN ECONOMY.

We are indebted to Dr. Rattray, Surgeon R.N., for a very elaborate memoir "On Some of the more Important Physiological Changes induced in the Human Economy by Change of Climate, as from Temperate to Tropical, and the reverse."(a) After pointing out that tropical pathology, whether of native or foreign races, cannot be properly studied till we know its physiology, and that many so-called tropical diseases are merely exaggerations of the ordinary effects of climate, or, in other words, physiological merged into pathological phenomena, he glances at the various experiments that have been artificially made (by hot-air chambers, the rarified atmospheres of high elevations, etc.), with the view of elucidating the effects of hot and cold climates on the human body, and shows that such observations, although interesting as approximations to truth, are evidently wanting in practical importance, because we fail in obtaining fair examples of natural climates.

Special sections, containing most elaborate tables of experiments, are devoted to the Influence of Tropical Climates—(1), On the respiration; (2), on the pulse; (3), on the temperature of the body; (4), on the kidneys and skin; and (5), on the weight and strength.

1. No less than eleven pages, containing five tables, are occupied with the consideration of the *Influence of Tropical Climates on the Respirations*. The first table gives the results of observations on the effects of tropical weather on the capacity of the chest, as indicated by the spirometer. The observations were made on four strong, full-chested, adult seamen, fourteen healthy adult officers, and six lads, aged 16—17 (twenty-four individuals in all), during a voyage from England (lat. 51° N.) to Bahia (lat. 11° S.) and back. In twelve of the seamen—viz., the four adult seamen and eight of the adult officers, the experiments were carried out more thoroughly than in the remainder, and the results yielded by the twelve were as follows. In the temperate summer climate of England (June 13; average temperature 65° Fahr., shade) the mean capacity of the chest was 256 cubic inches. Nineteen days afterwards (July 12; 78° F., shade), in the equatorial doldrums, and greatest heat of the outward voyage, the capacity had increased to 280 cubic inches, equal to an average gain of twenty-four inches per man. Thirty-eight days later, (August 20; 83° F., shade), in the equatorial doldrums, and highest temperature of the return voyage, the increase was further augmented in ten of the cases by an average of six and a half cubic inches, from prolonged tropical exposure; while in the remaining two the capacity remained stationary. The total average increase in the twelve cases during fifty days' residence in the tropics was thirty-one cubic inches, or 12·24 per cent. In evidence that the increase was due to climatic causes, and not to merely an increased facility from custom in using the instrument, the same cases were again tested about three weeks afterwards, as they approached the English coast

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(a) *Proceedings of the Royal Society*, June 16, 1870, and February 16, 1871.

(September 14; 65° F., shade), when it was found that the capacity of the chest for air had again decreased in every case by an average of twenty-six cubic inches. Although the temperatures were the same on their leaving and returning to England, the time was apparently too short to allow the capacity of the chest to resume its first average of 256 cubic inches, being still at 260 inches; but on a subsequent examination, five months later (February 10; 42° F., shade), the average capacity was found to be 253 cubic inches, or three inches below the first trial. The results among the other adults and five of the six youths were identical, and showed that the thoracic capacity is considerably greater in the tropics than in temperate climates. The greatest increase amounted to thirty-nine, and the lowest to twenty-one cubic inches.

The second and third tables, showing the effect of climate on the capacity of the chest in the black races, and in pulmonary disease, are based on too few cases (three and four respectively) to give trustworthy results. In two pure blacks the capacity of the chest in the tropics (79° F.) was twenty-five and eighteen cubic inches greater than in the winter in England (32° F.). In four cases of phthisis there was a decrease of from eight to fifteen cubic inches in an interval of only five days, on the first of which the temperature was 83° F., and on the last 78° F.

Dr. Rattray points out that a knowledge of the law that "the pneumatic capacity of the chest varies with temperature, increasing in tropical, and diminishing in temperate and cold climates," has an important practical application in preventing mistakes in the spirometric diagnosis of certain lung diseases. Thus, "the capacity of the chest of an individual debilitated by residence in the tropics, and weak-chested, but with no active lung disease, being, say, 250 or 270 cubic inches, he might be supposed to have contracted incipient phthisis on reaching England in winter, labouring under catarrh, with the pneumatic capacity of his chest reduced by from twenty-five to thirty-five cubic inches. On the other hand, a patient actually in incipient phthisis might be erroneously considered to have permanently recovered by a trip to the tropics, having raised the capacity of his lungs for air by a similar amount—*i. e.*, almost or actually up to the normal standard for his age and height in a temperate climate. A similar mistake might be made, especially if the instrument is carelessly used, in the same climate—*e. g.*, that of England, at different seasons of the year, such as the height of summer and the depth of winter, when a considerable difference in the capacity of the lungs for air must not be taken as an index of disease."

As it is not by deep and forcible breathings that ordinary respiration is carried on, it is important to ascertain whether the air inspired in each ordinary breathing undergoes a similar change, according to the climate. This is a far more difficult point to decide than anything we can learn from the spirometric experiments. From analogy, we may infer that the law holds for ordinary respiration, and a few observations made by Dr. Rattray upon himself confirm this view. "My ordinary respirations," he observes, "ranged from four to eight, and averaged six cubic inches in a temperature of 44° Fahr. (shade) during the winter of England. At Lisbon, during an average temperature of 65° Fahr. (shade), they ranged from five to thirteen, and averaged nine cubic inches. Unfortunately, while in the tropics I had not the proper apparatus to ascertain how much they increased during the far greater temperature of equatorial regions."

The fourth table may be passed over without comment, as it merely shows that in the tropics the period of the day has very little influence on the capacity of the chest. The fifth table shows how the frequency of the respiration is affected by tropical climates, and is chiefly compiled from the daily results of the three months' voyage to Bahia and home; the observations being taken in the standing position at 9 a.m., 3 p.m., and 9 p.m.; and the averages being for a week. This table shows that in the summer of England, with an average temperature of 62° F., the average number of respirations per minute was 15·68, whereas in the doldrums or warmest part of the tropics, during the outward voyage, with a temperature of 78·74° F., the average was only 12·74, and on the home voyage, with a similar temperature, 13·74—a decided decrease. In the winter of England (February) with a temperature of 42°, the average had increased to 16·5, and at freezing-point, 32°, to 17·5. These results were confirmed by Mr. Knott, Assistant-Surgeon to Dr. Rattray's ship, the *Bristol*, who showed that while, as in temperate latitudes, the activity of the respiration varies in different individuals, there is a diminution in the number in the tropics.

Here, then, are two closely-related but opposite results—viz., an increase in the capacity of the chest for air in the tropics, with a decrease in the number of the respirations. Dr. Rattray explains the first of these results by assuming that "there is really no actual increase in the capacity or size of the chest and inclosed lungs, but only an alteration in the relative proportion of blood and air contained in the latter." He believes that the lungs, unaltered in size, contain less blood and more air in tropical than in temperate climates, the blood being in part diverted to the excited skin and liver. We can thus explain the benefit derived in the early stage of phthisis by a sojourn in a sub-tropical climate. "Residence in a warm atmosphere is followed by a decrease in the quantity of blood in the affected lungs, by diminished activity in the vital processes carried on therein, by facilitated respiration, and, above all, by diminished lung-work, from vicarious action of the physiologically excited skin and liver; while the inhalation of milder, more equable, and less irritant air diminishes the chances of excitement or increase of distressing local inflammation, and those bronchial attacks so apt to break up old, and cause the deposition of new, tubercle. . . . . Now, if we can imitate Nature's operations, and, by increasing the temperature of a sick-room or ward in the temperate climate of England, can convert it into a local sub-tropical or tropical climate, we withdraw no inconsiderable amount of blood from the lungs to the skin and liver, thus relieving its overburdened capillaries, permitting freer access of air, and so aiding the respiratory process—a safe and sure mode, both of relieving dyspnœa and cough and aiding the *vis medicatrix*."

The author likewise believes that this law is suggestive in relation to the nature of the food, and to hygiene generally in the tropics. He calculates that, in a tropical climate, the lungs eliminate less carbon to the extent of above an ounce in the twenty-four hours than in England. Hence he infers that in hot countries the diet should be less carbonaceous than at home, and than independently of the diet, especial attention should be paid to the condition of the skin. We presume that Dr. Rattray gets over the apparent difficulty of carbonaceous food being the chief support of the natives of tropical climates by assuming that the climate does not affect them as it does Europeans.

The sixth and last table in this section of the memoir states that (1) the number of respirations—morning, afternoon, and evening—are all less than in temperate regions, and (2) that, in tropical as in temperate latitudes, the respiration is less frequent in the morning, and gradually increases as the day goes on.

2. The *Influence of Tropical Climates on the Pulse* may be considered in a few lines. The observations were taken three times a day (at 9 a.m., 3 p.m., and 9 p.m.), in a standing position, during the above-mentioned voyage. It appears (1) that the average pulse for the tropics (87½) is lower by two and a half beats than that for the temperate zone (90), indicating a more languid circulation; (2) that the same holds good for the average morning and evening pulse; (3) that the average afternoon pulse is higher in the tropics than in temperate latitudes, probably from the solar heat, which is greatest at that period of the day; (4) that the highest (112) and lowest (66) pulse of the period occurs in the morning; and (5) that the morning pulse has the greatest and the evening the lowest range. As these observations, which extended over sixty days, were made on one individual only, their confirmation is necessary.

3. A table is given in the section on the *Influence of Tropical Climates on the Temperature of the Body*, contrasting the average heat of the body in the tropics and the temperate climates, and showing that "while in England during a summer, and almost sub-tropical temperature, ranging from 60° to 70°, the average was 98·3°, it rose in the tropics to 98·6°, and in the equatorial doldrums, at a temperature of 84°, to 99°, and on one occasion to 99·5°. The difference would have been greater had the season in England been winter, or the latitude higher. The temperature of the body in the tropics attained its maximum during the afternoon, when the sun is high and the body most active, and least in the morning." On special occasions in which the atmospheric temperature was very high, the heat of the body was greater. Thus—the thermometer standing at 99° in the shade at 3 p.m.—out of fifty-one observations, the animal heat was 99·5° in seventeen, and 100° in five cases. Hence, according to Dr. Rattray, the range of the temperature of the body in health is about 2° Fahr. Dr. John Davy gave it at from ·5° to 1°, and Eydaux and Brown-Séquard at from 1° to 2·5° or 3° Fahr. In hot and very humid climates, the temperature of the healthy body may probably rise considerably higher than 100°.

(To be continued.)

THE ARMY MEDICAL DEPARTMENT REPORT FOR 1869.—VOL. XI.

The new nomenclature and classification of disease, prepared in 1868 by a Committee of the Royal College of Physicians, assisted by representatives of the Medical Departments of the Army and Navy, the Registrar-General, and other professional bodies, having been adopted by the Government as a standard, was taken into use in the army on January 1, 1869. An important change in the form of the statistical tables has thus become necessary, and the report opens with a brief but very practical and clear explanation of the nature of the new nomenclature and classification, and of the modifications necessary to render the latter applicable to military statistics. The College being unwilling to attach any designation implying a special theory to the two sub-divisions of general diseases, preferred to indicate them by the letters A and B. But in the preparation of the Medical statistics of the army, it has been found convenient, though not strictly correct, to specify these sub-divisions by assigning to them respectively the terms "febrile" and "constitutional" group. The former comprises cholera, influenza, erysipelas, besides all forms of fever; the latter includes rheumatism in all its forms, syphilis (primary, secondary, and hereditary), scrofula and phthisis (including tubercular hæmoptysis), scurvy and purpura, anæmia, and other constitutional affections. The College of Physicians did not deem it necessary to retain a separate class for enthetic diseases; consequently, in the classification, gonorrhœa and its complications and results are returned among affections of the urinary system. But as, from a military point of view, this class of diseases is so important, especially with reference to the amount of inefficiency and invaliding to which they give rise, the Director-General decided to call for special returns of them annually from every corps, and issued instructions for the mode of preparation of these returns, from which all the necessary information respecting the prevalence of enthetic diseases is compiled. The constitutional form of syphilis, and the local venereal ulcer, according to the Director-General's instructions, are to be carefully discriminated; gonorrhœa and all its sequelæ to be entered under their respective heads; while suppuration of the inguinal glands, orchitis, etc., arising from causes other than venereal, must be excluded from these returns, and entered in their proper class and order.

According to the weekly returns of sick furnished to the Army Medical Department during the year 1869, the strength of troops serving in the United Kingdom was 73,764, among whom there occurred 58,797 admissions into Hospital and 694 deaths, the average number constantly sick being 3011. These numbers give the proportions of 797 admissions, 9·41 deaths, and 40·52 constantly sick per 1000 of mean strength; the admissions into Hospital were 159 per 1000 of the strength under the average of the preceding nine years; there was also a slight decrease in the deaths, and the proportion constantly sick was less by 8 per 1000. General diseases gave rise to upwards of one-fourth of all the admissions, and to nearly one-third of the deaths. Syphilis and rheumatism were even the most prevalent of this class, the admissions by the former having amounted to 111, and by the latter to 46, per 1000. The most fatal diseases of this class were those grouped under phthisis and scrofula, the ratio of deaths by them having been 2·81 per 1000—slightly less than that caused by tubercular diseases during the eight years from 1860 to 1867.

Of the local diseases, those of the urinary system furnished the highest proportion of cases, the excess being entirely due to gonorrhœa, which gave 107 out of the 122 admissions per 1000 included in this group. The number of self-inflicted deaths was thirty-four, or ·46 per 1000 of the strength, being slightly above the average of the preceding nine years; twenty-one were effected by firearms, seven by cut-throat, three by drowning, one by poison (cyanide of potassium), and one by multiple injury, the man having thrown himself off the Castle Rock at Edinburgh.

The admissions from the febrile group were 45·9, and the deaths ·49 per 1000. Eruptive fevers did not prevail at any of the military stations, although at Woolwich, Chatham, Canterbury, and Maidstone the ratio of admissions was above the average, in consequence of some cases of vaccination having been admitted. Only three deaths from eruptive fevers—all from scarlet fever—were returned; they occurred at Windsor, Pembroke Dock, and Stirling. Of continued fevers, only twelve were returned as typhus, with four deaths; forty-one cases and thirteen deaths as enteric fever; one as relapsing; five with four deaths as cerebro-spinal; 700 cases and seven deaths as simple continued fever; and 711 cases as febricula. The case of relapsing fever occurred at Pembroke Dock; two of the cases of cerebro-spinal fever occurred at Portsmouth, and one at Aldershot, Dover, and Kilkenny respectively, the last being the only one which recovered.

Syphilis caused a very high proportion of admissions among the troops in Dublin, also in the large manufacturing towns, and in London and Windsor; while the proportion was lowest at the dockyards and arsenals. The seaport towns and camps had the next lowest proportion, the comparative exemption of both groups being probably due to the operation of the Contagious Diseases Act. The proportion of cases of primary to secondary syphilis was as 3 to 1.

A short paper in the appendix, by Dr. S. Graham Balfour, F.R.S., Deputy Inspector-General and head of the Statistical Branch, "On the Operation of the Contagious Diseases Act of 1866," contains most important information. Dr. Balfour observes that it is only in primary venereal sores and gonorrhœa that the immediate operation of the Act may be expected; that its influence in reducing the amount of secondary syphilis cannot, from the nature of the disease, be deduced from the statistics of the different stations, and a considerable time must elapse before any marked effect in this respect on the army generally can be developed.

Comparing the prevalence of primary venereal ulcer and gonorrhœa at the stations under the operation of the Act, and at those to which it has not been extended, Dr. Balfour gives the following results:—

Ratio of Admissions per 1000 *of Mean Strength.*

	1867.		1868. (a)		1869.	
	Primary venereal sores.	Gonorrhœa.	Primary venereal sores.	Gonorrhœa.	Primary venereal sores.	Gonorrhœa.
Stations under the Act .	86	131	72	127	61	108
Stations not under the Act	106	127	108	127	113	99

The proportion of cases of primary venereal sores at the protected stations in 1869 is, therefore, nearly one-third less than in 1867—or, in other words, for every 100 cases of primary venereal sores in 1867, there occurred only 71 in 1869.

The benefit of the Act appears to be confined to primary venereal sores, or to that form of venereal disease which is likely to be followed by constitutional effects, while it exercises no influence in the reduction of gonorrhœa; this latter result being probably due to the difficulty of distinguishing between the gonorrhœal and other occasional discharges in the female, and the ease with which a vaginal discharge may be concealed when the women appear at the Hospital for the purpose of being examined.

We must defer further notice of this report, merely saying that in abundance and variety of information it is considerably above the average of the series to which it belongs.

NEW BOOKS, WITH SHORT CRITIQUES.

The Rapid Cure of Aneurism by Pressure; Illustrated by the Case of Mark Wilton, who was Cured of Aneurism of the Abdominal Aorta in the Year 1864. By William Murray, M.D., etc., etc., Lecturer on Physiology in the University of Durham, Consulting Physician to the Children's Hospital, Newcastle-on-Tyne. London: J. and A. Churchill. 1871. Pp. 43.

⁂ So long as the temple of Medicine stands, so long is Dr. W. Murray certain of a niche, as the man who carried out the principle of the rapid cure of aneurism by pressure under chloroform, in a conspicuous case, to a happy conclusion. This little book serves as a record of the case, and an enforcement of the principles which led the way to success. This is, not the delay or slackening of the current of blood through an aneurism so as to allow of a gradual deposition of fibrine in layers, but the use of means for producing "the complete stagnation of a mass of blood in the aneurism until it coagulates." The patient was a man aged 26, a paviour, consequently liable to severe exertion. During eleven months he had complained of severe gnawing pain and tenderness in the abdomen, for which he was blistered, leeched, etc., etc. Coming under Dr. Murray's care, he was found to have an aneurism the size of a large orange, so situated that there was just room to compress the aorta below the left free borders of the ribs and the umbilicus. In this space pressure was applied, under chloroform—the first time fruitlessly, the second time with better result; for during the last of the five hours during which it was applied the tumour lost its pulsation, and so did the aorta and every branch of it below. The patient became feverish, and passed no urine for some hours, and was numb and sore in the belly and limbs; but these symptoms slowly disappeared, and he was able to resume his ordinary occupations with the aneurism cured. In 1870 he died of another aneurism of the aorta higher up, near the cœliac axis. A post-mortem examination confirmed the diagnosis, and showed the enlarged anastomosis of the epigastric and internal mammary arteries, and of the branch of the hepatic, by which the circulation was carried on. The writer does justice to Mapother, Holden, Lawson Tait, Heath, Lawson, Russell, Banon, and others who have either practically led the way or who have followed in the wake of this kind of treatment.

(a) In this column we have extracted the figures given in the extended table in page 311, as, owing to a typographical error, those in page 310 are not quite correct.

Street's Indian and Colonial Mercantile Directory for 1871. London: G. Street, Cornhill. Pp. 617.

⁂ India, Ceylon, China, Japan, the Eastern Archipelago, Java, the Philippine Islands, the Mauritius, Australia, New Zealand, Tasmania, South Africa, Canada, British Columbia, South and Central America, West Indies, Gibraltar, Malta, and Constantinople are included in this carefully compiled directory. The customs tariffs and principal products of each country are given. Nearly 200 cities and towns are concisely described, the population, means of communication, trade returns, etc., being stated, followed by the names of the consuls, banks, merchants, and a "classified list of professions and trades." The utility of this work to manufacturers having commercial relations with the countries enumerated is sufficiently obvious. With few exceptions, our own Profession is represented at each city or town, and our *confrères* who contemplate trying their fortunes in the colonies will do well to consult this directory, and inform themselves of the extent to which the colonial field of Medicine and Surgery is already occupied.

Lectures on the Laws of Life; with special Reference to the Physical Education of Girls. By Elizabeth Blackwell, M.D. London: Sampson Low, Son, and Marston. 1871. Pp. 176.

⁂ This is a reprint of lectures originally delivered in 1852. It is, for the most part, a rational protest against the system of cramming girls with accomplishments, and neglecting their bodily development. One point in which we must cordially agree with the author is the plea for the extension of time in female education; so that, before seventeen, the greatest pains should be taken to secure good bodily strength and development, and to train the senses and moral faculties, superadding to this a course of education which should last to four- or five-and-twenty, in which such science and language and knowledge of art may be acquired as shall fit a woman for society or business, and, above all, to be the manager of a household, the mother of healthy children, and the companion of a busy and thriving husband.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, May 15.

During the past few months the female Medical students and their friends have not been idle. Frustrated in their attempts to obtain clinical instruction in the wards of the Royal Infirmary, they have been directing their attention to other smaller Hospitals with the view of turning them to account.

As the Royal Infirmary is the only one which contains the requisite number of beds, various plans have been proposed by which, independent of it, the ladies might obtain a qualifying clinical course. It has been suggested by some that two of the smaller Hospitals might combine their wards for this particular purpose; others have proposed that to one of them should be added sufficient additional beds to make its instruction qualifying; while some more haphazard individuals have recommended the ladies to seize whatever opportunities they could get of attending at such Hospitals, in the hope that the University might ultimately be prevailed upon to recognise such attendance as, under the circumstances, sufficient.

But the ladies' friends considered how to cook their hare before they caught it, and having spread their net full in sight of the game, no wonder the game got shy, and was not to be caught. Your readers are already aware that the managers of Leith Hospital recently determined not to entertain their proposals for adapting that institution to the purposes of clinical instruction. On Thursday last the directors of the Royal Hospital for Sick Children, on the unanimous recommendation of their committee, appointed to consider and report on a similar application, came to a like decision.

The committee appointed by the directors of the Royal Hospital for Sick Children must have had a difficult task in coming to the decision at which they finally arrived.

Amongst the public generally the prevalent feeling was that in it, of all Hospitals, the presence of female students could be least objected to, and that, *if* ladies were to study Medicine at all, the department of children's diseases was one of the branches of study for which they were best fitted. It may be remembered that, when the question of admission to the wards of the Royal Infirmary was discussed at the last meeting of the subscribers, the lady students were twitted with never having sought admission to the Children's and Maternity Hospitals, where, surely, were to be found the subjects of greatest interest to them.

The taunt was a just one. Everyone, except the ladies themselves, expected that—coming forward, as they professed to do, on behalf of suffering womanhood—they would have manifested a special interest in these Hospitals. It would have been politic on their part, to say the least of it, to have sought the earliest possible opportunities of obtaining clinical instruction in those branches of Medicine which they professed it to be their intention to practise, and it is telling against them now, that they are only falling back upon these Hospitals as a sort of forlorn hope. It is impossible accurately to guess what were the difficulties which occupied the committee of the Children's Hospital for several days; but a good deal may be gathered from the unanimous decision at which, contrary to general expectation, they ultimately arrived—viz., "That, as this Committee feel it impossible to decide upon the question involved in the application now before them without virtually expressing an opinion on the general question of female Medical education, which, under present circumstances, they are not prepared to do, they think it inexpedient that this Hospital should take any action in the matter, and would recommend to the Directors that they should postpone its further consideration until such time as the position of the necessary qualifying and licensing bodies with regard to it shall have become defined."

At the meeting of the directors on Thursday, the course recommended in the above resolution was almost unanimously approved of. The position which they have thus assumed is a neutral one, but it indicates a determination not to be made use of as a lever for the purpose of acting on other more responsible bodies, as well as a reluctance to take the initiative in a question which ought to be decided by the responsible authorities, and by so doing to place themselves in an attitude of antagonism to these authorities.

The University has already receded from its original position, having shown an unwillingness practically to acknowledge and bring up its newly adopted children; and it is generally believed that the school of the Royal Colleges is about to follow its example. When those powers that be thus refuse to teach those whom they have recognised as students, it would ill become an institution like the Children's Hospital to go farther.

The result of these adverse and wise decisions will be that the ladies—if they are to continue their contest here—will be obliged to fight it out on the proper field, and without the advantage of any side-thrusts from allies, unwittingly and unwillingly entrapped into an unexpected antagonism. They will have to begin where they ought to have begun long ago—at the beginning.

The first question to be settled is, Have they or have they not a legal right to be admitted to the Medical schools as "students"? If the word "students" shall be proved to include females as well as males, then they will have an unquestionable right to every class and every advantage in every Medical school. If the reverse should be decided, then legislation alone can give them any right to the advantages which they now claim. The present state of the question is a disgrace to all parties who have mixed themselves up in it—it is confusion becoming gradually worse confounded.

With regard to the ultimate issue of this female physic question, I do not agree with the writer of the letter signed "M.D." in the *Medical Times and Gazette*, May 6, in thinking that the advocates of the movement "will one day return successfully" to the charge. I daily come across old supporters of the ladies, to whom a further experience has taught a change of views, and who are now decidedly opposed to them. My own firm conviction is that the days of this struggle in Edinburgh are numbered. If anything more than another has strengthened this conviction it is the signs of desperation which are seizing the party. Within the past week three letters have appeared in the *Scotsman* from subscribers to the Royal Infirmary, in which the writers threaten to withdraw their annual subscriptions if the ladies are not admitted. Could more contemptible tactics be conceived? Can this be characterised as other than the very madness of despair? It is madness, for the opposite party might retaliate with the same threat. It is suicidal madness, because by ceasing to be subscribers they cease to be voters, and thus cut their own throats.

IRELAND.

Dublin, May 24.

Dublin Sewage Difficulties.

The sewage difficulty, which besets every community of any size at the present moment, has received at the hands of a Committee of the House of Commons a strange solution. We will just preface a few remarks on the subject by glancing at the interests mainly involved in the question; they seem to be comprehended in the following:—In years gone by, contamination of the soil and of surface wells was sought to be avoided by the water-closet system, first brought into use by Bramah. This system soon made itself, felt by the serious amount of contaminated water, and the more solid parts of excrementitious matter mixed through it, which mutually reacting one upon the other gave rise to serious and even fatal consequences, by permeating many soils, and so poisoning well-water and the soil and air, in the case not only of cities, but also of towns and hamlets. The action of the then Board of Health, about the year 1849, ended in the selection of watercourses or the sea as the outlets for these matters, which had proved so deleterious at closer quarters. Short, however, was the respite afforded by this change, for soon it was found that the very source of water-supply to millions had become offensive and poisonous. With this result of its action made patent to every nose, and showing itself in serious bills of mortality, disfavour began to be shown towards the then Board of Health. Public opinion once aroused against that institution, other plaints were entered against it, many, no doubt, being groundless. At length, however, it was abolished. Suspicion now attaches to the most recent expedient for transferring the nuisance further away from our houses, by the plan known as the intercepting main-drainage systems, coupled, in almost all cases, with some scheme or other of sewage irrigation, this latter having recommended itself in the hope that more abundant feeding would be obtained for cattle—the price of the latter having risen so enormously of late. But here again we have been doomed to disappointment; for excellent authorities now show that such use of the enemy, which should be our friend, acts so injuriously on human life that residence in the vicinity is unhealthful and even dangerous. For this reason, and because it has been found unremunerative, the public voice is raised against irrigation—so much so that the Committee of the House of Commons has arrived at the determination to grant the Corporation of Dublin power to borrow a very large sum of money to enable that body to concentrate the sewage of some 300,000 people, and discharge it by sewers (in some cases over eight miles in length) into a couple of reservoirs—one to be used for subsidence while the other is being filled. It is asserted that in this way all the solid matters will be separated from the supernatant fluid, which is to be allowed to run into the sea, only at that time of tide most favourable to its being carried out to sea. It was stated, we learn, that during sixteen hours of every twenty-four there will be no flow of sewage through the main sewers. It was also stated by the engineering evidence in favour of the Bill that the deposit in the great syphons which will be required will amount to extremely little, if any—which is doubtful. Pumping-stations will also be required to elevate the sewage, as the natural gradients of the large districts to be drained are, it appears, to be disregarded. A large extent of the surface-drainage of the watersheds of the Dodder, Swan River, and Camac are to be concentrated by large sewers to terminate in those of the city of Dublin, adding greatly to the costliness and liability to injury of the latter, whilst the people of the city are to pay for the construction of their sewers, thus increased in size and costliness. To meet the wants of their generally much wealthier neighbours living in the suburbs, they are to be taxed to the amount of eightpence in the pound, while the suburbans are to pay but fourpence. Besides the infliction of this heavy taxation, the impoverished inhabitants of the older parts of Dublin have sufficient germs of ill-health amongst them without the introduction of sewer gases disseminated through their ill-kept and narrow streets and courts from a long and complicated network of sewers.

GENERAL CORRESPONDENCE.

ISOLATION OF SMALL-POX PATIENTS.

Letter from Dr. Septimus Gibbon.

[To the Editor of the Medical Times and Gazette.]

Sir,—One of your contemporaries has, without any sufficient grounds, stigmatised me as an opponent of the above means of preventing small-pox. The facts of the case the *Lancet* reporter on small-pox alludes to are briefly these:—On the 15th inst. I was, owing to the illness of the parish Doctor, asked by the relieving officer to enforce the removal of a pauper to the Small-pox Hospital at Hampstead. On examination, the child, aged 4½ years, proved to be in the tenth day of confluent and unprotected small-pox; secondary fever had set in, and it appeared to be much too ill to be moved. It was lodged in two rooms, on the second floor, in one of our most open and healthy courts—viz., Birkbeck-place, Lamb's Conduit-street, and was well tended by its mother and aunt. The rest of the family, consisting of the husband and three children, were well accommodated in the basement of the same house; so that, in my opinion, it could scarcely be said that, in the terms of the Sanitary Act, this child was "without proper lodging or accommodation, or lodged in a room occupied by more than one family."

The sufficiency or insufficiency of this latter condition must, of course, be decided by the magistrate on evidence. I regret, therefore, that in this instance he granted an order for removal on an *ex parte* statement, and without the parents having had an opportunity of being heard. It would have been of interest to Medical Officers of Health to have heard what degree of isolation would have satisfied the intentions of the Legislature.

In cases of scarlet fever, I have had experience that effectual isolation can be secured in one room of a house containing several unprotected children, by the use of disinfectants—viz., carbolic acid—where, as in this case, you can have a person to attend upon the patient, and the patient only.

I am a staunch advocate of isolation as a preventive of all infectious diseases, and very much regret to think that its efficacy during this epidemic has been questioned, owing to the fact that many patients have been discharged from our large pauper Hospitals before they were free from infection, and without being submitted to a process of thorough disinfection.

I am, &c., Septimus Gibbon,
Medical Officer of Health for Holborn District.

INJECTION OF AMMONIA INTO THE VEINS.

Letter from Dr. James Edward Neild.

[To the Editor of the Medical Times and Gazette.]

Sir,—I enclose you the newspaper account of a case of poisoning by chloroform, in which the immediate effects of this agent were counteracted by injection into the veins of liq. ammoniæ. The history of the case is briefly as follows:—

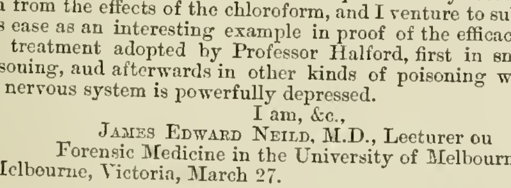
A young man, aged 28, who had been drinking hard for more than a month, swallowed, at half-past four in the afternoon, a fluid ounce of chloroform. A few minutes afterwards he was made to take an emetic of salt and water, which caused him to vomit some of the poison. In about a quarter of an hour he was comatose. Mr. Gillbee saw him between five and six o'clock, and used the stomach-pump, and adopted some other routine measures for resuscitation. About seven I saw him in consultation, and suggested the injection of the ammonia. The man's condition at that time was extremely critical. He was unconscious, and perfectly insensible to any kind of stimulation; the breathing was laboured and stertorous, and, as the air-tubes were manifestly full of thick mucus, he seemed every moment in danger of suffocation. The pulse was fluttering, and exceedingly small; the pupils were dilated; the extremities cold. Half a drachm of the liq. ammoniæ (British Pharmacopœia) was injected into the median cephalic vein of the left arm. The pulse immediately improved in volume, and became regular; the pupils at the same time contracted, and the breathing was less laboured. In about twenty minutes we repeated the injection in the same vein, and with a like improvement as to symptoms. At the expiry of twenty minutes more we injected the same quantity of ammonia into the median cephalic vein of the right arm. The pulse was thereupon singularly improved, and the respiration correspondingly so. At each expiration he ejected a quantity of thick, frothy mucus, slightly tinged with blood. We then left him for about three-quarters of an hour. When we returned, the breathing had greatly improved, and the air-tubes were evidently free from the mucous obstruction. As the pulse, however, was still feeble, we injected a fourth quantity of liq. ammoniæ, with the same indications of benefit. In twenty-five minutes from this last injection, slight sensibility was found to have returned. The pulse was then 140; small, but quite regular. The pupils had contracted. About a quarter to eleven, on my titillating the nostrils, he slightly raised his arm, and from that time he progressed to complete consciousness. In the course of administering the ammonia the body had steadily become warmer, and was now all over warm, and over the præcordia perspiring. The next day he complained of weariness and of dryness of the fauces, but he walked about in his room, and did not appear greatly different from a man suffering recovery from drink under ordinary circumstances. This was on the Friday. During the night he rested moderately, but on Saturday morning, about six, he had slight delirium, and at seven he had an attack of syncope, and suddenly died. The autopsy revealed extreme congestion of the brain, enlargement and structural degeneration of the liver, complete consolidation and compression of the left lung, and a thin-walled heart. These conditions, coupled with the fact that the tissues were completely saturated with alcohol—the brain strongly smelling of it—were sufficient to predispose to fatal syncope. I cannot but think, therefore, that if this man had been otherwise healthy, the ammonia would have permanently recovered him from the effects of the chloroform, and I venture to submit this case as an interesting example in proof of the efficacy of the treatment adopted by Professor Halford, first in snake-poisoning, and afterwards in other kinds of poisoning where the nervous system is powerfully depressed.

I am, &c.,
James Edward Neild, M.D., Lecturer on Forensic Medicine in the University of Melbourne.
Melbourne, Victoria, March 27.

THE ORIGIN OF THE GUINEA-WORM.

The following is an extract from a private letter sent home by Dr. Clarence Cooper, of the 5th Madras Native Infantry; it is dated Secunderabad, April 4. Dr. Cooper writes:—

"I have lately been busy in trying to find out which animal, out of a great number, it is which becomes converted into guinea-worm. A great many of the men in the 5th suffer from it, but almost nine out of every ten belong to either No. 7 or No. 8 Company, who draw their water from a particular well. Under the microscope I found it alive with animalculæ, and I have an idea that I have hit upon the one that grows into the worm when it has found its way into the body, probably in the form of an ovum, through the pores of the skin. My animal, under various forms, looks like this—



and cuts about very actively, apparently by contracting rugæ on his abdomen, like a snake, or rather like some molluscs. The spike or spikes in front of 3, 4, and 5 seem to be retractile, and are, I fancy, intended to assist the animal in piercing the fibrous tissue. Many have a reddish spot; I fancy it is the heart, and the tail part of all is full of granules or ovules.

"Perhaps all this will end in nothing beyond what I have already had done, which was to have the well completely emptied out, and all the mud also removed from the bottom. Since this has been done I have not been able to find any more animals, and the result may be beneficial, but as the animals can lie dormant in the system for about a year, no great change can be expected at once."

THE RECENT SERIOUS CHARGE AT THE LAMBETH POLICE-COURT.—AN EXPLANATION.

Letter from Dr. Stephen Duke.

[To the Editor of the Medical Times and Gazette.]

Sir,—Having seen a report, in last Saturday's *Telegraph*, of certain proceedings at Lambeth Police-court with reference to a serious charge preferred against two persons for attempting to procure medicine with intent to cause abortion, in which the mention of the name of "Dr. Duke," without an address, has caused me considerable annoyance, I think it right to say that I am the only Dr. Duke practising in the suburbs of London, and I am in no way connected in business with my first-cousin, Mr. Benjamin Duke, who figures so conspicuously in the case. I am, &c., Stephen Duke, M.D.

1, Langton-place, Vassall-road, Brixton, May 24.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, May 12, 1871.

Dr. W. W. Gull, President, in the Chair.

Mr. Warrington Haward exhibited a patient on whom M. Reverdin's operation of Skin-grafting was first performed by Mr. Pollock at St. George's Hospital. The sore operated upon was caused by a severe burn, was originally about fourteen inches by five inches, and was situated on the right buttock and outer aspect of right thigh. The case has been under treatment for a very long time, but has made a good recovery, and the extension of the leg is almost perfect.

Mr. George Lawson said that when sores such as ulcers of the leg healed in this way break out again on the patient beginning to walk about, those portions of skin grafted on did not give way.

Mr. Cooper Forster said his first case failed because the woman would persistently pick off the pieces of skin as they grew. As to getting skin, that might be done from amputated limbs immediately after removal. This answered (as he had tested) perfectly well.

Mr. Callender was glad to see this result in Mr. Pollock's case. He had seldom seen a more unpromising case when the experiment was tried. He had noticed in several cases that spots of grafting in the centre of a large sore did no good; when planted near the margin, they speedily extended, and formed bridges of skin to the textures at the side. He had one now being treated by this process.

Mr. T. Smith said that it had been found in Bristol that the skin of an amputated part did quite well. This had been severely tried at St. Bartholomew's in one case. The skin removed from an amputated limb was carried about for two hours before application to the ulcer, but was kept warmly wrapped up in lint. The case did well.

The President thought it might be of some importance under such circumstances to ascertain fairly the nature of the individual's constitution who had supplied the skin, as disease might be introduced by it.

Assurance was given that in all cases due care of this had been taken.

Mr. Cooper Forster read notes of a case of Naso-pharyngeal Polypus. The subject was 19 years of age, and had a large growth filling up the left nostril, which appeared firm, fleshy, and fibrous, and covered with mucous membrane. The right nostril was not much interfered with; no swelling of the face or fulness of the palate, or any projection in the throat. Chloroform was given, and a wire snare put round the growth, which broke off, and bled profusely. Mr. Forster then made a further examination, and, having passed his finger up the nostril, found an enormous growth, which could not be circumscribed, but large portions of which he tore away with forceps. Four days after the operation the patient suddenly became unconscious; the right half of his face was numb, and, though he rallied, he was never able to speak except to say "Too-too." The temperature rose to 102° Fahr. He had three convulsive fits on the seventh day, and became totally unconscious, and died twelve days after the operation. The post-mortem examination showed general arachnitis, and sloughing of the brain about Broca's convolution. That portion of the growth which had not been removed occupied the left side of the external base of the skull, and filled the space between the greater and lesser wings of the sphenoid, the orbital plate of the frontal, and the cribriform plate of the ethmoid. It had extended from the nasal fossa by way of the sphenoidal fissure into the back of the orbit, but without damaging the optic nerve. The cribriform plate of the ethmoid was broken, and at the back part there was a small opening about a quarter of an inch in diameter, and a fracture extending forwards from the opening. Microscopic examination showed the growth to consist of small fusiform cells and stellate connective tissue. Mr. Forster, in alluding to the advisability of bringing forward for discussion unsuccessful as well as successful cases, remarked that though it might possibly have been advisable not to have proceeded further in the operation when the true character of the growth was apparent, yet, under any circumstances, the life of the patient could not possibly have been much prolonged. He submitted to the Society four reasons as to the brain complication:—1. As to the idea offered that the forceps might have broken the bone of the skull in the act of operating, Mr. Forster said the instrument used was a pair of strong bone forceps, the length of which by measurement precluded any possibility of this accident. 2. The growth might have been adherent to the portion of bone broken and at the seat of the small opening, and this was the most probable explanation. 3. The growth might have already destroyed the bone and reached the membranes, so that the brain was exposed in the course of the operation. 4. The mischief might by contiguity have extended from the periosteum to the membranes. Mr. Forster also called attention to the inutility of treatment generally when the brain became involved.

Dr. Anstie asked the President if he had any belief in the utility of mercury in cerebral inflammation of a non-syphilitic character.

The President considered the case of great interest Medically. The tumour was akin to a malignant structure. Had the operator known this, and that it was attached to the dura mater, he probably would not have operated. He asked why this boy should have had twenty grains of calomel, were it not for fashion.

Mr. George Lawson had seen several cases where brain-matter was removed along with polypi, owing to thinning of the cranial bones.

Mr. Thomas Smith asked if they ever removed polypi in any other fashion at Guy's. At Bartholomew's they taught that cutting was better than pulling, and that the cavity of the nose should be laid open to enable the knife to be used.

Mr. Spencer Watson thought the rhinoscope would have been of use. From the history, he thought there must have been some protrusion of the eyeball.

Mr. Callender asked the condition of the brain itself.

Mr. Arnott had seen mistakes made in diagnosis of nasal polypi. In one case there was a large projecting tumour, which was very soft. It was not, however, mucous, but spindle-celled sarcoma, with myeloid cells. In another somewhat similar case the structure was medullary. From the presence of certain elements he predicted its return. It did so, and death followed the next operation.

Dr. Silver pointed out that one conclusion drawn by Mr. Cooper Forster was quite contrary to that which the facts seemed to imply. Mr. Forster thought the case favoured the notion of the localisation of speech in Broca's convolution. Now it was stated that the individual had been aphasic for a time, but that the day before his death his speech had been quite intelligible. After death, the left posterior frontal convolution was found perfectly softened. Were, then, that the site of speech, how account for his speech being intelligible the day before his death, when the softening must have existed?

Mr. Cooper Forster, in reply, stated that he was not responsible for every portion of the report, part of which had been communicated to him by Dr. Corner. The whole case turned on the diagnosis. The polypus seemed an ordinary fibrous one; he would have left it alone had he known it was semi-malignant. He did not like the knife in these cases. The rhinoscope had not been used. The calomel was probably given as a convenient purgative.

Dr. Buzzard read notes of a case of Cervico-brachial-Neuralgia, treated with the constant current. The patient, a woman aged 65, had suffered for three months from paroxysms of agonising pain in the neck and right arm, which attacked her several times every hour, night and day, deprived her of rest, and rendered her arm useless. The neuralgia had followed seizures which sufficiently indicated its central origin, and this, coupled with the age of the patient and the degeneration of her tissues, rendered its cure in the highest degree improbable. Applications of a sedative character had been useless in relieving her suffering. A constant current derived from ten cells (increased afterwards to fifteen cells) of a Weiss's battery was applied from time to time between the cervical vertebræ and the hand, with the effect of producing remarkable relief to her pain, insomuch that, at one time, she thought herself cured. Under the influence of this treatment the patient was enabled to sew, and to cut her food with the right hand, which had previously been so helpless that she was forced to lift it with the other. With the view of testing the effects of the application, it had been intermitted on several occasions, and other remedies, as blisters, sedatives, and tonics, had been employed, but these failed in preventing the paroxysms of pain. Summing up the results of treatment, Dr. Buzzard said that, out of sixteen applications of the constant current, ten had been followed by very great and well-marked relief, two by moderate relief, and four by very slight relief. Dr. Buzzard brought the case forward, not as one of cure of neuralgia, but as a good example of the effects of the constant current in relieving pain; and he drew attention to the process because he believed it was as yet very little employed for this purpose in this country, although, as was well known, its efficacy had been perfectly recognised and insisted upon abroad for many years past.

Dr. Anstie offered, as a pendant to Dr. Buzzard's case, two examples of the treatment of neuralgia with the constant current, one successful, the other unsuccessful. The first case was that of a married woman, aged 48, born of a neurotic family, and herself the subject of migraine in youth, in whom the change of life had passed over quietly some years before. She was attacked with severe and well-defined right neuralgia in the cervico-brachialis. Treatment with every kind of internal remedy and internal application was tried for two months, with none but the most trifling and temporary amelioration. She then tried country air, without medicine, for one month, but returned to town worse than ever. The constant current from ten (afterwards increased to fifteen) cells of Weiss's battery was applied daily for twenty-four days; the positive pole being applied, alternately, on the various foci of pain, the negative pole being applied by the right side of the three lower cervical vertebræ. The pain was at once diminished, and ceased altogether at the end of thirteen days; and a secondary anæsthesia of the skin, with secondary paralysis of the deltoid, and trapezius were removed at the end of the twenty-four days' treatment. The cure was found persistent six weeks later. The other case was that of a hard-worked and ill-fed unmarried needlewoman, aged 30, who suffered from double cervico-occipital neuralgia. A variety of internal remedies, and also blistering, having failed to produce any benefit, the daily use of the constant current was tried for sixteen days. No good was effected by the treatment. Dr. Anstie remarked that the effect of the constant current in neuralgia was very remarkable, but that there were, as yet, some unexplained anomalies in its action. In the large majority of cases it acted as a palliative most strikingly. In a not inconsiderable number of cases it appeared to cure the disease absolutely. But in a few examples, like the second case he had read, without any discoverable reason it failed to produce any good results. As a general rule it was far less effective in the neuralgias of old persons, with degenerated tissues, than in younger subjects. But occasionally even a young subject, like his second patient, quite failed to derive benefit from it.

Dr. Duffin confirmed the statements as to the use of electricity in neuralgia, even when that turned out ultimately to depend on organic causes. He had recently seen the termination of a case of this kind—viz., neuralgia of the trigeminus. Everything had been tried, and at first the constant current had seemed to do harm, but afterwards to do good, and the neuralgia gradually faded. The patient was well for three months after this, but fell back again, and was again relieved, but next time it failed. Now she showed signs of a central lesion.

Dr. Althaus said some cases of neuralgia were central, some peripheral. If central, it was best to apply one pole to the sympathetic and one to the head. In other forms of neuralgia, peripheral applications were best. The direction of the current was important, as the good seemed to be done by the positive pole alone. The negative sometimes did harm, and should therefore be removed as far as possible from the site of the pain—viz., to the opposite side. Epileptiform tic was thus benefited. If this failed, galvano-puncture might be tried. There was no use in trying any plan too long.

The President thought there had been a want of precision in discussing this subject. Certain forms of neuralgia were strictly personal, depending on no organic change. Such forms were cured by metallic tractors as readily as by electricity. He had tried to investigate the subject for twenty years, and could come to no definite conclusion. It struck him that the constant current does most good because it does the least harm. He would ask the Society to have some more exact discussion on some future occasion. He did not think that the present one was of any clinical value.

Dr. Greenhow proposed a committee on the subject, and Mr. Kesteven seconded the motion, which was not, however, acceded to.

Dr. Anstie had thought unbelief in the powers of electricity was fading away. He had been convinced by the most striking proofs, and referred as a final test to Niemeyer's celebrated case.

OBITUARY.

DR. PHELAN, LATE POOR-LAW INSPECTOR.

(*From the Dublin Freeman's Journal, May* 22.)

On Saturday, at noon, there passed away from our midst a truly, a thoroughly good man—may we not say a great man, if to have worked for a long life with unparalleled success for the benefit of the poor of Ireland gives a right to the name. He was an Irish Howard, devoting himself incessantly, not to poor prisoners merely, but to the whole mass of our countless destitute. In early life a nameless, unknown Practitioner in a small provincial town, Dr. Phelan, feeling acutely the deficiencies of the dispensaries of that day, took upon himself, with a generous and noble courage, the arduous task of making at his own cost and peril a general inspection of the dispensaries in every province and every county in Ireland. The result of this tour was that remarkable work, "The Medical Charities of Ireland," in which one is at a loss which most to admire, its extreme painstaking accuracy, or its honest, bold, uncompromising truthfulness. It is mainly owing to this book, and to Dr. Phelan's subsequent and unremitting labours in the same field, that our Irish dispensary system has attained its present high repute, far above that of either of our more favoured sisters, Scotland or England. To Dr. Phelan the country is further mainly indebted for that most valuable boon, the workhouse fever hospital, which supplied a crying want, and gives most opportune relief to thousands, not of the extreme destitute only, but of the whole humbler classes in the rural districts, whose only resource in fever cases had been the far-off county infirmary. Upon our lying-in Hospitals, too, he has left his mark—the benevolent mark of the kindly reformer—and recent strictures of his on that matter will probably have the effect of saving many valuable lives. As a Poor-law official it would be hard to appreciate duly, impossible to commend too highly, Dr. Phelan's untiring industry, his minute carefulness, his zealous and anxious devotion to duty. As an Irishman, he was a genuine patriot, an ardent lover of his country, and always took, as long as the field was open to him, an active and influential part in the performance of every civic duty. And, as usually happens to thoughtful, far-seeing men, he was long before his time, and some forty years ago he proclaimed, almost prophetically, that sound political doctrine which is now in the ascendant, that the true course for Ireland is to demand a federal reconstruction of her union with England. And so, in the fulness of time, he had completed his 86th year; going to meet the great reward of a well spent-life, he passed on painlessly to the spiritual world, it being exactly true that he gently and almost imperceptibly "fell asleep in the Lord" —*obdormivit in Domino.*

FREDERICK WILLIAM RICHARDS, M.B., F.R.C.S., OF WINCHESTER,

Died on February 23. Those who entered St. Bartholomew's in 1861 will well remember Richards, the highest and best man of his year. Educated at Merchant Taylor's School, and subsequently a pupil of Dr. Butler, of Winchester, and having already passed the Matriculation and Preliminary Scientific Examinations at the University of London, taking at the former honours in mathematics, chemistry, and botany, he came well prepared to the Hospital. Clear-headed, observant, and diligent, working to good purpose, with polished manner, with fluent speech, and ready wit, he became well-known. In his first year he obtained the first prize for general proficiency and the first for practical anatomy, and in the next the first scholarship in anatomy, physiology, and chemistry, passing the first M.B. examination, with honours in physiology and Materia Medica.

Having qualified at College and Hall, he held the post of Obstetric Assistant, and subsequently obtained the licence of the College of Physicians—graduating M.B. in 1865. In the following year he entered into partnership at Winchester with his old master, Dr. Butler, and if ever a successful Professional career might have been anticipated from intrinsic worth, and qualifications both natural and acquired, such was to be expected would be that of Dr. Richards. But his earthly career was to be short, and at the age of 29 he has passed to his rest.

Dr. Richards became a Fellow of the Royal College of Surgeons by examination in 1867, and was Assistant-Physician to the Hants County Hospital. He has left a widow and two children.

MEDICAL NEWS.

Royal College of Surgeons.—The following Members of the College, having undergone the necessary examinations on the 22nd inst. in Anatomy and Physiology for the Fellowship of the College, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, viz.:—

Bloxham, John Astley, St. Bartholomew's Hospital, Diploma of Membership dated November 15, 1864.
Churchill, Frederick, Edinburgh and St. Thomas's Hospitals.
Elliott, Arthur Bowes, Guy's Hospital, April 25, 1867.
Freeman, Delamark, St. Thomas's Hospital, April 20, 1860.
Hardwicke, Junius, of the Dublin School, June 3, 1844.
Kisch, Albert, of the London and St. Thomas's Hospitals, November 15, 1865.
Roberts, Charles, St. George's Hospital, April 18, 1859.
Solly, Samuel Edwin, St. Thomas's Hospital, May 8, 1867.
Square, William, St. Bartholomew's Hospital, April 24, 1866.
Thomas, William Robert, Dublin School, May 20, 1863.
Welch, Francis Henry, London Hospital, May 8, 1860.

The following gentlemen passed on the 23rd inst., viz.:—

Ashby, Alfred, of Guy's Hospital, July 21, 1869.
Goodsall, David Henry, of St. Bartholomew's Hospital, May 19, 1868.
Law, William Thomas, of Guy's Hospital, May 16, 1871.
Percival, George Henry, Guy's Hospital, May 2, 1871.
Tait, Robert Lawson, Edinburgh and Birmingham Hospitals, January 27, 1870.

The following gentlemen, who are not Members of the College, also passed their Primary Examination for the Fellowship, viz.:—

Baber, Edward Creswell, of St. George's Hospital.
Beaufort, Henry Seymour, of Guy's Hospital.
Cartwright, Henry Gordon, of Guy's Hospital.
Eastes, Thomas, of Guy's Hospital.
Garton, William, of the Liverpool and St. Thomas's Hospitals.
Hartridge, Gustavus, of King's College.
Lewtas, John, of the Liverpool School.
Sergeant, Edward, of St. Thomas's Hospital.
Smith, George Francis Kirby, of Guy's Hospital.
Sobey, Arthur Lyne, of St. Bartholomew's Hospital.
Wall, William Barrow, of University College.

The following gentlemen passed on the 24th inst., viz.:—

Adams, John, of St. Bartholomew's Hospital.
Appleyard, John, of University College.
Boon, Alfred Pearl, of St. Mary's Hospital.
Elliott, Norman Bruce, of Guy's Hospital.
Gould, Alfred Pearce, of University College.
Hacon, Walter Edward, of Guy's Hospital.
Jepson, Edward, of St. Bartholomew's Hospital.
Keetley, Charles Robert Bell, of the Hull and St. Bartholomew's Hospitals.
Morley, John Lacey, of Guy's Hospital.
Ransford, Thomas Davis, of Guy's Hospital.
Schäfer, Edward Albert, of University College.
Sturge, William Allen, of the Bristol School.
Taylor, John William, of Charing-cross Hospital.
Wanklyn, Arthur, of the Cambridge, Westminster, and University College Hospitals.

The following Members of the College having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 24th inst.:—

Giles, Peter Broome, Staunton-on-Wye, diploma of Membership dated May 2, 1871, of University College.
Lycett, John Allan, L.S.A., Scarborough, April 19, 1871, of the Middlesex Hospital.
Stickland, Samuel, Hawkhurst, Kent, July 26, 1870, of Guy's Hospital.
Pires, Joseph Octaviano, L.R.C.P. Ed., Bombay, January 25, 1871, of St. Mary's Hospital.

Two candidates having failed to acquit themselves to the satisfaction of the Board were referred to their obstetrical studies for the usual period.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 18, 1871:—

Beech, Lionel, Royal Infirmary, Margate.
Clarke, Frederick Howard, Devonport.

Forshaw, Thurston, Heanor, Derbyshire.
Jackson, Thomas William, Leyland, Lancashire.
Moody, Henry, Erith, Kent.
Powell, Lionel Lewis, Melton Mowbray.
Younger, Edward George, Blackheath-hill.

The following gentlemen also on the same day passed their first Professional examination :—

Archer, Edward Lewis, St. Bartholomew's Hospital.
Price, Hugh Pugh Jones, Manchester Royal School of Medicine.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Gowan, Mr., M.R.C.S. Edin.—Assistant Medical Officer to the County and City of Worcester Pauper Lunatic Asylum.

Jolly, Robert, M.D., F.R.C.S.E., Surgeon to the General Hospital, Birmingham—Joint Demonstrator of Anatomy at Queen's College, Birmingham.

Sells, C. J., L.R.C.P. Lond., M.R.C.S. Eng., and L.S.A.—Assistant Honorary Medical Officer to the Royal Surrey County Hospital.

Thompson, George, L.R.C.P. Lond., Senior Assistant Medical Officer, and formerly Resident Clinical Clerk at the West Riding Asylum, Wakefield. —Medical Superintendent of the City Asylum, Stapleton, Bristol, *vice* Dr. Stephens resigned.

BIRTHS.

Bond.—On May 17, the wife of T. Bond, F.R.C.S., of Parliament-street, of a daughter.

Felce.—On May 23, at 12. Chippenham-road, St. Peter's-park, W., the wife of Stamford Felce, M.R.C.P. Edin., of a daughter.

Gray.—On May 19, at 45, St. Giles, Oxford, the wife of Edward B. Gray, M.D., of a daughter.

Ireland.—On May 23, at The Limes, Linton, Cambs, the wife of Edward Ireland, Surgeon, of a son.

Paul.—On May 19, at Bedford, the wife of Surgeon-Major Paul, M.D., Surgeon to the General Hospital, Madras, of a son.

MARRIAGES.

Bestall—Askins.—On May 15, at St. Mary's Church, Donnybrook, Robt. Bestall, M.D., son of the late William Law Bestall, Esq., Templelyon House, county Wicklow, to Mary Eleanor, youngest daughter of the late William Askins, Esq., of Sandymount, county Dublin.

Harvey—Garstin.—On May 16, at the British Consulate, and afterwards at the Episcopal Church, Boulogne-sur-mer, John Stevenson Selwyn Harvey, M.D., M.R.C.S. Eng., to Ellen Louisa Mary, eldest daughter of the late Lieutenant-Colonel H. M. Garstin, Assistant Adjutant-General Peshawur Division, Bengal.

Kirkwood—Pottinger.—On May 19, at Toomna Church, Thomas Moore Kirkwood, Army Medical Staff, to Anna Bella, only daughter of Major-General Pottinger, C.B., of Mount Pottinger, county Leitrim.

Mackey—Fry.—On May 17, at St. Chad's Cathedral, Birmingham, Edward Mackey, M.B., of Birmingham, to Blanch, eldest daughter of Henry A. Fry, Esq., of Edgbaston.

Ogle—Robertson.—On May 17, at the Independent Chapel, New Mills, Derbyshire, the Rev. Joseph Ogle, to Jessie, youngest daughter of John Robertson, Surgeon, Manchester.

Osborn—Knocker.—On May 13, at Christ Church, Dover, Ashby G. Osborn, M.R.C.S. Eng., to Mary Jenny, second daughter of the late Captain J. B. Knocker, R.N.

DEATHS.

Buckell, Hannah, the beloved wife of Leonard Buckell, M.D., in the Pallant, Chichester, on May 18, aged 48.

Chadwick, Adam, M.D., at his residence, Heathfield, Greenheys, Manchester, on May 11, in the 68th year of his age.

Dale, Ellen, the beloved wife of Edmund Dale, of 9, Gloucester-road, Regent's-park, on May 22, in her 62nd year.

Gray, Mary Kellow, relict of the late Robert Gray, M.R.C.S., at 168, Brompton-road, S.W., on May 20.

Hunter, Elizabeth Georgina, the beloved wife of Dr. John Gilland Hunter, at Stobb House, Durham, on May 20, aged 22.

Rawson, Elizabeth Josephine, second daughter of Thomas James Rawson, M.D., at Barrowville, Carlow, Ireland, on May 17, aged 26.

Smith, Dr. Charles Irving, late Inspector-General of Hospitals, Madras Army, at Montague House, Bath, on May 21, aged 62.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Charing-cross Hospital, West Strand, W.C.—Registrar; must be legally qualified to practise, and be registered. Applications and testimonials to the Secretary, on or before May 31.

Chorlton-upon-Medlock Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications, and be registered. Applications and testimonials to Adam Fox, Esq., Hon. Sec., 54, Ann-street, Manchester, on or before May 27.

Cumberland Infirmary.—House Surgeon; must be legally qualified. Applications and testimonials to Mr. John Laver, Secretary, Carlisle, on or before May 27. Election on June 7.

Dental Hospital of London, 32, Soho-square.—Assistant Dental-Surgeon; must be L.D.S.R.C.S. Eng. Applications and testimonials to the Honorary Secretary on or before June 9.

Dundee Royal Infirmary.—House-Surgeon; must be qualified to practise. Applications and testimonials to the Secretary, Mr. D. Gordon Stewart, 18, Meadowside, Dundee, on or before May 31.

East Riding Lunatic Asylum.—Medical Superintendent; must be duly qualified and registered. Applications and testimonials, together with a copy of the last Report of the Commissioners in Lunacy as to the state of the Asylum with which the applicant is now connected, to Mr. F. Hobson, Beverley, Yorkshire, on or before June 1.

Leeds Public Dispensary.—Resident Medical Officer; must be duly qualified. Applications and testimonials to Mr. John Horsfall, 31, Albion-street, on or before June 14.

Leicester Infirmary and Fever House.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to Mr. T. A. Weekes, Secretary, on or before June 5. Election on June 13.

London School of Dental Surgery, 32, Soho-square.—Lecturer on Mechanical Dentistry; must be L.D.S.R.C.S. Eng. Applications and testimonials to the Honorary Secretary on or before June 15.

Lunesdale Union.—Medical Officers wanted for five districts of this Union. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Further information may be obtained of Mr. John Hoggarth, Clerk, 87, Church-street, Lancaster, to whom applications and testimonials are to be sent on or before May 29.

Lutterworth Union.—Medical Officer and Public Vaccinator for the district comprising the parishes of Arnesby, Bruntingthorpe, Kimcote, etc. Candidates must have a certificate of proficiency in Vaccination, and possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. James Driver, Clerk, on or before June 7. Election on the 8th.

Macclesfield Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before June 10. Election on the 15th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

Queen's Hospital, Birmingham.—Resident Physician and Medical Tutor; must be a Graduate in Medicine of a University of Great Britain or Ireland. Applications and testimonials, under cover, to the Secretary, on or before May 27.

Royal General Dispensary, 25, Bartholomew-close, E.C.—Resident Medical Officer; must be duly qualified and registered. Candidates to attend at the meeting of the Medical Sub-committee on May 30, at 2 o'clock p.m. Further particulars can be obtained of the Secretary, Mr. E. P. Rowsell, 60, Gracechurch-street, E.C.

St. Bartholomew's Hospital.—Lecturer on Mental Diseases. Applications and testimonials to Mr. H. Cross, at the Hospital, on or before June 9. Any further information may be obtained of Mr. Morrant Baker, Hon. Sec. of the Medical School.

Salford and Pendleton Royal Hospital and Dispensary.—House-Surgeon; must be legally qualified. Applications and testimonials to the Secretary, on or before May 27.

Salop Infirmary, Shrewsbury.—Resident House-Surgeon; must be a Member of the College of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Board of Directors, on or before June 9.

Samaritan Free Hospital for Women and Children, Lower Seymour-street, Portman-square.—Physician for out-patients; must be M.D., not practising pharmacy. Applications and testimonials to the Secretary, on or before June 3.

Victoria Hospital for Children, Gough House, Queen's-road, Chelsea.—House-Surgeon. Applications and testimonials to the Secretary on or before May 29.

POOR-LAW MEDICAL SERVICE.

APPOINTMENTS.

Bingham Union.—Alfred C. Taylor, M.R.C.S. Eng., M.B., M.C. Aber., to the West District.

Coventry City.—Henry G. Shorter, M.R.C.S. Eng., L.S.A., to the Second District.

Kingston Union.—Wm. Story, L. K. and Q. Coll. Phys. Ire., F.R.C.S. Eng., to the New Hampton District.

Pontefract Union.—Alexander Buncle, M.B., M.C. Univ. Edin., to the Sixth District.

Presteigne Union.—Wm. Hanson, L.R.C.P. Edin., L.R.C.S. Edin., for the Union.

Thingoe Union.—Jno. Joseph Ellis, L.R.C.S. Edin., to the Eighth District.

Fellowship of the College of Surgeons.—Those Members of the College who have undergone the examination for this honourable distinction will be glad to learn that the high standard formerly required is again revived, as will be seen from the following questions on anatomy and physiology submitted to the candidates on the 19th inst., on which occasion 68 candidates offered themselves — viz., 12 seniors, whose diplomas of Membership ranged from June, 1844, to May, 1863; 15 juniors, from November, 1864, to May, 1871; 15 candidates who had passed the primary examination for the diploma of Membership; and 6 who had not passed any Professional examination. Of the 20 examined on the first day, there were 9 rejections; on the second day, out of 24 examined there were 8 failures; and on the last day, out of 24 there were 10, making a total of 27 out of the 68 candidates. It will be seen that there were only four questions instead of six as heretofore; but then *all* were required to be answered, instead of four out of the former number :—1. What parts are in immediate relation with (1) the obturator internus, and (2) the obturator externus muscles? 2. Describe the development of the human brain from its first appearance in the embryo up to the full period of intra-uterine gestation, and compare its several stages with the adult brain in the classes of vertebra. 3. Give the dissection required, and mention in the order in which they appear the parts that must be removed to expose the otic ganglion; describe its relations and the nerves connected with it. 4. Describe the structure of a "Malpighian body," of the spleen, and state the evidence from which it is concluded that the spleen is concerned in the elaboration of the blood. The following were the questions on Surgery and pathology submitted to the candidates on Thursday, the 25th inst., when eighteen offered themselves for the final ordeal:—1. Describe the diseases which cause undue prominence or protuberance of the globe of the eye; their diagnosis, treatment, and prognosis. 2. Mention the symptoms of loose cartilage in the knee-joint, and the treatment which should be pursued for their relief. Describe the operation which might be performed for the removal of a loose cartilage, and the circumstances which would warrant such an operation or render it unadvisable. 3. Describe the nature, seat, and diagnosis of the diseases which may render the operation of colotomy expedient; mention the steps of the operation, the after-treatment, and probable prognosis. 4. Describe the different modes in which union of fractured bones is accomplished; state the conditions, constitutional or local, under which union may be impeded or prevented.

ROYAL COLLEGE OF SURGEONS.—The following is an abstract of the unconfirmed proceedings of the last meeting of the Council:—On the report of a committee, Mr. Charles Norris Wilde, of College-hill, was appointed solicitor to the College, and it was resolved to invite Sir Roundell Palmer, Q.C., to accept the office of standing Counsel to the College, whereupon an opinion, dated August last year, from Sir John Karslake and Mr. Bevir was read, to the effect that the right of election of a representative of the College to the General Medical Council was vested in the Council. The annual meeting of the Fellows for the election of Members of the Council was directed to be summoned for Thursday, July 6 next, and that the usual notices to that effect be sent to the Fellows. Mr. Hawkins gave notice of the following motion at the next meeting of the Council—viz., "That all legal opinions taken by the authority of the President or Council be laid before the Council."

DR. PAVY, F.R.S., has been elected Physician to Guy's Hospital, and Dr. Pye-Smith Assistant-Physician.

DR. DONALD MACIVER, Assistant-Surgeon R.N., has been appointed to the staff at Haslar Hospital.

THE Governors of St. Bartholomew's Hospital are about to appoint a Lecturer on Mental Diseases. Applications must be sent in before June 9.

DR. CLARKE has resigned the post of Medical Officer at Homerton Workhouse.

THE Medical Officer of the Privy Council recently wrote to the Council of the Pharmaceutical Society, intimating that, unless the Society adopted proper regulations for the storage and keeping of poisons, the Privy Council would take the matter in hand at once, in order to give effect to the provisions of the Pharmacy Act.

THE fifth annual meeting of the United Hospital Athletic Club will take place at the Lillie-bridge Ground, West Brompton, on Thursday, June 1. The sports will commence at 12. The band of the Grenadier Guards will attend.

THE LADY MEDICAL STUDENTS AND CHALMERS HOSPITAL.—Yesterday, at a meeting of the directors of Chalmers Hospital, the request of the Committee for Promoting the Medical Education of Women, for the admission of lady students to the wards of the Hospital, was refused.—*Scotsman*, Thursday, May 18.

A GOOD EXAMPLE.—The Committee of Management of the Great Northern Hospital received last week £131 11s. 7d. in aid of the funds of that institution, being the net amount realised by an amateur dramatic performance, originated and carried out a few weeks since at the Holborn Theatre by Mrs. Maurice Davis, of Brunswick-square.

THE Vaccination Inspector furnished to the Islington guardians last week some interesting statistics of vaccination. He reported that he had completed the visitation of 842 unvaccinated children, reported by the late sub-inspectors, and had found 467 since vaccinated, 79 removed, 7 dead; 106 had promised to comply within seven days, 20 objected to vaccination, 74 children were too ill at present, 79 too young, 7 had had the small-pox, and 7 were adults. He had served a special notice upon each of the 20 persons who objected.

THE new County Lunatic Asylum for Cheshire, at Macclesfield, was opened last week, and is calculated to accommodate 700 patients.

THE magistrates of Glasgow have been vigorously prosecuting publicans for selling spirits to children under 14 years of age.

THE Liverpool Corporation have determined to extend the privilege of free bathing to all children attending elementary schools under the new Education Act.

A RETURN of railway accidents for 1870 shows that the total number of persons killed during the year was 286, and 1239 were injured, as compared with 321 killed, and 1232 injured in 1869.

DR. MOREAU MORRIS, Sanitary Inspector of New York, reports that several horses have recently died in the city after feeding on brewers' grains, and that chemical analysis shows that their death was caused by strychnine.

BY the advices received on Wednesday, we learn that at Buenos Ayres the yellow fever was diminishing, only about 100 deaths taking place daily; but eminent Medical authorities believe that the disease will prove endemic, and that the city will in consequence lose its prestige as a great commercial emporium.

AUSTRIA has proposed that an International Conference shall be held, to draw up regulations to prevent the spread of the cattle plague from Russia and the Danubian principalities. Switzerland has sent in her adhesion to the proposition.

MR. JOSEPH M. HIRSH, of Chicago, has succeeded in the production of mannite artificially. In all its properties, especially its medicinal ones, the artificial manna is found to correspond with the natural manna.

THE Exeter Local Board has leased the sewage of the city for twenty-five years to a company, which has undertaken to effect a thorough system of drainage, on the condition that they are granted the sewage for irrigating purposes.

The *Madras Athenæum* states that a case of leprosy, in a patient in the local Hospital at Ootacamund, was cured by carbolic acid. The disease in this case was not in a very advanced state, but the cure was perfect.

SEVERAL inhabitants, says the *Levant Times*, of the Dardanelles have died from eating poisoned bread; the shops from which the bread was obtained have been shut up, the bakers put in prison, and an investigation commenced by the authorities. It is believed that the bakers were ignorant of the existence of any noxious ingredient in the flour, which, it is said, came from Constantinople.

DEATHS DURING THE WAR IN FRANCE.—Among the numerous deaths among Professional men which have been due directly or indirectly to the late war are those of Drs. Raciborski and Scoutteten and Professors Ehrmann and Longet.

HEALTH OF PARIS.—Dr. Mary-Durand, writing in the *Siècle*, and expressing regret that the Medical authorities in Paris have ceased to publish the *Bulletins des Décès*, observes that, beyond deaths occasioned by balls and shells, the health of Paris is at present in a satisfactory state. The diminutionin the number of fatal diseases, he adds, is explained when the frightful mortality which occurred during the first siege—carrying off children, old persons, and the sickly—and the enormous emigration which has recently taken place are borne in mind. The recent meteorological conditions, too, have been favourable to the Medical constitution of the capital. This is, indeed, not the first occasion on which a population bending under the weight of great moral suffering, and living amidst constant alarms and the most cruel anguish, has still, during such a time, enjoyed excellent physical health. "But this must not put us off our guard, for if the civil war continue, the price of bread be raised, and other articles of subsistence become rare and dear, the indigent population of Paris will be infallibly condemned to again pay a large tribute to death."

FOR the fortnight ending Saturday, May 13, the deaths from all causes in the city of Glasgow were 671, against 692 during the preceding fortnight—a decrease of 21. Of the 671 deaths, 308 were under 5 years. During the same period the cases of fever reported amounted to 262, against 293 in last fortnight — a decrease of 31. To-day there are 365 cases of fever known to be in the city, and of these 342 are in Hospital and 23 are in private. These figures show a decrease of 37 upon the numbers known to have been in the city at date of last meeting. There were also reported 73 cases of small-pox, as against 69 in the previous two weeks, and to-day (May 23) there are 117 cases of small-pox known to be in the city, and of these 114 are in Hospital and 3 at home. The deaths from fever amounted to 35, and from small-pox to 6. In the previous two weeks the deaths from small-pox amounted to 13. Of the 6 deaths from small-pox 4 occurred in the Magistrates' Hospital and 2 in private, and Dr. Russell states that not one of the four individuals who had died from small-pox had been vaccinated.

THE small-pox is spreading at Malpas and Oswestry.

DR. ALDIS, the Medical Officer of Health of St. George's, Hanover-square, reported, on Tuesday, a considerable decrease of small-pox in the parish.

ACCORDING to the latest advices, small-pox still prevailed in the Persian Gulf. Cholera had subsided.

THE small-pox has made its appearance in Queen's County, and in Carlow, Ireland.

SMALL-POX, says the *Derby Mercury*, has made its appearance in that town.

THE total number of persons vaccinated in Chili in 1870 was 54,000. This is in a population of about 1,000,000.

AT the Rochdale Board of Guardians' meeting, last week, the assistant-registrar reported the death of two children from small-pox. Neither of the children had been vaccinated. The father of one of the children was some time ago fined by the Rochdale magistrates for refusing to comply with the Vaccination Act.

SMALL-POX is assuming serious proportions in some parts of Eccles. Mr. Roe, the Medical Officer, wrote to the Barton-upon-Irwell Board of Guardians last week, and said that "there is a fearful amount of recklessness in the lower classes. A virulent case of the disease died, and on Sunday whole droves of boys and girls, on their return from the chapel, went to view the body, and on a previous case of death the same took place."

ONE of the relieving officers of the Holborn Union applied to Mr. Cooke, at Clerkenwell Police-court, last week, for an order for the removal to the Hospital of a child suffering from small-pox. It was stated that in the house in which the epidemic had occurred several families resided, numbering altogether twenty-seven persons, and one of the rooms was used at night for a penny bank. The mother of the child objected to its removal, but, in the interests of the other inhabitants of the building, a magistrate's order was asked for, with a view to the case being taken to an Hospital. After hearing the evidence of Dr. Stallard in support of the application, the magistrate granted the order, and the possibility of a further spread of the infection is thereby diminished.

SMALL-POX IN THE POTTERIES.—In Longton and Fenton small-pox is now very rife. In Longton 27 deaths have occurred, and in Fenton 2. There are now under treatment in Longton 186 cases, in Fenton 22. The disease has not spread to any of the towns further north. All the local authorities are active in carrying out sanitary work.

WHO IS RESPONSIBLE?—A shoemaker at Hoxton had, for nine weeks and two days, a daughter in the Small-pox Hospital at Hampstead. He went very regularly to inquire after her, and was always informed that she was going on well. At last be was told she was dead and buried. He asked why he had not been told before, and was answered that the parish authorities ought to have informed him. To the parish authorities he accordingly went, and they said the fault lay with the Hospital authorities. Then he went to the Worship-street Police-court, but the magistrate referred him to Hoxton. On Wednesday the Hampstead magistrate told him to apply to the Clerk of the Metropolitan Asylums Board.

VACCINATION.—A Parliamentary return shows that in the year ending at Michaelmas, 1870, there were 785,775 births registered in England and Wales, but the number of children under 1 year old successfully vaccinated by the public vaccinators was only 392,869, being not quite half the number of registered births. The whole number of persons, young and old, successfully vaccinated in England and Wales in the year by the public vaccinators was 472,881.

A PECULIAR AFFECTION OF THE NERVOUS SYSTEM.—Dr. Fieber, of Vienna, writes—"At one of the last meetings of the Vienna Academy of Sciences, I read a communication concerning a hitherto unknown affection of the nervous system which I first observed in my division of the General Hospital. It is characterised by an impossibility of executing moderately fast movements through the agency of the will, while extremely slow or very rapid movements can be executed without any obstacle."—*Centralblatt*, May 6.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

In connexion with Mr. Barnard Holt's bag, we would correct a mistake whereby Dr. Barnes's name was mentioned instead of that of Dr. Greenhalgh.

F. R. H. is thanked. 1. The communications will be acceptable. 2. London Fever Hospital.

Mr. E. Newbould (*Gisborne, Victoria, Australia*).—Your letter, with enclosure, has arrived safely.

C. V.—County Lunatic Asylums, according to the general law, are placed under the supervision of the magistrates of each county.

Chemicus.—In 1861.

Edinburgh.—Dr. Harthill's "business card," in the *Scotsman* of May 17, is sadly out of taste. It may be doubtful how far the following statement will enhance his services in the eyes of the public:—"Dr. H. holds the diploma of M.D. of the University of Glasgow, and makes no charge for consultation merely, whether personally or by letter."

H. (*Middlesex Hospital*).—Sir Charles Bell was one of the Surgeons to your Hospital. At the last primary examination at the College *all* the Middlesex men passed. See Erasmus Wilson's History of the Hospital.

A Provincial Fellow.—The annual election of Fellows into the Council of the College of Surgeons will take place on Thursday, July 6: due notice will be sent you. Mr. Spencer Wells will, it is positively stated, offer himself for one of the vacancies. Mr. Carden, of Worcester, will take the chair at the annual festival of the Fellows the same day.

COD-LIVER OIL JELLY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Dr. Attfield has drawn my attention to a deficiency in the percentage of oil in my "Cod-liver Oil Jelly." In justice to Dr. Attfield, and also in good faith with the Profession (from whom I have received a very liberal patronage), I beg to state that the deficiency has arisen through a miscalculation on my part, but the error has already been corrected. Please to let this appear in your journal for the current week.

I am, &c., JAMES AGNEW.

278, Great Homer-street, Liverpool, May 23.

CORRIGENDA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the *Medical Times and Gazette* of to-day I notice a slight error, which, perhaps, you will kindly correct. In noticing the death of Dr. Bruce, of the Dundee Royal Infirmary, from an overdose of chloral, you state that he succeeded Dr. McEwau. I beg to state it was myself whom he succeeded.

I am, &c., WM. LEAVENS WHITE, M.B.

Royal Victoria Hospital, Netley, Southampton, May 20.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I observe in a recent number that, in answer to an inquiry as to Mr. Cooper's address, with reference to the salts for watering the streets, it was stated to be "Craig's-court," instead of "28, Duke-street, Westminster." Will you be kind enough to correct this error?

I am, &c., W. J. COOPER.

28, Duke-street, Westminster, S.W., May 23.

TWO CASES OF SUNSTROKE.

By THOMAS GIBSON, M.D.

J. S., aged 17 years, on July, 1868, was travelling on the road with his father, who was in charge of an entire horse. The day was excessively hot, and the midday sun shone forth with great force. While near a village the boy was observed to stagger; the father caught hold of him and led him to the roadside, and luckily some passers-by volunteered to carry him to the village inn at once.

I was sent for immediately. The boy had been put to bed; he was partly insensible, and gradually becoming comatose, but could answer questions vaguely in monosyllables, showing that the hearing was good. The pupils were very much dilated; the breathing natural. I gave one drop of croton oil, followed by a saline aperient, neither of which had any effect; a turpentine enema was then given, which also had no effect, the liquid apparently being hindered passing into the bowel by hardened fæces. An examination was made by passing into the rectum a small tallow candle, and there, indeed, was found to be impacted a large quantity of fæces thoroughly imbedded, which had to be scooped out with a spoon-handle. Another enema was then given, and this brought away a large motion, followed almost immediately by a most offensive discharge of liquid, greenish-looking matter. A blister was applied to the nape of the neck, which roused the patient to a little more consciousness; but another symptom then developed itself—namely, a most unusual palpitation of the heart, while the respiration was very little, if at all, increased in frequency. The patient, however, was now able to swallow some lemonade, and about twelve hours after the first attack expressed a desire to void urine, not having previously done so (in fact, on examination, over the pubes the bladder was found to be in a very comfortable state, without any distension). The urine was voided by this attempt without difficulty, but only about two tablespoonfuls in quantity, rather of a sherry colour.

I then prescribed a mixture with the nitrate of potash and digitalis, anticipating it to have both a sedative action in controlling the action of the heart and also acting as a diuretic. I also prescribed a purgative of pulv. jalapæ co. c. hydrarg. chlorid., and had the satisfaction to find that the palpitation evidently was very much modified. The skin became moist, and the urine was voided in large quantities, about three pints in the next twelve hours. Thus, in twenty-four hours from first seeing the patient, I was able to give a favourable prognosis. The pupils gradually contracted. He took some strong tea and sago.

The peculiarity of the case, in my opinion, was the absence of vomiting, even when croton oil had been administered, the hardness felt all over the abdomen, and the impacted state of the rectum. Probably the patient's youth, and travelling upon a white dusty road, where the sun's rays would be reflected, together with the fatigue of travelling, would tend to bring on the attack. It is possible, on account of the nature of the occupation of father and son, that they would be in the habit of imbibing a large quantity of stimulants of some kind or other, but it is difficult always to arrive at the truth in this matter, as the questions Medical men put upon this point are generally answered vaguely. The boy, however, made a good recovery, and on the sixth day I allowed him to resume his journey homeward on horseback.

In a case which occurred some time ago, and to which I was called, the patient was suddenly seized or struck down while haymaking, about three o'clock on a July afternoon. When I got to the place the boy had been removed to the farmhouse, about 200 yards distant, and had died almost immediately—in fact, he was dead before they attempted to remove him. The corpse presented a blanched appearance—so that, to look upon the face without knowing the cause, it looked like a case of death from excessive hæmorrhage. The sphincters were relaxed, and there was an almost continuous flow of offensive fæcal matter. This also was a youth of 17 years of age.

Bedford.

COMMUNICATIONS have been received from—

Dr. W. V. Lush; Mr. F. Whitaurn; Messrs. Arnold and Sons; Mr. G. Thompson; Mr. M. C. Soulter; Mr. Harry Leach; Mr. J. R. Liston; Dr. Heslop; Dr. F. R. Hogo; Dr. T. Gibson; Mr. F. T. Procter; Mr. J. Sherlock; Mr. J. F. Williams; Dr. W. L. White; Dr. D. Campbell Black; Dr. J. E. Neild, Melbourne; Thrasybulus; Associate; Mr. E. Ireland; Mr. F. R. Cross; Mr. W. J. Cooper; Dr. Brackenridge; Dr. Hughes; Dr. Felce; Dr. Drew; Mr. H. Arnott; Dr. R. Douglas Powell; Mr. J. Chatto; Mr. J. Hutchinson; Professor Laycock; Mr. H. W. Hunt; Dr. C. F. Moore; Dr. Gibbon; Mr. R. Y. Barnes.

BOOKS RECEIVED—

Report of the South Lambeth, Stockwell, and Brixton Dispensary—On the Curability of Cancer and its Medical Treatment without Operation, by Dr. G. von Schmitt—Dr. Morell-Mackenzie on the Use of the Laryngoscope in Diseases of the Throat—Holmes's System of Surgery, vol. v.—Dr. James B. Russell on Revaccination—Remarks on Relapsing Fever, by Dr. G. P. Tennett—Report on the Health of the City of Glasgow for the year 1870, by Dr. W. T. Gairdner—Report of the Broadmoor Criminal Lunatic Asylum—Dr. R. E. Dudgeon on Subaqueous Vision—Tarasp and its Mineral Waters, from the French of Dr. Killias, compiled and edited by the Rev. N. B. Whitby—On the Proper Selection and Scientific Application of Trusses, by Carsten Holthouse, F.R.C.S.—The Physiological Anatomy and Physiology of Man, by R. B. Todd, William Bowman, and Lionel S. Beale; a new edition by the last-named author.

PERIODICALS AND NEWSPAPERS RECEIVED—

Journal of Anatomy and Physiology, May, 1871—Glasgow Herald—The Scotsman—Nature—Pharmaceutical Journal—New York Medical Gazette—Birmingham Daily Post—Medical Press and Circular—The Dublin Freeman's Journal—The Worcestershire Chronicle.

APPOINTMENTS FOR THE WEEK.

May 27. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

29. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

30. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Rev. Prof. Haughton, M.D., F.R.S., "On the Principle of Least Action in Nature."

31. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 8 p.m. Meeting.

June 1. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

2. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal Institution, 9 p.m. Prof. Thomas Andrews, F.R.S., "On the Gaseous and Liquid States of Matter."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 20, 1871.

BIRTHS.

Births of Boys, 1070; Girls, 999; Total, 2069.
Average of 10 corresponding weeks, 1861-70, 2027·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	778	708	1486
Average of the ten years 1861-70	672·7	600·4	1273·1
Average corrected to increased population	...	...	1400
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	8	2	3	2	9	1	6	...	5
North ...	618210	113	...	9	3	8	3	2	...	5
Central ...	383321	13	...	5	...	4	...	3	...	2
East	571158	34	3	1	...	11	...	3	2	3
South... ...	773175	99	6	10	3	11	5	4	5	7
Total	2803989	267	11	28	8	43	9	18	7	22

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·830 in.
Mean temperature	50·1°
Highest point of thermometer	69·8°
Lowest point of thermometer	36·3°
Mean dew-point temperature	41·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·16 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 20, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending May 20.	Deaths Registered during the week ending May 20.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2069	1486	69·8	36·3	50·1	10·06	0·16	0·41
Portsmouth ...	125464	13·2	76	38	72·4	38 9	51·8	11·00	0·00	0·00
Norwich	81787	10·9	50	25	66·0	33·0	46·5	8·05	0·18	0·46
Bristol	173364	37·0	120	52	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	46	38	63·2	33·8	47·8	8·78	0·05	0·13
Birmingham ...	378574	48·3	267	163	64·2	34·5	48·4	9·11	0·05	0·13
Leicester	101367	31·7	72	45	61·0	33·0	46·7	8·16	0·18	0·46
Nottingham ...	90480	45·3	52	27	65·4	33·6	47·2	8·44	0·15	0·38
Liverpool	526225	103·0	320	297	59·1	35·1	48·4	9·11	0·34	0·86
Manchester ...	379140	84·5	277	196	...	...	...	...	...	...
Salford	123851	23·9	99	82	57·6	33·9	45·9	7·72	0·63	1·60
Bradford	148030	22·5	119	73	59·1	32·6	46·3	7·94	0·09	0·23
Leeds	266108	12·3	220	120	59·0	34·0	45·4	7·44	0·17	0·43
Sheffield	255247	11·2	188	124	61·0	33·6	46·1	7·83	0·16	0·41
Hull	135195	38·0	99	52	64·0	29·0	43·6	6·44	0·06	0·15
Sunderland ...	103037	31·2	68	50	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	98	74	60·0	31·0	43·7	6·50	0·00	0·00
Edinburgh	179944	40·6	118	109	61·7	27·0	45·6	7·55	0·20	0·51
Glasgow	477627	94·3	346	306	...	...	...	...	...	...
Dublin (City, etc.)	322321	33·1	202	153	66·9	32·2	51·8	11·00	0·07	0·18
Total of 20 Towns in United Kingd'm	7336961	34·4	4906	3510	72·4	27·0	47·2	8·44	0·14	0·36

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·83 in. The highest was 30·11 in. on Saturday morning, and the lowest was 29·67 on Sunday morning.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

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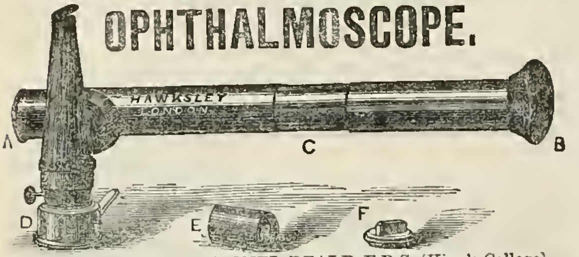

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VIDE OPINIONS OF THE PRESS:—

"Medical Times and Gazette," March 11, 1871; "British Medical Journal," April 1, 1871; "Chemist and Druggist," March 15, 1871; "Pharmaceutical Journal," April 22, 1871.

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ORIGINAL LECTURES.

LECTURES ON THE PRINCIPLE OF LEAST ACTION IN NATURE, ILLUSTRATED BY ANIMAL MECHANICS.

DELIVERED AT THE
Royal Institution of Great Britain.

By the Rev. SAMUEL HAUGHTON, M.D., D.C.L., F.R.S., etc.
(Corrected by the Rev. Professor.)

TUESDAY, MAY 30, 1871.

LECTURE II.

Geometrical Classification of Muscles found in Animals—Application of the Principle of Least Action to several forms of Muscle, demonstrating the possibility of predicting Animal Structures by Mathematical Calculations similar to those used in Astronomy and the other Exact Sciences—Special Illustrations from the Limbs of the Tiger and Wings of the Albatross.

LADIES AND GENTLEMEN,—In bringing to a conclusion my former lecture, I acted on the principle I laid down of least action. Taking into consideration the feelings of the audience as well as of the lecturer, and judging by my own experience in hearing sermons, I thought that a little less than the hour's lecture would suit your taste. I therefore threw overboard one of the illustrations of the principle of least action to lighten the ship; but, if it is your pleasure to hear it to-day, I shall be happy. I place myself in your hands.

I hold in my hands the flexor tendon of the eland's leg. At one end it branches into three distinct tendons, and at the other extremity it branches into two. These three tendons are attached to three great muscles which act upon the foot. Three streams of force enter through these three lines, and they are then distributed into two, which two applications of force are carried to the toes of the animal. Similar arrangements are found in almost every animal which has the muscles acting at one extremity of the tendons. These tendons are the ropes of the animal frame, and we have them in both the fore and hind limb. In the case of many animals the fore and hind limbs are used for the same purpose—progression. In such animals as the llama, horse, and cow, the limbs have the same function: their four feet are used for the purpose of locomotion. But in higher animals, such as tigers, bears, dogs, monkeys, and ourselves, we have the fore limbs more or less differentiated and set apart for the use of the brain as grasping organs. In man this is carried to the highest limits, and, with the exception of little children, we have lost the use of the fore limbs as feet, and the hand has to serve the brain—a perfect instrument for carrying out its conceptions. As we should expect, therefore, there are great differences in the hands and feet of the higher animals.

But in both of these, a certain amount of friction must take place round the joints—the wrist and the ankle. If my principle of least action be correct, I should find in the hand of the animal the strength of the tendons above the wrist greater than that of the tendons in the fingers; and so it is. When I take an object into my hand, the force I use comes from the muscles of the arm, passes through these tendons, and is applied to the object grasped. If the principle of least action be true, again, the united strength of the tendons above and below the wrist will not be the same, but the tendons to the fingers will have the less force by the quantity of friction in the wrist. Then, in the leg, the force comes from the muscles of the leg; the ground, by reaction, presses upon my foot, and the strength of the tendons is just what is necessary to prevent their injury in overcoming it. If least action be true, I should expect to find the reverse of what I find in the hand; the tendons which pass from the foot into the muscles will have a less cross-section. Now, this is positively the fact. I have examined upwards of eighty animals, and found it so. Indeed, animals might well be classified by this action—animals which use the hand as a hand, and those which use their fore-feet as organs simply of locomotion. In the hand of the tiger there is a co-efficient of muscular force of 22, and in the foot of 46. The tendons of the fingers in the tiger's hand are consequently less than in the forearm; the tendons of the toes are greater than those in the leg. So, also, the difference in the tendons represents in each case the friction to be overcome. You are to remember that the friction is + in the one case, and — in the other. I place before you a table of the relative strength in the hands and feet of various animals:—

	Hand.	Foot.
Tiger	22·7	46·0
Wolf	31·4	34·0
Virginian Bear . .	35·0	25·9
Negro Monkey . .	27·4	8·0
Goat	0·0	9·5
Kangaroo . . .	1·7	0·0

Our cousin, the monkey, is a quadrumanous animal. He uses the foot very much as a hand for the purposes of climbing, as is shown by the low co-efficient in the foot. The most perfectly constructed animals are the goat and the kangaroo. No force is lost in the feet of the goat. He raises his foot by an admirable arrangement of the wrist. In the case of the kangaroo there is no friction at the heel, and the most perfect organ of locomotion is the hind leg of the great kangaroo.

The investigations which I have carried out show in the most conclusive manner that the law of least action is attended to down to the most minute details, even to the expense of producing a few grains more or less of this glue—for the tendon is nothing else but a kind of glue. In nature the most rigorous parsimony is employed, and never is more of a substance used when less would do. This might be carried out into minute details, but in a lecture such as the present I have no time to do so.

I wish to draw your attention now to the hind feet of the monkeys in the Old and New Worlds. Their feet are fully entitled to the name of hands given to them by the great Cuvier; but we might classify the Old and New World monkeys by the arrangement of the tendons of their feet. In the Old World monkeys the tendons of the feet are supplied by two great muscles, the *flexor hallucis longus* and the *flexor digitorum longus*—the long flexor of the great-toe, and the long flexor of the other toes. Now, if you observe, you can see the distinction here; the muscle of the great-toe in the Old World monkey supplies half of the first toe, half of the second, and the whole of the fifth; whereas the other tendon supplies the whole of the third and fourth, and the remaining half of the first. He would put his great-toe opposite the third and fourth.

In the monkeys of the new world the arrangement is quite different. The flexor of the great-toe goes partly to the first toe, and supplies the fifth. The whole of the second, third, and fourth is supplied by the other flexor. In the Capuchin monkeys, so called from their resemblance to the monks who wear a similar hood, and which cross their arms so piously that we think they say their prayers, the arrangement is of this kind. These little creatures place their first and fifth toes together. And in the occupation which is so congenial to them and so well known, of gathering up small living creatures from the skins of their companions, you will find, if you watch, this view borne out: that while the monkey of Africa prefers to grasp with the first, second, and fifth digits, the monkeys of the new world grasp with the first and fifth alone.

I now come to the proper subject of my present lecture, which is the classification of muscles. The muscles of animals were arranged by Giovanni Alfonso Borelli, who divided them into various groups; but I shall content myself with giving you my own classification.(a) I divide all muscles into the following:—

1. *The prismatic muscle*, where the muscle passes in parallel fibres simply from bone to bone.
2. *The penniform muscle*, where the muscle decussates.
3. *The triangular muscle*, where the muscular fibres proceed from along a fixed line and are inserted into a point.
4. *The quadrilateral muscle*, where the muscular fibres are arranged in lines converging from one bone to another.

The quadrilateral muscle is nothing but the triangular muscle with the top cut off. It is easily understood in its action as long as the bones of insertion remain in the same plane; but in the motions of its bones it does not always remain in the same plane: it is not as accommodating as geometers could wish, and forms skew surfaces. You are probably acquainted with the term from the *skew bridges* of the engineer. The *skew* is made up of a number of straight lines, and yet every portion of the surface is a curve. I have succeeded in discovering that the particular skew surface which muscles are capable of assuming the shape of is known as *the hyperboloid of one sheet.* Here are a number of straight lines passing from point to point, which represent fibres of muscle. I now take this muscle and distort it out of its plane, and I have got a curved surface, in which every portion is made up of separate straight lines. I can curve the surface in the opposite direction, and make a *hyperboloid of one sheet* again out of a straight muscle. This is no fiction. The *adductor magnus* of man, and the *great pectoral* of every bird are illustrations that Nature constructs, by means of straight lines, curved muscular surfaces of the most beautiful and elegant forms invented by the abstract geometers.

(a) These particulars were illustrated by diagrams.

A friend of mine, who is one of the most distinguished of living geometers, told me, when informed that Nature made these hyperboloids, that his respect for her was very much increased.

The last form of muscle to which I shall rapidly direct your attention is the *sphincter*, which encloses or surrounds openings, and the ellipsoidal muscle, called so because it is egg-shaped. In my next lecture, I shall direct your attention to the most important of these in the heart; and we shall confine our attention to-day to the more elementary muscles which we have enumerated.

The prismatic and penniform muscles possess the remarkable property—which can be demonstrated mathematically—that no loss whatever of force takes place in their use. Nature is, therefore, entitled to employ these two forms of muscle whenever she pleases. She has no loss in their use, and both of these classes of muscle are therefore most employed. When you come to the quadrilateral, skew muscle, etc., you have in the use of these muscles a necessary loss of force. How comes it, then, if my principle be true, that these muscles are employed at all? Because Nature has other problems in view than mere economy of force. She has to consider that if she economises in one way she may have to spend more in another. Beauty was one of the prime views of the Creator, as well as economy. Nature never uses such muscles, however, except under great necessity.

The most wonderful of triangular muscles is the *biceps femoris* in the tiger. The muscular fibres start from a point, and are inserted from the middle of the thigh down to the heel, forming when the mass is stretched, over three feet, lying along the side of the leg. That muscle exists in every mammalian animal, but in other animals it is arranged as a prismatic muscle—as in myself. Why has Nature deliberately sacrificed a certain amount of force by constructing this muscle in the tiger of a triangular shape, which she constructs in my leg like a straight rope? Because I am a man, and not a tiger. I am not intended to hide in the jungle, to jump from it, and carry off a man and eat him. That is not the purpose for which I was created; but if I had been created for this purpose, I would have had the triangular muscle. The tiger has this muscle, because if a muscle had been placed from point to point in its leg, it would have been a great deformity, and have resisted his progress. Therefore, Nature has deliberately thrown overboard her first idea, which was to place a rope from point to point. She seems to have said, "I must make the tiger the most beautiful creature of earth. There is a certain loss of force in making the fibres of the biceps radiate; but I gain more than I lose by the apparent loss of force."

We can demonstrate that the *resultant force of all the fibres of a quadrilateral or of a triangular muscle lies in the bisector of the angle.* When I draw this line in the tiger, I find it passes through the top of the fibula—through the very spot into which the biceps muscle of my leg is inserted; so that, though the muscle is triangular, it really works in an imaginary line, as it does in the prismatic. Therefore, Nature has accomplished the work she has to do on the principle of least action with the greatest advantage. The carrying out of the principle in another way would have lost the best packing. She always acts upon the French proverb—*Reculer pour mieux sauter.*

I have said before that she is at perfect liberty to use either the penniform or prismatic muscle. Still, her use of the penniform muscle is very rare; as if she did not like to use her resources except when necessary. And although there is no loss of force in the penniform muscle, it is only rarely used. The most remarkable example in nature is the muscle which lifts the wing of the bird. The bird's wing is flapped by great muscles, but it is lifted by a muscle placed on the centre of the body to keep the weight far aft. In the ostrich, which does not fly, Nature places it in the neck. In any other bird it would be destruction to have it so. It is placed at an angle of 180 degrees, and runs through a pulley to reach its attachment. The depressor of the wing must be very great, to strike the air; but the muscle to raise it must be made as rapid in action as possible, to bring it back quickly; for while the wing is rising the bird is falling. Nature always employs the penniform muscle to raise the wing, because the fibres decussate so that the motion along the diagonal is represented. The wing is thus lifted up with a greater rapidity than if the prismatic form had been retained.

I have selected as illustrations of the quadrilateral and skew muscles first the fore and hind legs of the tiger. I have selected the tiger, because he is the strongest and handsomest of animals with which we are acquainted, and while the world lasts strength and beauty must command admiration. The tiger is stronger than the lion. I am sorry if I disturb our childhood's traditions of the lion as the king of beasts; but the lion is a humbug. He is like some human beings, who have more in their appearance than in their reality. The tiger is the king of beasts. In the reign of the Emperor Titus, A.D. 80, this cruel Emperor had Bengal tigers compelled to fight Numidian lions. The poor Babylonian lion is a very small animal compared with the African lion, and the tiger easily beats him. But the Roman emperor was determined to try whether the Bengal tiger could fight the African lion, and Martial records that the tigers and lions fought, and that the tigers always beat the lions. He describes the tiger as naturally a gentle animal, accustomed to lick the right hand of the keeper that trusted him. But when this tiger came to Rome (according to the poet's sarcasm) he lost his gentleness, and became possessed of ferocity. He uses these words—

> "Lambere securi dextram consueta magistri
> Tigris, ab Hyrcano gloria rara jugo
> Sæva ferum rabida laceravit dente leonem;
> Res nova non ullis cognita temporibus.
> Ausa est tale nihil, sylvis dum vixit in altis
> Postquam inter nos est, plus feritatis habet."(b)

Accidents have happened also in some of our English menageries, where the barriers between the lion and the tiger have been broken, and they have fought. The tiger, if in good condition, invariably kills the lion when compelled to fight. But I shall give you an experience of my own on this subject.

I have been for many years the Secretary of the Zoological Gardens in Dublin. The claws of the forepaw of these animals, for want of their natural exercise, sometimes grow into the pad of the foot, and this would become gangrenous, and ultimately kill the creatures. Their nails must be pared when this occurs; but the operation is not so satisfactory in reality as it is in appearance. I have performed it repeatedly, and may tell you that it takes eight men to hold down a tiger, when five can keep down a lion. I found in the cross-sections of their muscles after death that the tiger's were more than 50 per cent. greater than the lion's. But the operation of cutting the tiger's claws on the first occasion of my trying it was attended with some incidents in which you may be interested. Indeed, if they had turned out differently I should not have been here today. I collected eight men to cut the tiger's claws. We put a large rope round his neck and another round his foot. The tiger watched for the opportunity of putting his sore foot on the ground and slapping me on the face with the other. Unfortunately, in the middle of our proceedings his companion tigress thought she would interfere, and she behaved not unlike the wife of Heber the Kenite of old; she put her paw through the bars, and struck me on the back of the hat. In a moment the eight men resolved themselves into their component parts—seven of them were cowards; but the eighth was a brave man, and saved my life. This brave man had a hold of the rope. To my astonishment, I saw the seven men running out of the house, and I was left with one helper. The tiger threw up the sliding door of his cage, and I saw that I was immediately to be killed. But my friend held fast the rope until I had time to close down the door, when the tiger rushed at the bars of the cage, and broke his teeth on them. I collected the seven cowards again, and took them with me into the lion-house, putting the key of the door into my pocket. "Now, my boys," I said to them, "you ought to be ashamed of yourselves. If any accident happens, the tiger will eat me first, and the key in my pocket as well—and he will eat you at his leisure!"

After the operation, the tiger threw himself on his back, and began to purr and to show by signs of the most unmistakable kind that he wanted me to come; and he was not satisfied until I had put my hands to his mouth to lick, and had examined the foot which I had hurt. He carried out to the most minute degree the character given him by Martial.

But it is impossible for me to go now into all details. That must be left for the future. In proof that the principle of least action is applied to tigers, we may look at two conditions

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(b) Martial, "De Spectaculis," epigram xviii.

—one in the fore and one in the hind limb. We have combined groups of muscles acting upon the arm and forearm. The *latissimus dorsi* and *teres major* act upon the arm, drawing it backwards. The most powerful stroke of a man is the backstroke. The backstroke of a guardsman will cut a leg of mutton in two, by bringing the muscles into co-ordination together. But this would not take place unless there were two angles of 90 degrees passed through simultaneously in the arm and forearm. There is a corresponding law in the hind leg. In the case of the hind leg, the hip-joint is not related to the knee-joint, but to the heel; in the forearm the shoulder is related to the elbow. This is one of the most remarkable instances placed on record of the skill and contrivance of the Creator. You have seen an engineer on board a steam-ship putting his can of oil into the joints of the engine. If you were to try and do so, you would lose your life in the attempt. That man knows when the joint comes and retreats, and he knows that he can rely upon the motions of these bars with perfect security. When we see the engine describing an angle, no person is fool enough to believe that there is not contrivance and design in it. I am ashamed to say that there are intelligent men who look upon more wonderful structures in the world of nature, and yet who cannot recognise the hand of Him who made them.

Before parting with this subject, I may be allowed to give a word of advice to the ladies who hear me. Two angles of 90 degrees, attained simultaneously in the hip and in the heel, are necessary to the proper action of the foot. Anything which interferes with this is most injurious. I am told that it is now the habit among ladies in America and elsewhere to use high-heeled boots, in order to produce the Grecian bend. But I would caution you against the practice. You thereby shorten the distance between the points of action, and prevent the beautiful play of the ankles and joints, and you sacrifice, in the muscles of the limb, what you gain in supposed grace of figure. If the practice continues, the ladies of the future, between the development of tendons in the feet and the bright colours on their heads, will be most like the flamingoes of Regent's-park.

I come now to the last and most interesting application of this principle. The quadrilateral muscle becomes occasionally a skew muscle; the whole forms a curved surface. The great pectoral muscle in the wing of the bird is an instance of it. I have placed before you two diagrams, which have cost me many hours of hard work—the wing of the albatross, taken from life. The great pectoral muscle runs round the keel, and forms a curved figure. Now, let us imagine ourselves the bird, and throw back the arm; we should then use this muscle. It is inserted into the curved line at the top of the arm.

I believe that I have succeeded in carrying out the principle of least action to such a degree that I could make a prediction. And here I would call your attention to the fact that nothing whatever is worthy of the name of science which is not able to predict consequences—when certain facts are given, to predict their effects; and whenever conditions can be predicted, we have an exact science—it has come under the domain of geometry, which is the queen of sciences, and must regulate them all.

I said to myself, I can trace accurately this great muscle. I know its insertions, and I shall try to predict the unknown about it. Let there be any curve in nature, as the pectoral muscle of a bird at its origin; let there be another curve representing its insertion into the arm; I shall be able to draw the bisector of the angle. But I was also able to draw a right line at right angles to the bisector, to show that, if the muscle of that bird contracts to the greatest advantage, it is in a certain axis of rotation round the joint.

I shall not trouble you with my calculations; but they consist in finding a certain ellipse. There is such an ideal ellipse in the albatross; and I saw that the minor axis of that ellipse was the curved axis of least action round which the wing of the bird revolved. I chose the albatross for the following reason:—Just as the tiger is the most worthy of quadrupeds, so the albatross is far the most wonderful of birds. The habits of the bird have been described by the Portuguese writers, and by Coleridge in his celebrated lines:—

> "And the good south wind still blew behind,
>   But no sweet bird did follow;
> Nor any day, for food or play,
>   Came to the mariner's holloa!
>
> "And I had done a hellish thing,
>   And it would work 'em woe;
> For all averred I had killed the bird
>   That made the breeze to blow."

The albatross is an animal of very remarkable peculiarities. He seldom flaps his wing; but he has the power of soaring, so that he is able to keep his height better than any known bird. The only other bird to compare with him is the condor vulture; and if I were to take a pair of scissors and cut off some of his feathers, he would have the same wing as the albatross. In studying the wings of the eagle, hawk, and many others, I saw a sort of type wing in the wing of the albatross. The albatross sleeps upon the water at night; he feeds upon small molluscs and crustacea which he finds, or gladly takes a biscuit from the sailors. When morning comes, he soars slowly; for a half-mile his feet tip the water, and then he rises to a thousand feet. If a ship is in sight he follows it; but if not, he is cunning enough to find another albatross who sees one, or one who sees an albatross who sees an albatross who sees an albatross who sees a ship!

I was five years waiting for an albatross for dissection. I was put into communication with some ship captains of Liverpool who sail these seas; but they all know the stories of the bird, and dread to injure it. But in spite of this difficulty I obtained my albatross and made my dissection. I spent an hour at its dissection, another hour making measurements upon him, another hour in writing these out; but it cost me five hours with the help of logarithmic tables to make my conclusions.

It is a characteristic of every true rule discovered, that if we make closer applications we shall find clearer results; but we shall always find certain residual phenomena left unaccounted for. Now, in this case I have a residual phenomenon. The condor has not only to soar like the albatross, but he is to possess the power of rising from the level of the Pacific Ocean to the heights of Cotopaxi. There is not a bird which has not two or three things to accomplish.

We have, therefore, every reason to believe that we possess a power of prediction with regard to the wings of birds and other limbs of animals. In conclusion, there is nothing tentative in nature. We have no evidence that the light describes its path by a series of attempts. The axis round which the bird's wing revolves was constituted by no tentative process. There is no evidence in nature that birds make a succession of blunders before perfection is attained. All is perfect, and all was ever perfect. The graceful form of the beautiful tiger and the expanded wing of the albatross speak to the ear of Reason in language that cannot be mistaken: THE HAND THAT MADE US IS DIVINE.

ORIGINAL COMMUNICATIONS.

ON THE ROUTINE USE OF THE OPHTHALMOSCOPE IN CASES OF CEREBRAL DISEASE.(a)

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the Hospital for the Epileptic and Paralysed, and Physician to The London Hospital.

ABOUT three years ago I wrote in this journal ("Latency of Optic Neuritis in Cerebral Disease," February 8, 1868), to urge strongly, as I did six years ago ("Royal Lond. Ophth. Hosp. Reports," vol. iv., 1865), the *routine* use of the ophthalmoscope in investigations of cases of disease of the nervous system, stating, as one reason, the fact that *very striking ophthalmoscopical changes may exist when the patient believes that his sight is good, and when he can read the smallest type.* I wish once more to urge this point, because I still find the assertion above made is received with great incredulity by some Physicians, and because, since writing the paper referred to, I have had numerous illustrations of the fact stated. I gather from the quotation below given from Graefe, that Blessig was the first to draw attention to it.

At first glance, it does seem sheer nonsense to speak of severe changes in the optic nerves of patients who can read the smallest type,(b) and who have no complaint to make of their sight. I do most willingly grant that the incredulity of those who do not use the ophthalmoscope is quite intelligible; but the fact is not denied by Ophthalmic Surgeons.

(a) When urging on Physicians the routine use of the ophthalmoscope, I may properly mention that, to the best of my belief, Dr. John W. Ogle was the first Physician in this country to write on Medical Ophthalmoscopy. The papers by Dr. Clifford Allbutt, in this journal (1868), will be familiar to Physicians. These papers show convincingly the great value of the comparatively new instrument of research in the investigation of Medical cases.

From a scientific point of view the necessity of not overlooking a decided pathological condition is obvious. Then it is of some importance in a case of severe cerebral disease to be able to tell the patient's friends that sight, probably, will fail; for this prediction when verified will satisfy them that we have not misunderstood the nature of the case in its early stage.

There are few cases on which such different opinions are given as those of cerebral tumour and other kinds of "coarse disease."(c) They often begin by symptoms which are not specially nervous, although really dependent on brain disease. The early symptoms are often put down to stomach derangement, to over-work, or to some other minor cause. The patient is naturally very anxious to put forward the view that his severe headache, vomiting, etc., are owing only to some temporary derangement, and mostly accuses the liver. He may urge that his illness began by "attacks of bile." I have known the friends of a patient lament bitterly the different opinions that have been given at the early and late stages of a case of cerebral tumour. Every Practitioner will know of cases of young men who have first severe headache, and, perhaps, urgent vomiting, and scarcely other symptoms, and who occasionally for weeks, or even for months, remain able to do their work somehow, especially if, as occasionally happens, the severe pain in the head only comes on in the night. The absence of renal disease being ascertained, the symptoms are strong evidence of the existence of "coarse" disease inside the head. We often see patients blind from optic neuritis, especially in children who are reported to have had "bilious fever." It is frequently the "fever" that attends coarse disease of the brain. I feel sure that the use of the ophthalmoscope would sometimes save us from the mistake of declaring the symptoms of a case to be of non-cerebral origin, because superficially considered they seem to refer to other organs than the brain. In all such cases the ophthalmoscope should be used, *whether the patient complains of defect of sight or not, and when he can read the smallest type.* Although the absence of optic neuritis would not negative the existence of coarse disease within the cranium, the presence of the neuritis (double) would, I think, render the existence of this kind of change *almost* certain in many cases of very severe headache without renal disease; we cannot be quite certain. I had about a year ago a patient under my care, the whole course of whose symptoms—and double optic neuritis was discovered—seemed to point to coarse disease of the brain; but there was no such change found *post-mortem;* the brain was very much wasted. Nevertheless, I repeat, double optic neuritis occurring along with intense headache, and especially with vomiting (perhaps bilious), is *almost certain* evidence of the existence of coarse disease of some kind—not of any particular kind—within the cranium.

In cases of loss of speech (aphasia) there may occasionally be discovered marked optic neuritis, when there is nothing in the patient's bearing to suggest that his sight is defective.

In children it is absolutely necessary to use the ophthalmoscope when they suffer from severe cerebral disease. We occasionally discover optic neuritis in a child whose parents "have never noticed anything the matter with his eyes."

In cases of acute cerebral disease the patient may be too ill to take any notice of our attempts to test his sight. Here, again, we must use the ophthalmoscope.

I do not say that we can with certainty predict that sight will fail when we have discovered optic neuritis. It does fail in most cases. I have had, however, under my care a woman 25 years of age, who had severe optic neuritis in 1867, and whose sight a year later had kept good, so far as she knew, and so far, also, as the test of reading showed, but I have no note of the extent of her field of vision. She could read "Brilliant" type rapidly. The ophthalmoscopical signs, at first very extreme, altered remarkably, so that when I saw her last the abnormal appearances in the fundus were so slight that I dare-say many, seeing her then for the first time, would have been incredulous that she had ever had severe optic neuritis at all. Yet she certainly had had it. Her eyes were examined in the early stage, not by myself only, but by Brudenell Carter, by Soelberg Wells, and by Clifford Allbutt, of Leeds.

This woman is one of two patients under my care, of whom Mr. Soelberg Wells speaks when writing on conservation of sight with optic neuritis in his "Treatise on the Diseases of the Eye," pp. 399, second edition. He mentions, also, a case from his own practice of uniocular neuritis in which the acuity of vision remained perfectly normal throughout. I quote the following from his work:—"Mauthner ('Lehrbuch der Ophthalmoscopie,' pp. 293) narrates an interesting case in which a patient affected with optic neuritis retained a normal acuteness of vision *up to the time of his death* (which was sudden). The post-mortem examination revealed the existence of interstitial optic neuritis, but the retina was healthy up to the optic nerve." (The italics in this quotation are mine.) In remarks added to reports of several interesting cases of optic neuritis at the Clinical Society, October 28, 1870 (see *Lancet*, November 5, 1870), Brudenell Carter referred to the fact "that a considerable degree of optic neuritis may be present in certain cerebral affections without impairment of vision." In my former paper, 1868, I referred to the opinions of Hutchinson. The following quotation is from a note by him in the last volume of the *London Hospital Reports*, 1867:—"In optic neuritis, it is often impossible, from the observation of the state of the disc, to form any opinion as to how much the patient can see." Bader, in his work on eye diseases, p. 485, speaking of the state of vision in cases of inflammation of the optic disc and of the retina adjoining it, says—"Vision, according to the accounts given by patients, is often hardly disturbed, even if there is considerable loss of transparency of the optic disc and of the adjoining retina, with much hyperæmia. . . . . Some patients (even at the height of the inflammation) only complain of a swimming of objects looked at for some time."

Noyes, of New York, commenting on a case of acute neuritis optica from tumour of the brain, reported by Dr. Schiess Gemuseus, says:—"This case adds to the observations already become numerous, where intra-cranial disease produces visible changes in the fundus oculi without causing injury to sight." (*New York Medical Journal*, February, 1871.)

Now I quote from the writings of the greatest of Ophthalmic Surgeons. Graefe, writing in 1866 (*Archiv. für Ophth.*, xii., 2, 130), says:—"It has been on all sides admitted, and has been especially stated by Blessig, that there is no exact proportion between the amount of functional disturbance and the amount of change discoverable by the ophthalmoscope. The want of such proportion depends upon two factors. The first is the uncertain degree in which the conducting elements of the nerve may participate in the morbid process, a fact well ascertained in nephritic retinitis. Hence, we may find the existence of good vision—almosts always only for a short period—in a high degree of congestion papilla (Stauungspapille). The second factor is the degree of interference with the arterial blood supply."

So far I have quoted Ophthalmic Surgeons. I now quote a Physician. Dr. Clifford Allbutt (*Medical Times and Gazette*, May 30, 1868), speaking of ischæmia of the discs, says:—"It is astonishing how changed and disfigured the optic disc and neighbourhood may become in this affection without disturbing central vision. I have lately had several such patients under my care who could read a badly-printed news-sheet with ease. The same fact is strongly insisted on by Graefe. For this reason, the condition is constantly (I may, perhaps, say generally) overlooked."

Another error as bad as, or even worse than, overlooking *striking* ophthalmoscopic appearances is to attach undue importance to slightly abnormal intra-ocular appearances, which may be only abnormal in the sense of being physiological peculiarities. Curiously, this is the fault, not of those who have used the ophthalmoscope much, but of those who have used it little. It requires much practice to give true clinical value to "congestion of the optic nerves" or to "congested retinæ," to slight changes about the edge of the disc or to alterations in the course and calibre of the veins. In the paper referred to, I spoke on this matter, and from it I quote the following:—"I have never laid stress on slight alterations in the colour of the discs, or on slight abnormalities in the size or course of the large retinal vessels. . . . We may get as far wrong by attaching too much importance to slight appearances as by altogether overlooking decided pathological changes." I certainly did not speak too strongly.

Professor Liebreich, at visits to the Hospital for the Epileptic and Paralysed, has frequently pointed out striking peculiarities in the fundus, which he declares to be really physiological variations. Speaking of the importance of ophthalmoscopical examinations of many normal eyes, Professor Liebreich remarked at the Clinical Society (see *Lancet*, November 5, 1870): —" En effet, l'aspect du fond présente à l'état normal, on pourrait dire autant de variations que la figure humaine, et il faut l'étudier indéfinement si on ne veut pas être exposé à prendre quelquefois pour une altération pathologique ce qui n'est qu'une modification individuelle d'un œil sain." Obviously, then, whilst the student may observe any case he likes as minutely as he can do with precision, he should not dare to draw conclusions from very slight intra-ocular appearances.

(b) The reader will observe that I do not use expressions implying that sight is *quite* unaffected when there is optic neuritis. It is not necessary for me to prove that. To ordinary tests sight is often good, and, therefore, without routine ophthalmoscopic examinations, we may overlook a striking pathological condition. The obvious explanation is that the inflammatory process affects the nerve fibres of the nerve-bundle secondarily, and that, so long as sight is conserved, they have not suffered, or have suffered very little.

(c) I use the term "coarse disease" to include not only tumours, ordinarily so-called, but all kinds of adventitious products—syphilitic nodules, abscess, blood-clot, hydatid. Any one of these foreign bodies may lead to optic neuritis as it may to local encephalitis, on which convulsions, etc., depend.

AN ACCOUNT OF A MODE OF

FORMATION OF URINARY CALCULI, AND OF THEIR SPONTANEOUS PASSAGE THROUGH THE URETHRA.

By BERNARD KRAUS, M.D.,
Editor of the *Vienna Medical Times*.

THE form of catarrh of the bladder in its relation to the bone-earth or triple-phosphate diathesis—first described by myself—gives rise to various pathological conditions, which have been so little investigated that I think it desirable to give publicity to such of them upon which I have been able to throw some light.

I have already, in my former contributions concerning vesical catarrh, laid down the position that the phosphatic diathesis is but little disposed to the formation of calculus in the proper sense of the term—*i.e.*, that urine which induces the accumulation of triple phosphates, in the form of double ammoniaco-magnesian phosphates, very rarely induces the formation of large stones, it being much more commonly the case for the whole of the inorganic product, when there is a suitable amount of tone in the bladder, to be discharged through the urethra. I have known patients who have discharged from ten to twelve grains daily without sensible distress. The last remarkable case of the kind came under my notice in April, in the person of a functionary, 24 years of age, who, treated nine months previously for gonorrhœa by nitrate of silver injections, became the subject of an intense vesical catarrh, which exhibited all the attributes that I have described in catarrh connected with the phosphatic diathesis. It rapidly passed from the acute into the chronic stage. The urethra, on account of frequent preceding gonorrhœas, was but slightly sensitive, and the passage of the phosphatic calculi was not so painful as it usually is in the recent form of catarrh. The patient urined in my presence, and evacuated about four or five grains of a compact mass held together by a very small quantity of mucus. Depositing at the bottom of the urine in a white adherent mass, it resembled a sandstone on drying, and, rubbed between the fingers, furnished a sandy feeling, and the other signs of calculous sediments. Careful examination with the catheter detected no concretion in the bladder, although the aperture of the beak of the catheter contained some of precisely the same white sediment. In old catarrhs of this description I have almost always met with these appearances; but their occurrence in recent catarrh was new to me, and I can find nothing similar to it recorded in the literature of the subject. Equally new is my observation that sediments of the caseous form, mingled with pus and mucus cells, may escape through the urethra in a globular form, and be met with in the urine of as large a size as a pea—a fact which I have often had the opportunity of observing.

This description of deposit is only met with in the phosphatic diathesis and its consequent catarrh, never occurring in the other forms of sediments, such as the oxalates or urates. In my opinion it is a peculiar action of the phosphates on the mucus and pus in the bladder which leads to this peculiar form of deposit, and which is of so much less hurtful a character than that from uric acid. The triple phosphates have also a great disposition to combine with the epithelium of the bladder, so as to produce a conglomerate of a less injurious nature than that resulting from the oxalates. These latter remain isolated, combining together atom by atom, without the intervention of any organic constituent, whence arises their augmented consistency. On the other hand, the phosphatic calculi are porous, owing to the combination with them at the time of their formation of organic constituents, such as cells, pus globules, coagula, etc. If these phosphatic crystals remain too long a period without a sufficiency of liquid, either in the bladder itself or in their passage through the urethra, when the propulsive power of the bladder is not sufficient to force out the sediment with the stream of urine, this peculiar form of calculus is produced. Concrements of the triple phosphate, varying in size from that of a millet-seed to that of a lentil, may form either in the bladder or urethra; and when they are arrested in the urethra, they may, by producing an impossibility of passing the urine, give rise to very dangerous symptoms, which may prove highly embarrassing to the Surgeon. Such a state of things is not of rare occurrence in the subject of the phosphatic diathesis catarrh, and I am acquainted with a case in which such formation of calculi has taken place five times in the same year, to the infinite trouble both of the patient and his attendant.

The occasional cause of the formation of these calculi has always been cold, so that it may almost be proved that a certain amount of temperature is required to maintain the triple phosphate sediment in a safe solution or suspension in the urine, while, if the necessary warmth be not present, a concretion ensues. This is entirely in harmony with a fact which has come under my daily observation—viz., that if the triple phosphates have been for some time removed from the bladder, they form, on the abstraction of the water, little concretions, exactly resembling those which are formed in the urethra when the triple phosphates are therein arrested. Shivering is a very common premonitory symptom in the formation of these calculi, and it may recur several times during the night, frequently assuming regular febrile stages of shivering, heat, and sweating, with great depression of strength. It is very remarkable that often even on the same night, on an attempt being made to pass urine with an effort, a total closure of the urethra and an impossibility of emptying the bladder arise. Every effort of the patient proves in vain, and he is seized with complete retention, accompanied by tenesmus.

These symptoms prove without a doubt that a concretion has been carried by the urine into the urethra, and has produced its obstruction. A Surgeon, called to the patient, who is unacquainted with the conditions of this mode of stone-formation will at once endeavour to pass a catheter, and yet in these cases the catheter should only be resorted to as a last resource, as will be explained. Our first endeavour should be to favour the expulsion of the concrement from the urethra; for if by means of the catheter we force it back again into the bladder it may become the foundation of a calculus too large to admit of its again being carried away spontaneously by the stream of urine. My experience, derived from eight cases, has taught me that these concretions can always be passed by the urethra. We should advise the patient, when he finds this sudden interruption to the passage of the urine, in spite of involuntary efforts, that he should not employ any active attempts to further the flow, as this only increases the state of irritation that is present, and the passage along the canal is delayed. After an hour's repose, he should go to stool, and the combined straining through the rectum and bladder forms the most ready means for assisting the passage of the stone. In one case, the patient arriving at his attendant's house in a carriage, and attempting to pass urine, found that he did so without any difficulty, a small stone coming away during a powerful stream. It is possible that while riding the stone was changed from its broad diameter into a more favourable position. On another occasion a favourable change occurred during the careful passing of a straight catheter down to the obstruction. On its withdrawal, a stream of urine bearing the calculus followed. In a third case this happened in a bath, without any instrumental aid; but the bowels and bladder were emptied at the same time, so that forcing in both directions had co-operated. It is not without its advantage to give these patients, when suffering from obstruction to the urine, a certain amount of water to drink, in order that the propulsive power of the bladder may be increased by its distension. It is evident that in extreme cases no other means remains than to force the stone back again into the bladder, which in simple cases can be done without any great difficulty by the mere passage of a catheter. When, however, œdema of the urethra is present, the procedure is a much more delicate one.

I am at the present time engaged in constructing an i
ment having for its object the seizure of the calcul
extraction from the urethra. It will consist
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CATARACT, AND ITS TREATMENT BY THE SEMILUNAR CORNEAL INCISION.

By JABEZ HOGG,
Surgeon to the Royal Westminster Ophthalmic Hospital, etc.

(Concluded from page 602.)

A FEATURE of some interest in my cases, and one upon which I shall trouble you with a few remarks, is the successful extraction, in three instances, of traumatic cataracts, with retention of sight. Penetrating wounds and blows received on the eyeball very frequently lead to lenticular opacity, and such accidents are the frequent cause of an iritis, a torn retina, or destructive inflammation of the eyeball; so that, to be useful, we must be prompt in our measures of relief. If an accident produces early opacity, we should resort to early extraction—looking upon an opaque or displaced lens as a foreign body, certain to become worse or to set up irreparable mischief if not removed quickly. Even then it is impossible to say what success may attend the operation. I, however, as unhesitatingly condemn a too hasty removal of the eyeball after receipt of injury in any case, even should it be suspected that a foreign body has been lodged within the chamber. I believe that those who advocate early extirpation in anticipation of sympathetic inflammation attacking the sound eye, will have some difficulty in showing that, in days long past, and before this plan of treatment was in vogue, the loss of the second eye followed in any great number of instances. I will briefly narrate my cases which bear upon this question :—

Wm. S., aged 68, received a violent blow on the right eye, which was followed by a traumatic cataract. With a Beer's knife a small corneal section was made. As the lens did not show a disposition to start, an adhesion was suspected, and the extraction was finished with the scoop. The House-Surgeon reports—" The man has not had a bad symptom, and, in fourteen days after the operation, can read ordinary type with a No. 2 convex glass."

Sophia P., aged 38, received a blow from a man's fist on the left eye, producing a traumatic cataract. The House-Surgeon states on September 3 :—" Mr. Hogg extracted the lens through a small corneal section. On the 11th the eye was opened, everything in the meantime having gone on well, when she could count fingers. The pupil was found to be quite circular, and the eye presented no appearance of having been operated upon at all. September 18 (fifteen days after the operation), the patient was able to read with a two and a half inch convex glass."

Repeated attacks of inflammation after the receipt of an injury are extremely liable to produce destruction of the eyeball; nevertheless, occasionally a case will turn out well even when the inflammatory attacks have extended over a considerable period. A gentleman, A. C., aged 82, received nearly twenty years before I was consulted a slight injury to the left eye, which, so far as could be made out, was followed by rheumatic iritis and lenticular opacity. At intervals inflammatory attacks occurred, which obliged him to consult his Medical adviser. When I saw him the lens presented a dense white central nucleus, and he was suffering from a severe attack of rheumatic inflammation. In spite of the remedies employed, suppuration within the capsule took place. I recommended early extraction of the lens, as a measure of relief for the intense pain. To this the patient at first demurred; but, when I pointed out the extreme danger to the other eye, he at length consented. As, from great intolerance of light, there was much difficulty in turning the eyeball downwards, I made a lower section of the cornea, and out gushed a small nucleus in a drop of milky-looking fluid, complete relief following in a few hours; and, although a slow recovery was made, I was not a little surprised to find before I ceased my attendance that the patient could discern large objects. In two months from the operation he could, with a deep convex class, read large type.

When, by injury or violent straining, dislocation of the lens is produced, and sets up an inflammation, there can be no doubt of the propriety of resorting to extraction. Dislocation may occur quite spontaneously—that is, from disease of the suspensory ligament, or from liquefaction of the vitreous, the lens becomes separated from its attachments, or is so loosely held in its place that a violent fit of coughing or sneezing is sufficient to produce the accident. I may remind the Fellows of this Society of a remarkable case of the kind just mentioned, which I published in the *Lancet*, 1860, and in which, from the amount of pain and violent iritis set up, I was obliged to resort to early extraction. I mention this case here because a few months after the operation I was once more consulted by this patient, who had the evening before unfortunately sustained a similar accident to the other eye. On this occasion I had the opportunity of seeing him early. Finding him free from pain, I proposed to dilate the pupil, and try to return the lens to its normal position. This I succeeded in doing, by seating him on a music-stool, and, by a pull from behind, bringing him suddenly into the horizontal position. By this manœuvre the lens popped back into its place. I kept him on his back until the pupil had very nearly recovered its natural condition, and I suppose he had no further trouble, for in a few months after I heard of his return to Germany.

I have but few details to trouble you with in the history of the majority of my cases, as nothing very remarkable occurred. Nearly all ran a very even course, and terminated in good or fair sight. I do not mean to say all my operations ended in giving perfectly circular pupils to my patients, or that I had no case of secondary cataract to deal with subsequently, for I certainly had two secondary cataracts, and these gave me neither trouble nor anxiety. Let me add, by way of caution, that secondary cataract is very liable to follow when the corneal section has been made too small, and much pressure is made on the globe in the delivery of the lens, or when your assistant make pressure on the globe at the time the knife is passing through the cornea. The last of my cases (in November—No. 32) ended in secondary cataract from this cause. Mrs. E. W., aged 60, with double cataracts; nervous temperament; eyes full and prominent. The left, being the oldest cataract, was selected for operation. She was rather unsteady, and my assistant had some difficulty in supporting the upper lid. In so doing he made considerable pressure upon the eyeball just as the knife was cutting its way out; the consequence was that it came out too suddenly, and about an eighth of an inch from the junction of the sclerotic. The lens was extracted with difficulty, leaving behind portions of the capsule. At the end of three weeks I depressed the capsule, which was then filling up the greater part of the pupil. My patient has since obtained fair vision.

In conclusion, I will add a few brief remarks on my mode of performing the operation. The upper section has always been preferred at the Royal Westminster Ophthalmic Hospital, and very justly so. As I have already intimated, it possesses certain important advantages over the lower section—that of less easily permitting escape of the vitreous, while the support afforded by the lid certainly favours healing of the flap. Should irregularity of the pupil occur, either from unfavourable healing of the cicatrix or injury to the iris, it is concealed by the upper lid. After the operation, separation of the section and prolapse are less likely to take place from a fit of coughing or vomiting. If the patient, however, is unable to fix the eye in the proper position, and a real difficulty presents itself in attempting the section, by reason of the eyeball rolling upwards and inwards, this is readily overcome by directing your assistant to seize, with a pair of fine-toothed forceps, a fold of the conjunctiva, and gently retain it in position. Everything considered, although upper section may be rather more difficult of execution, this is counterbalanced by its greater advantages. Another difficulty will occasionally occur, and one less easily overcome. In attempting the section, the knife penetrates the cornea too obliquely; the point then traverses the lamellæ for some distance without at all entering the anterior chamber. In such a case, the knife must be withdrawn and re-entered, or an opening must be made from above downwards with a broad-shouldered triangular knife. Such an accident will be avoided if the knife is fairly poised between the two forefingers and thumb, and the point made to enter perpendicularly to the cornea and within it, at the distance of a line from the sclerotic coat. When the point has penetrated the anterior chamber, which is known by its brightness as distinguished from the dull appearance of that part of the instrument still remaining within the density of the cornea, and by the absence of resistance which is readily felt by the practised fingers, the handle is directed slightly towards the temple, so as to give the edge such a direction when drawn in a right line that the point shall come out at the part of the circumference of the cornea exactly opposite to the point entered, thus causing the knife to divide the cornea parallel to its edge, and within a line or two of the sclerotic. It is, I consider, a matter of considerable importance that the section should be purely corneal, and therefore it must not be carried low enough to merge into the sclerotic: a corneal margin should be left of a sufficient breadth for union.

The main impediment to success is, as I have already intimated, a section too small to admit of an easy delivery of the lens. The easy extraction of a cataractous lens, like the easy extraction of a stone in the bladder, depends upon a clean cut and a fair-sized opening; while a difficult and forcible removal is almost as certain to end disastrously. The enlargement of the section after the escape of the aqueous is dangerous to the iris and other membranes, often provocative of laceration of the hyaloid and a loss of vitreous. Should the lens sink down behind the iris to rise up in judgment against us, prolapse of this membrane is very likely to follow, and it becomes entangled in the lips of the wound. Any attempt to excise the iris after the lens has escaped will be followed by bleeding into the anterior chamber, causing not only protracted healing, but opacity of a portion of the cornea, and a dense secondary cataract from the combined effects of retained portions of capsule and serous exudation. When all goes well, very gentle pressure exerted on the eyeball, after rupture of the capsule, serves to deliver the lens, and the operation is complete. Before applying the bandage, it is necessary to separate the eyelids to ascertain if the pupil be perfectly clear. Should any portions of capsule be seen, these must be removed with a curette or scoop, care being taken not to use enough force to rupture the hyaloid, which, it should be remembered, is now bulging forward, and may very easily be torn.

By way of securing more perfect adaptation of the edges of the cornea, I take a very soft piece of sponge, and make a few circular movements over the closed eyelid, and, lastly, apply a pad of carded wool and a firm bandage. At one time it was my practice to close the lids with a narrow band of black sticking-plaster; but as this sometimes lead to unpleasant consequences when there was occasion to remove it, I abandoned it for cotton-wool. The plaster is still preferred by some operators, and it certainly possesses the advantage of maintaining perfect adaptation of the lids, and secures the eye from the meddlesome interference of nurse and patient. I generally prefer to keep my patient in bed from four to six days; at the end of this period, if no inflammatory symptom appears, the bandage is partially removed, and he is allowed to move about. After the first forty-eight hours, little or no restriction is placed upon the diet, and the average duration in Hospital is under twenty days.

The construction of instruments employed in this, as in most other operations, is a point which everyone must be permitted to decide for himself. The knife known as Beer's is that more generally used in our Hospital. For my own part, I think it a little too broad towards the base; the angle it subtends is too great. I therefore employ a modified form of this knife, in shape somewhat between a Beer and Wenzel. It is, as you will see, rather smaller, but very well adapted to fill the wound it inflicts, which is a point of no little importance in making the corneal section, as it prevents the too hasty escape of the aqueous.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE ROYAL FREE HOSPITAL.

IDIOPATHIC (?) PERFORATING ULCER OF THE SOFT PALATE IN A CHILD, HEALING UP WITHOUT OPERATIVE INTERFERENCE.

(Under the care of Mr. JOHN D. HILL.)

Perforating ulcers of the soft palate are so rarely met with, save in syphilitic patients, that, by most Surgeons, we believe, they are considered pathognomonic of this disease. The following case, for the notes of which we are indebted to Mr. F. Lett, the House-Surgeon, is therefore of considerable interest, inasmuch as careful search, specially directed with a view to the discovery of other symptoms or history of syphilis, failed to discover any, although the ulcers in the palate precisely resembled those usually associated with this disease:—

Mary C., aged 8, came under the care of Mr. John D. Hill in this Hospital, on January 12, 1871, suffering from a circular perforating ulcer of the soft palate, about three-eighths of an inch in diameter, situate a quarter of an inch from the junction of hard and soft palates. There were also several small ulcerated openings on each side of, and posterior to, the large ulcer, and some ulceration about the free margin of the palate and upper and posterior parts of the pharynx; the uvula had been almost entirely destroyed, a short stump only remaining, and the whole was covered with a yellowish-white coating. The mother stated that her own health and that of her five other children had always been good, and most of her relations had attained advanced ages; her husband's health had also been always good, although he came of a phthisical family. The patient, a well-developed, though somewhat delicate-looking girl, had never had any ailment that her mother could remember—certainly not any of the eruptive fevers. About thirteen months since the child complained of pain in the right ear, soon followed by a yellowish discharge. In four weeks from the commencement of this discharge a white swelling, resembling a blister, presented itself in the median line of the soft palate, which was quickly followed by a discharge of whitish fluid, and ulceration, which has gone on increasing up to the present time. The pain of ear and discharge from it continued for about four months. As far as could be ascertained from the history as given by the mother, there was nothing by which to identify it as syphilitic in its origin.

On admission, Mr. Hill ordered a lotion of acid nit. fort. ♏xv. to aq. ℥j., to be applied with a brush twice daily, and internally a mixture of pot. chlor. gr. x., syr. aurant ʒj., acid hydroch. ♏iij., aq. ℥ss. t.d. The lotion was discontinued on January 25, because the granulations were weak and flabby, and argenti nitras applied daily instead, a liberal diet with ℥v. of wine being allowed. The patient thenceforth steadily improved, and the circular opening in the soft palate was quite closed up by March 15.

EPITHELIOMA OF THE LOWER LIP—EXCISION—UNION BY FIRST INTENTION.

(Under the care of Mr. J. D. HILL.)

J. H., aged 64, was admitted into No. 9 bed, Calthorpe Ward, on January 14, 1871, suffering from epithelioma of the lower lip. The man stated that the disease had first appeared as a small blister on the outside of the lip about two years ago, following a kick from a horse. A thick discharge issued, which dried up and again appeared, until, in May, 1870, the sides of the sore began to get hard, leaving the centre soft and sloughing. On January 16, Mr. Hill took a V-shaped piece, including the diseased portion, out of the lip, and drew the edges together with three pins, which he kept in place by silk, the whole being covered with collodion. On the third day afterwards, the first pin was withdrawn, union having commenced; and the second and third pins were removed on the next two days. On the ninth day, all plasters, etc., were also removed, the wound having perfectly united; and the patient was discharged on February 3.

In his remarks upon the case, Mr. Hill said that, whether in the upper or lower lip, he always made a practice of removing the pin nearest the mouth last, so that the orbicular muscle should not be free to act before the union was very firm; and although the longer the pins were kept in the greater the scar, this was far preferable to the danger of reopening the wound, and possibly the chance of a salivary fistula. Considering the patient's age, he had not seen a more satisfactory example of primary union.

"DREADNOUGHT" SEAMEN'S HOSPITAL.

CASE OF MALIGNANT PURPURIC FEVER.

(Under the care of Dr. STEPHEN WARD.)

[Communicated by W. C. S. Clapham, House Physician.]

G. S., aged 20, a fisherman, was admitted into the Seamen's Hospital May 16, complaining of dizziness, pain in back, vomiting, and dimness of vision. Stated that he left Grimsby for fishing-grounds off Holland seventeen days ago, and was taken ill after being at sea seven days. Had been exposed to no infection that he knew of; no one else in boat ill. Returned to Grimsby on 15th, and came direct here by steamer. Previously enjoyed good health. Does not know whether he had been vaccinated; no vaccination scars.

Examination.—Patient is a strong, well-developed man. Bright scarlet rash was seen over back and abdomen, which did not disappear on pressure, nor ecchymose on pinching. Skin of face, chest, and arms darker than rest of body, and dotted here and there with small bullæ, containing black fluid blood. Legs were covered with purpuric spots and patches, a few large pustules on ankles, not umbilicated. Legs and arms œdematous. Rash principally on outer side of limbs, and thickest at flexures of joints. Pupils contracted, but equal; conjunctivæ injected and painful; corneæ healthy. Purpuric spots on lips, which were covered with sordes; tongue swollen, white, and dry; thick white exudation on palate; gums spongy, and bleed profusely; swallows liquids well; bowels confined since 14th. Pulse 108; heart-sounds natural, but indistinct; respirations laboured, stertorous, and interrupted by short frequent cough; sputum copious, and consisting chiefly of blood; small crepitations over both lungs, anteriorly and posteriorly. Urine, large in quantity, dark port-wine colour, with deposit of pure blood, acid, specific gravity 10·18, albuminous; chlorides increased, sugar present in considerable quantity; microscope showed blood corpuscles and vesical epithelium, red and white corpuscles in normal proportion. Temperature at night 104·2; pulse 110. Ordered five grains of ammon. carb. and twenty minims of sp. æther nit. in an ounce of water, every four hours. Milk diet, eight ounces of brandy, and two eggs.

17th.—Bowels smartly moved this morning; motion loose; no blood; expectoration still bloody; bullæ on chest more numerous; dyspnœa increased; rash deeper in colour; lips swollen, and covered with black sordes; quite sensible, but drowsy; temperature 103·8; complains of feeling chilly; pulse 128. In course of afternoon dyspnœa increased, and death took place at 5 p.m., patient retaining his consciousness until the last.

Post-mortem Examination, Twenty Hours after Death.—Rigor mortis considerable. Thorax: Lungs free; patches of ecchymosis on surfaces of both. Right lung extensively engorged with blood; middle and lower lobes soft, and easily broken down. Left lung in same condition, but to a less degree. The heart contained a little dark fluid blood in both ventricles; no coagula; valves healthy; muscular structure firm, almost like indiarubber. The liver was firm and fatty. The gall-bladder contained three ounces of black viscid bile. The spleen was firm and beefy. Kidneys large; pelves filled with closely adherent blood-clot; capsules stripped off easily. The intestines were healthy throughout; mesentery of cæcum infiltrated with blood. Weight of viscera: Right lung, 2 lb. 8¾ oz.; left lung, 1 lb. 10½ oz.; heart, 13 oz.; liver, 5 lb. 1½ oz.; spleen, 10½ oz.; kidneys (together), 1 lb. 5½ oz.

This case agrees with two cases already published elsewhere, in the character of the eruption and excretions, with the exception, in this case, of there being no blood in the stools, chlorides of urine being increased, and sugar being present. The febrile symptoms of this were also of greater severity, as shown by pulse and temperature. Malignancy of fever is sufficiently established by the fact that not one of the three survived the sixth day of the rash. Post-mortem appearances similar in all three cases, except that in this case the intestines were healthy, whereas, in the two above referred to, there were ecchymoses scattered indifferently over surface.

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Medical Times and Gazette.

SATURDAY, JUNE 3, 1871.

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ARE THE PARISIANS MAD?

The Medical Profession has had quite its share of suffering from the horrible events which have accompanied the Communist insurrection in Paris. The private practice of our *confrères* has been well-nigh annihilated; they have toiled in the Hospital wards amidst pyæmia and gangrene; they have exposed themselves freely to the scarcely greater dangers of the battle-field, and have not escaped the threats and injuries of the ruling assassins and incendiaries. It is not out of the province of a Medical journal, therefore, to say a few words on the late horrible events in Paris. This the more especially because, as we learn from the *Pall-mall Gazette*, the hypothesis has been started that the Parisians are mad.

"M. Francisque Sarcey," we are told, "reports in the *Gaulois* a conversation he has had with 'an illustrious Physician' who expressed the opinion that one of the chief causes of the terrible scenes which accompanied the final suppression of the Communist outbreak was 'a contagious mental alienation.' The minds of the Parisians, he said, were gradually unhinged by the privations of the siege. The revolt of March 18 gave the last blow to brains which were already shaken; and at length the greater part of the population went raving mad. 'This epidemical insanity is one of the most surprising cases that physiologists have ever witnessed. . . . You are astonished at seeing women, young girls, and children throw petroleum and lighted matches into private houses. This fanaticism is attributed to their having been paid ten francs a day for their horrible work. Can anything be more improbable than that they should expose themselves out of mere thoughtlessness to the almost certain prospect of being shot down by our troops for such a miserable sum? They were simply under the epidemical influence of the mania of incendiarism. . . . They acted under an hallucination which is as incontestable as it is difficult to understand and explain. This is not the first time that a whole population, attacked by a sort of vertigo, ran about with torches and set fire to everything in their way. The records of the middle ages are full of similar examples. . . . Women are under such circumstances fiercer and more reckless than men. This is because their nervous system is more developed, their brains are weaker, and their sensibilities more acute than those of the stronger sex; and they are consequently far more dangerous and do much more harm. . . . None of them knew exactly what they were fighting for; they were possessed by one of the various forms of the religious mania—that which impelled the Jansenists to torture themselves, with a strange delight in pain of the acutest kind. . . . . The men who threw themselves on the bayonets of the soldiers in a paroxysm of passion were seen ten minutes after utterly prostrate and begging for mercy. They were no more cowards in the last state than they were heroes in the first; they were simply madmen. . . . . Look at the citizens who did not take part in the insurrection; they are immovable and stupid, like men struck with paralysis. Yet they have on many occasions given proofs of uncommon vigour and courage; but the air of Paris is at this moment poisoned by deleterious miasmata which make some people furious madmen, and others helpless idiots. I have seen the strongest intellects stagger under this pernicious influence, and I have myself frequently felt as if my reason were going.'"

We fear that a more minute analysis of the facts will fail to establish any similarity between the disorders in Paris and the great moral epidemics of the middle ages, of which accounts are to be found in Hecker; for instance, the Dancing Mania, the Flagellants, and the like. In the cases of the Parisian *petrolistes*, we do not find them actuated by incendiarism pure and simple; they did not burn their own houses; they were sane enough to select the objects of destruction amongst those of the class that they believed to be hostile to them. Moreover, the incendiarism was not the sudden impulse of a frantic population. There was nothing in it to recall Dryden's lines—

> "Behold how they toss their torches on high!
>   How they point to the Persian abodes
>   And glittering temples of the hostile gods!
> The princes applaud with a furious joy;
> And the King seized a flambeau with zeal to destroy.
>   Thais led the way
>   To light him to his prey,
> And, like another Helen, fired another Troy!"

There was no sudden apparition of the Furies in Paris; everything had been coolly premeditated and prepared. *Reynolds's Newspaper*, one of the English Communist organs, says (May 28):—

"Three weeks ago we forewarned our readers that Paris would be set on fire. We had seen a letter from M. Felix Pyat, the ruling spirit of the Commune, saying that the city was soaked and undermined with petroleum. M. Thiers must have known this also."

This quite excludes the notion of insanity.

If now we endeavour, like students of moral pathology, to trace this hideous social cancer to its source, we are compelled to dismiss most of the causes that are brought forward. Some lay the blame on the Emperor Napoleon, but forget that precisely analogous symptoms prevailed in the Parisian insurrection of 1848, which was, in fact, the main cause that lifted him to the throne. The Emperor, say some, acted criminally in declaring war. On the other hand, M. Victor Hugo declares of Louis Phillippe that he was deservedly upset by the revolution of 1848, because "Sa grande faute, la voici; *il a été modeste au nom de la France.*" His pacific policy, says M. Hugo, did not suit a nation that has an Austerlitz amongst its military traditions. Again, the idea is untenable that this fight of the "populace" against the "people"—of the ὄχλος against the δῆμος—was caused by privation and misery. All evidence shows the existence of an organised combination of two classes—of the free lances, the turbulent demagogues from every part of Europe; and of the so-called working classes; that is, of those who live by weekly wages—not merely to get the greatest pay for the least work, which is fair, but to seize the property of the capitalist, and place all the fruits of the industry and forethought of past generations at the mercy of men who live from hand to mouth. Capital means only that surplus of the fruits of the earth which remains over and above immediate expenditure. Unluckily, the "working men" wish to unite the possession of other people's capital with the pleasure derivable from squandering the whole of the weekly wages they earn. Is the Medical Profession blameless of the guilt of fostering this moral ulcer? We fear not. The drunken artisan begins to look on Hospital relief as his right, and to treat it as if it were a natural privilege. Any system which should inculcate providence, temperance, and self-reliance would be a greater boon to the working classes than the doles of the middle ages or the indiscriminate relief of our own times.

THE PROCESS OF INFLAMMATION.

So much has of late years been said and done on the subject of inflammation—so materially have our views changed since the days of the old exudation theory—that it is not very easy to state, even in substance, what could be called the orthodox belief at the present day. First, we had the views of Virchow superseding what might be called those of the French school, teaching that all inflammatory products were the direct result of alterations in local cell-growth and nutrition. Next came the views of Waller, revived by Cohnheim, showing how inflammatory products were to a considerable extent, at least, the result of metamorphosis in extravasated blood elements. It is with something like satisfaction, therefore, that we proceed to give an abstract of the views of one who, by weight of judicial authority and by experience, both clinical and experimental, is entitled to claim a hearing from us all. It may be within the recollection of some of our readers that the portion of Mr. Simon's article "On Inflammation," relating to the inflammatory process, was not published with the rest in the first volume of Holmes's "System of Surgery," and it was then generally understood that Dr. Burdon-Sanderson had been intrusted with the task of carrying out such inquiries as would lead to satisfactory conclusions on the subject. These results now appear in the appendix to the fifth volume; and of them we desire to give some account.

The process of inflammation is defined by Dr. Sanderson as "the succession of changes which occurs in a living tissue when it is injured, provided that the injury is not of such a degree as at once to destroy its structure and vitality." The origin of inflammations, again, may be put down as either extrinsic or intrinsic, either reaching the part directly, and directly modifying its structure and functions, or only reaching it through the lymphatic or vascular channels. To the latter of these modes of origin, Dr. Sanderson has given a name which, if well adapted to explain certain forms of inflammation originating in the intrinsic way, is hardly so well suited for others; that name is *infective*. But all inflammations of that kind, whether tubercular or pyæmic, are meantime put aside; *extrinsic* inflammations are alone discussed, and only that variety of these where the local injury gives rise to local changes in the same locality—in other words, we deal only with the effects of excessive irritation on the tissues. These appear to be, in order—(1) disorder of circulation; (2) transudation of blood constituents; (3) alterations in the nutrition of the inflamed part or texture, as exemplified by alterations in the growth of its elements.

Perhaps the step most difficult of understanding in the process of inflammation is that which relates to the changes in the bloodvessels themselves, especially in the production of what is called *stasis*. To the perfect understanding of this a knowledge of what has of late years been made out as to the influence of certain nerves on the vessels themselves is absolutely necessary; and on this point our readers cannot do better than to refer to Dr. Sanderson's own lectures on the subject in our columns. Taking all the facts into consideration, we must come to the conclusion that irritation of the sensory nerves of a part gives rise, by reflexion through certain centres, to, in the first instance, contraction of the minute arteries, with, in almost every instance, increased rapidity of the blood-current. But this in its turn gives way to dilatation and retardation, or retardation without dilatation. Such, also, would seem to be the case in inflammation. If a frog be properly prepared, and a portion of its mesentery exposed below the microscope, this increased rapidity of the blood-current will for a time be observed, but by-and-bye a change comes; suddenly the current, instead of being accelerated, is retarded in a remarkable manner. It will also be observed that whereas the central portion of the vascular canal is filled with a rush of red bodies, the comparatively still layer at its sides becomes more and more crowded with white corpuscles or leucocytes. Now, also, is to be noticed that curious property of living leucocytes—their powers of independent locomotion. Everywhere they may be seen perforating the walls of the veins, and accumulating in the tissues beyond. At the same time, the liquid portion of the blood leaks through the vessels' walls, yielding nourishment to the leucocytes beyond, and giving rise—in part, at least—to that swelling which is one of the characteristic features of inflammation. All this time the current has been becoming slower and slower—more and more retarded; next, the stream seems uncertain in its direction; oscillation of the vascular contents ensues; finally, there is a dead stop, all motion in the blood ceases, stasis is complete. In these parts the blood corpuscles are so crowded that they seem to lose their shape, and liquor sanguinis no longer seems to be left in the vessels. Nevertheless, these changes do not appear to be brought about by changes in the blood itself, but rather in the vascular walls. Thus it has been shown that the same sudden train of changes may be induced by the irritation of a part whose bloodvessels contain, not blood, but milk; but if the vessels themselves be altered by the introduction of such a reagent as chromic acid—even for a moment—no stasis follows.

This is best explained by a consideration of the structure of a minute capillary. Physiologists do not nowadays adhere to the old anatomical demonstration of the arterial coats, for Frey has well shown the exceeding variety of these coverings, from the structureless substance of a fine capillary to the complicated textures of a medium-sized artery. But more has been done than this. The exceeding readiness of repair exhibited by the capillaries themselves has been studied, and found to be inherent in their nature. They are no rigid semi-vitalised canals, but channels of living protoplasm; and, just as one portion of a wandering amœba combines with another, or separates from it at will, so can a living leucocyte enter into or make its exit from the living walls of a capillary. Kill the walls of the capillary, and all is changed.

It is thus evident that the bloodvessels are something more than mere carriers of blood in the initial step of inflammatory action; their very substance is modified by the original stimulus, be that what it may, and the change so induced facilitates the transmission of leucocytes through their walls. These constitute the first puriform elements outside the vessels. But this change in the vessels themselves also permits the transudation of fluids in unusual quantity for the nourishment of the tissues beyond; and from their elements, thus stimulated and nourished, are produced the great bulk of the so-called pus corpuscles. These changes in the tissues outside the vessels we must consider next week.

THE SMALL-POX EPIDEMIC.

The fatal cases of small-pox registered last week in London were 257, a very trifling decline upon the previous week. In the seven weeks ending May 27, the weekly numbers averaged 264. Distributing the Hospital deaths among the districts from which the cases proceeded, the numbers for the several districts were—West, 21; North, 65; Central, 22; East, 51; and South, 98. Taking the population into account, the South of London is still pre-eminent for small-pox mortality. The principal decline has occurred in the Northern districts. The greatest fatality from small-pox was shown in St. Pancras, Shoreditch, Bethnal-green, Southwark, Walworth, Clapham, Battersea, Peckham, and Camberwell. In the North of London the chief prevalence of the disease, according to the returns of the Health Officers, is in St. Pancras. We hear, too, that within the last ten days a considerable outburst of small-pox has occurred in Kensington. We learn from the Registrar-General that, while the small-pox mortality has declined in most of the large towns invaded, it has increased in Newcastle and Sunderland. In Southampton, 16 deaths were registered last week, against 13 and 17 in the two previous weeks, the annual death-rate being equal to 17 per 1000 persons living. A return made to the sanitary committee of the town shows that there are 1000 cases in the town, out of a population of less than 50,000, besides those in the workhouse. In Weymouth there were 9 deaths from small-pox last week, showing a death-rate of 32 per 1000 living. In Great Grimsby there was a decline of 4 deaths, the annual death-rate being 25 per 1000; no fewer than 122 deaths have occurred here, with a population under 30,000, since the outbreak of the epidemic about two months ago.

We hear, upon what we regard as good authority, that the disposition to overcrowd the *Dreadnought* with convalescents has received a rebuke in the form of an outbreak of erysipelas. At first, it was contemplated to accommodate 200 patients there; then it was thought that 250 would not be too many, considering the free ventilation that could be commanded; and ultimately there were those who did not consider 300 an excessive complement. It is a pity that the Asylum Board do not in such matters submit to the guidance of an experienced Medical man. The same disposition to overcrowd has been manifested at Stockwell. We are afraid that the truth is that each Hospital Committee is a law unto itself. It is said that arrangements have been made for taking into occupation another Hospital ship, to be moored alongside the *Dreadnought*. One day this week we paid a second visit to the Hampstead Hospital, in order to see the wooden huts erected for male convalescents. There are altogether four of them put up on the waste ground to the north of the Hospital buildings. They are entirely constructed of weather-boards, the roof is covered with felt, and along the whole length at the top of it is a prolonged louvre, the sides of which can be closed at discretion by a flap. There is a free circulation of air beneath the floor, and for more complete ventilation the central floor-boards along the whole length open by means of hinges into the space beneath. Each is well lighted and ventilated by sixteen windows at the sides, and one or two at each end. Airiness, lightness, and economy of construction are here combined with complete efficiency. Each hut is 100 ft. long, 20 ft. wide, and about 9 ft. high to the spring of the roof, above which the latter rises about 6 ft. higher in the middle. One of them is used as a day-room, and is provided with bagatelle-boards, draught-boards, and a piano! Smoking is allowed; and the patients have thus a pretty fair time of it. It would be strange if, with the liberal diet provided, they were not content, and rather sorry to leave such good quarters when discharged. The other three huts are dormitories; they contain each thirty-four beds. The 800 feet per head of cubic space, with the constant ventilation provided for, prove sufficient. The closets, urinals, and lavatory are separate altogether from the huts. The cost of each has been £190; or, including the day-room accommodation, £7 9s. per bed. Now that the Hospital is complete, and in good working order, we cannot avoid reiterating our admiration of the entire plan and arrangements; the perfect order, cleanliness, and neatness pervading the establishment; and the sweetness of the atmosphere in the wards. There was but one exception—namely, the old double hut, moved to Hampstead from the London Fever Hospital—which is divided along the centre into two wards by a lofty wooden partition; these wards alone felt close and stuffy. We were glad to learn that Dr. Grieve, whose authority in the establishment is wisely and fully maintained by the Committtee, in the ordering of all the details of administration, proposes to cut down this partition very considerably. One of the annexes on the north side has been fitted up as a small chapel, and attractively decorated by the East Grinstead Sisters in charge of the domestic arrangements.

We are pleased to hear from Dr. Collie that he has taken our hint about the children's tent at Homerton, and reduced the number of patients to six. Still he maintains six adults in the other tents. He says that the patients like the tents better than the Hospital wards. In the daytime, these patients are virtually treated in the open air by turning up the side of the tent all round. The dry-earth closet is in use for these patients, and answers very well. Up to the present time, at the Hospital which Dr. Collie has charge of, there have been 914 patients admitted altogether, and the deaths have been 119, equal to about 13 per cent. As yet, he informs us, the cases have not presented any change of type—they are as severe as ever.

In Dr. Barbour's last report on one of the Stockwell Hospitals, he takes occasion to mention, as a contribution towards determining the question of using revaccination lymph, the following facts which have come to his knowledge. He says:—

> "A Medical man in the south of London has been revaccinating with lymph taken from a secondary vaccination. Three patients thus revaccinated have been admitted into this Hospital with small-pox, contracted after a lapse of time sufficient to have allowed the revaccination to become protective. One of this number, the mother of a family, died the same day on which she was admitted, the attack being of a hæmorrhagic, and almost necessarily fatal, type. The history of the family is the important part. The mother and one child were vaccinated with secondary lymph three months ago, the marks on the arm remaining. Both had a bad attack of small-pox, and the mother, as I have said, died. Two other children were revaccinated, by another Medical man, with lymph taken from a primary vaccination five weeks ago. They have not taken small-pox, though they slept in the same room with the mother and sister already referred to."

We should have liked to have heard something more of the character, appearance, and stage of the secondary pocks used in this instance. Anyhow, the warning is a valuable one.

THE WEEK.

TOPICS OF THE DAY.

The Committee of the Council of the Royal College of Surgeons, appointed to arrange the scheme for a conjoint examination, met on Wednesday. It is understood that the scheme proposed by the Royal College of Physicians was fully discussed, and that the Committee decided upon some very important alterations which they propose to make in it. These alterations they will submit to the committees appointed by the Royal College of Physicians and the Apothecaries' Society at a meeting which is fixed to take place on Monday next.

The Report of the Select Committee on Vaccination, which we publish in another column, is evidently a carefully weighed and drawn-up State paper. It is a complete confirmation and vindication of the opinions which this journal has advocated with regard to the wisdom and policy of the Compulsory Vaccination Act. In the first place, the Committee allow—what unfortunately can no longer be denied—that vaccination is not an absolute, although it is a very great, protection against small-pox, adding, however, that it is an almost absolute protection against death from that disease. They then state that, if due regard be paid to the health of the person vaccinated, and proper precautions be taken in obtaining and using the vaccine lymph, there need be no apprehension that vaccination will injure health or communicate any disease. In this statement the Profession will agree. But the evident caution with which the statement is made, and the avowed possibility of disease being communicated where precautions are not taken, are arguments which will certainly be made good use of by the anti-vaccination fanatics. The Committee, while they lay down the axiom that it is the duty of the State to secure the careful vaccination of the whole population, will not undertake to recommend the forcible vaccination of any individual, and "recommend that whenever in any case two penalties or one full penalty have been imposed upon a parent the magistrate should not impose any further penalty in respect of the same child." This is virtually to give up the principle of fines and penalties altogether. The law thus altered will merely prescribe that anyone who chooses may avoid vaccination by paying a trifling sum or getting the Anti-Vaccination League to pay it for him. If a fine or penalty be right as a punishment, logically it ought to be inflicted until the law be complied with. An habitual infringer of any other law is not exempt from punishment because he has already been punished. The fact is, as we have always maintained, a system of fines and penalties for non-vaccination is a mistake, and Parliament and the Government are now finding it out. Vaccination is an enormous boon to the human race, but it is not an absolute good. There will always, therefore, be a set of perverse people who will refuse to recognise the good, and will magnify the evil. To attempt to coerce these persons by fines, imprisonment, and penalties is merely to fan the flame of unbelief, and spread the heresy. This has been the result of the Compulsory Vaccination Act. The evidence produced before this Committee will afford the agitators stronger arguments than they have ever had before against a most beneficent and invaluable practice. All this evil has been due to unwise and mistaken legislation, which will certainly be sooner or later abandoned. Far wiser is the German law on the subject of vaccination. With all the absolute power of the Government of the German Empire, they are far too intelligent to attempt this form of coercion. They say to their subjects, "You may be vaccinated or not as you please, but for the sake of those about you it is desirable you should be vaccinated, and, therefore, unless you are thus prevented from spreading small-pox you shall not go to school, you shall not get married, you shall not serve in any public service, or, in fact, exercise any of the ordinary privileges of a citizen." The result is, that a certificate of vaccination is looked on as a necessary passport to society, and it is obtained. If compulsory vaccination is to be maintained in this country, after the possibility of the introduction of the syphilitic virus by the operation has been proved, Government must at least provide facilities for vaccination from the calf for those who desire it. Finally, we are glad to see that the Committee recommend that vaccination should not be, as now, under two departments—the Privy Council and the Poor-law Board. Delay and non-efficiency are the necessary result of the division of duties.

To the list of candidates for the post of Assistant-Surgeon to St. Thomas's Hospital which we published last week, we have to add the names of Mr. Francis Mason and Mr. Frederick Churchill. The attractions of the new transpontine Hospital are, it seems, great, for Mr. Mason, it will be remembered, has very recently been promoted to the Surgeoncy of the Westminster Hospital—a post which he will have to vacate should he be elected at St. Thomas's. Mr. Frederick Churchill, like Mr. Wagstaffe, has established a real claim on the Hospital, which we think the Grand Committee in fairness ought not to overlook. Mr. Churchill has worked for three years as Surgical Registrar to the Hospital. It is but fair, when gentlemen accept unpaid appointments to Hospitals, and fulfil these duties for a long period honestly and well, that, when vacancies occur, the claims of previous service should be respected, and should place their possessors on some vantage-ground. It is only by the recognition of this principle on the part of Hospital authorities that young men of energy and talent can be found to spend some of the best years of their life in these otherwise unproductive employments.

A Scotch judge and jury have awarded one farthing damages to Mr. Edward Cunningham Craig, a student of the University of Edinburgh, in his action against Miss Sophia Jex Blake for defamation of character, she having charged him with drunkenness at a public meeting in Edinburgh. It must be remembered, however, that in Auld Reekie to be "fou'" is rather a credit, especially to a ruling elder, on Sabbath e'en. This probably accounts for the lenient view of the case taken by the Court. We say nothing of the witchery of the lady plaintiff, which may have subdued the "douce sober bodies."

A Chinese paper, the *Shanghai Courier*, has been taking up the cudgels on the part of the ladies who are endeavouring to force themselves into the Edinburgh Medical Schools. The Chinese writer argues, that because there is nothing indecent about the female patient, so there is nothing indecent about the female Medical student amongst students of the male sex. We do not see the logic of this except we admit as analogous truth Dr. Johnson's axiom, "Who feeds fat oxen must himself be fat."

To the horrors which have accumulated within the last few days, we are sorry to see added the death of the Secretary of St. George's Hospital from prussic acid. The deceased, Mr. Russell Goldie, has been, it appears, in the habit of taking opium and prussic acid to relieve pain, and it is supposed that he took an overdose. He was found dead on his sofa.

HARD OR SOFT WATER IN RELATION TO POPULATION.

A correspondent reminds us that the tallest and strongest men in this country, from whom we get our Horse Guards, our navvies, and our wrestlers, are the people of Cornwall, Cumberland, and Westmoreland, who all live upon the primitive or granitic formation, and drink absolutely *pure* water, when they drink water at all—which is as seldom as possible; for they are much given to very strong ale (33 lbs. to the barrel). But they also eat enormous quantities of animal food, and a kind of bread they call "Masselgion," made from two parts of wheat and one of rye. The Welsh and Highland Scotch also live on the granitic formation and drink pure water, but they are feeble creatures by comparison with the others. They eat, however, very little animal food. The first live on cheese and milk, the last on broth and oatmeal. There is no doubt, if you could determine the amount of nitrogen in a Cumberland dinner and in a Welsh dinner, you would have a very good co-efficient of the relative strength of the two kinds of people, and you would cease to wonder at the feats of the Cumberland wrestler. Moreover, all large towns are centres for the accumulation of all the bad and desperate cases within a twenty-mile circuit; these cases come to the town for better advice, and of course many of them die, and swell unfairly the death-rate. But in agricultural towns this circuit is sparsely peopled by a tolerably healthy population; in manufacturing towns it is densely populated by a people shut up in manufactories and workshops, where unhealthy processes are carried on. To compare such towns as Birmingham, Leeds, and Newcastle-on-Tyne with such towns as Banbury, Cheltenham, Croydon, and Canterbury is impossible.

ANNUAL DINNER OF THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Between fifty and sixty of the officers of the "United Medical Services," as they may be now called, dined together on Friday evening, the 26th ult., at Willis's Rooms. Dr. Armstrong, Director-General of the Medical Department of the Navy, presided. Sir William Fergusson, President of the Royal College of Surgeons, and Dr. Burrows, President of the Royal College of Physicians, were present as guests of the President for the evening, and were most cordially received. Sir T. Galbraith Logan, K.C.B., Sir David Dease, K.C.B., Sir T. Ranald Martin, C.B., Inspectors-General of Hospitals G. S. Beatson, C.B., and John Murray, Indian Service; Deputy-Inspectors-General C. A. Gordon, C.B., T. Longmore, C.B., J. O'Flaherty, C.B., T. Crawford, M.D., and Dr. Mackay, R.N., Dr. Sloggett, R.N., Dr. De Renzy, Sanitary Commissioner of the Punjaub, Dr. De Chaumont, Dr. Manley, V.C., R.A., Dr. Hannen, R.A., Staff Surgeons Snell, Kidd, Webb, etc., also attended.

THE CENTRAL CHAMBER OF AGRICULTURE AND POOR-LAW MEDICAL RELIEF.

The question of poor-law Medical relief, which was to have been dealt with at the last meeting of the Chamber, on May 2, and which was adjourned in consequence of the prolonged discussion on Mr. Göschen's Rating and Local Government Bill, will come on for consideration on Tuesday, June 6, at the Salisbury Hotel, Salisbury-square, Fleet-street, at 12 a.m. precisely. The discussion will be opened by some introductory observations from Mr. Joseph Rogers. As this is the first time that this question has ever been entertained by a non-Professional auditory, it is to be hoped that those gentlemen who are interested in a more efficient system of poor-law Medical relief will make a point of attending and supporting Mr. Rogers in his undertaking.

AMALGAMATED TWINS.

A collection of human monsters is at present to be seen at Willis's Rooms, King-street, St. James's, which well deserves the attention of the student. There is a Miss Swan and a Captain Bates, the former a Canadian, the latter a Kentuckian, each seven feet high, and of good proportion and symmetry. There is likewise a pair of negro girls, amalgamated into one mass, although the cicerone of the party prefers to call them one girl with two heads. It is very well known that two ova are capable of more or less complete amalgamation (or one twin ovum may have a more or less incomplete separation), so that there is hardly a limit to the varieties of double monstrosity. No class of animal is exempt from this liability, and fish, reptile, bird, and mammal so combined may be seen in the Hunterian Museum. There may be an amalgamation of two heads in one, with bodies separate, or of two heads with one body; in fact, given two persons, any parts of both may be fused into one. In the case before us there are two heads, and of course two consciences and wills and understandings; two chests, two sets of arms, all with distinct sensation and volition; but the lower part of the spinal column and pelvis are one, and the four legs obey nerves from a common centre. There are two bladders; one genital and fæcal aperture. Millie Christine, for such is the name of this amalgamation, is 19 years of age, and of nearly pure negro blood. Both girls have the pleasing physiognomy of young negresses, have good voices and considerable taste for music, and dance with considerable grace. Although back to back, they are capable of twisting round, so as almost to face the audience. As living specimens of teratology, they deserve to be visited by our Medical brethren.

FROM ABROAD.—SCORBUTUS COMPLICATING TRAUMATIC INJURIES—DR. E. MULLER ON VACCINATION WITH GLYCERINED LYMPH.

In a file of the *Gazettes Hebdomadaires* just received from Paris, we find several interesting articles on the subject of scorbutus as observed during the siege. Among these is one from the able pen of M. Verneuil (March 31), in which he considers "Scorbutus as complicating Traumatic Lesions." He has long had under investigation a large subject in general pathology—viz., "The Reciprocal Influences of Diathetic Conditions and Traumatic Lesions;" and, therefore, eagerly availed himself of the opportunity of the cases of scorbutus which came under his notice in their Surgical relations. These, however, were few in number; but he relates one case in full detail, and appends to it many interesting remarks. For these we have not space and can only glance at his general conclusions:—1. Scorbutus may attack a wounded person just as it may any other subjected to its causes, but the occurrence is rare. 2. It is a condition of simple intercurrence; the wound, so far from creating any predisposition, would seem to procure a kind of indirect immunity. He has derived this opinion not only from his own observation, but from a diligent examination of the writings on military Medicine. Such immunity would seem explicable by the fact that the wounded under treatment in ambulances are sheltered from fatigue and atmospheric vicissitudes. It would also seem to clear up some obscure points on the etiology of the affection, confirming the opinion of those who attribute a principal part to the influence of climate, and weakening the hypothesis of contagion. 3. Although anterior traumatic lesions do not appear to have any influence in the production of scorbutus, on the other hand, when this disease pre-exists, they play an indubitable part in the localisation of the disease. 4. Scorbutus supervening after traumatic lesion, when reparation is incomplete or of recent date, may retard or destroy the reparation. This a common occurrence. 5. A traumatic lesion affecting a scorbutic person furnishes a place of election for the most common local manifestation of this malady—external, interstitial, or cavitary hæmorrhage. Further investigations are required to determine whether these hæmorrhages are traumatic or mechanical, or whether histological lesions are necessary for their production. If the capillary vessels were in quite a normal condition, it would be difficult to understand how slight pressure should suffice to rupture them while still protected by the tissues which cover them, as also how those of them which are more exposed in granulations or mucous membranes should so easily give way when the pressure of the column of blood is reduced to its minimum, owing to the extreme enfeeblement of the heart. 6. The diminution of the fibrin of the blood in this disease, formerly admitted, is now disputed. At all events it does not lose its coagulability. Moreover, incisions, even when made on a portion of the integument which has already undergone alteration, furnish only a moderate quantity of blood, and are followed by spontaneous and prompt arrest of the bleeding. 7. The wounds manifest little or no tendency towards reparation, and may take on the specific characters of spontaneous scorbutic ulcers, or become phagedenic. At the present time, by the aid of suitable hygienic and therapeutic treatment, the progress of the disease may usually be arrested. 8. The coincidence of scorbutus and an open wound may render the etiological determination of certain of the visceral lesions observed in this case—as steatosis of the liver and pulmonary apoplexy—a matter of difficulty, as these conditions might be supposed to be due to chronic septicæmia, or putrid infection and pyæmia. "In prolonged suppuration, occupying large and irregular surfaces, nothing is more common than steatosis of the liver; but the lesion is not of less frequent occurrence in acute or chronic diseases in which there is a tendency to hæmorrhage. This fact, well known to Physicians, especially since the time of Monneret, had been but little remarked by Surgeons when I endeavoured, some years since, to call attention to it and exhibit its importance in the history of primary and secondary traumatic hæmorrhage." 9. Therefore the hæmorrhagic tendency, so marked in scorbutus, should always lead us to direct especial attention to the liver.

Dr. E. Müller, Director of the National Vaccine Institution at Berlin, writes (*Berlin Woch.*, April 17) to state that the events of the epidemic of small-pox supervening on the war have amply confirmed the opinions he has so often expressed of the value of glycerined lymph. The faster the epidemic extended the more at a loss were all the authorities of the places invaded to know where to get their supplies of lymph for the revaccinations which the public so urgently demanded. Even the supplies of vaccine establishments themselves were utterly exhausted. From Holland, where in several towns establishments for "animal" lymph had been founded, the most urgent demands were addressed, and in Bavaria, Baden, and Luxemburg the same want was also felt. The stores of the Berlin establishment, however, were, thanks to glycerine, so complete that the wants of all could be supplied from them, while it was also able to furnish the means of revaccinating the troops exposed to danger in France, and the recruits going there, as also the inmates of the German prisons. So well acknowledged has now become the value of lymph mixed with glycerine, that the majority of those who send to the establishment expressly request that this only may be sent them. Still, there are too few persons aware how easily they may prepare the mixture for themselves; for, had this been more generally done, such a superfluity of lymph would have been produced that it would have been impossible for the epidemic to have taken on its present extension. How easily every Practitioner may meet the difficulty of supply, is shown by a quotation which Dr. Müller gives from the report of the Medical officer of one of the prisons. He says that at the beginning of this year he found the small-pox rapidly increasing among the inmates, and that as many as 5142 men were in urgent need of revaccination. Three infants were vaccinated by glycerined lymph received from Berlin, and with the lymph derived from these, diluted with glycerine, fifty men were revaccinated, with such brilliant results that, fourteen days after the commencement of revaccination, the Surgeon was a possessor of fifteen grammes of glycerined lymph. With only one-half of this, he was enabled, within another eight days, in the coldest February weather, to revaccinate nearly 4000 men. In answer to numerous inquiries, Dr. Müller states that his pamphlet on vaccinating with glycerined lymph is to be had at Hirschwald's, Berlin. He adds that the most certain mixture consists in one part of lymph, two parts of pure glycerine, and two of distilled water. As no solution of the lymph takes place, the glycerined lymph must be well mixed up again each time before using it.

Kreis-physicus Wiener, of Culm, writing on April 21 to the same journal, states that during 1870 he vaccinated 1600 children with lymph, in the proportion of 1 to 3 and 1 to 4 of glycerine, with the most unusual success, only five failures having, in fact, been registered. The pustules were just as fine as those produced by unmixed lymph, and exhibited nothing abnormal in the course which they ran. He obtained just as good results from other vaccinations performed in February and March, 1871, although the lymph employed for that purpose had been collected and glycerined in July, 1870, therefore eight months previously. In this last particular the glycerined lymph offers a great advantage over the ordinary lymph, which sometimes loses its inoculative power in a few days. In preparing the mixture, he empties lymph which has been collected in some of Bretonneau's tubes into a small porcelain saucer, such as is met with in colour-boxes. To this he adds, by means of capillary tubes of about the same calibre equal parts of glycerine and distilled water, rubbing the whole well up by means of a glass rod, which he thinks is preferable to the hair pencil employed by Dr. Müller. The mixture should be stored away for use, in capillary tubes, in a cool and dark place. Before arming the lancet with it, it should be mixed up again.

PARLIAMENTARY.—METROPOLIS WATER-SUPPLY—THE CASE OF MRS. INGHAM—CONVEYANCE OF FOUL LINEN IN CABS.

On Thursday, May 25, in the House of Commons,

Mr. Bruce moved the second reading of the Metropolis Water Bill, the main object of which, as he explained, is to provide a constant supply of water under regulations for the prevention of waste to be framed by the companies and sanctioned by the Board of Works or the Home Secretary. The compulsory powers of purchase are abandoned, but the Select Committee to which the Bill is to be referred, as a hybrid bill, will have power to settle, if possible, terms of purchase, which, however, are not to take effect until a system of local government is established for the metropolis.

The Bill was opposed by Mr. Craufurd, who professed to speak in the interests of the consumer and ratepayer, though a recently-elected director of a water company, and who contended at great length, and amidst constantly increasing expressions of impatience, that the Bill would not carry out its objects.

A long discussion followed, turning less on the merits of the Bill than the propriety of pressing it forward at between one and two o'clock in the morning, and ultimately, at ten minutes past two, after one motion for adjournment had been defeated, Mr. Bruce consented to postpone the Bill until Friday.

On Friday,

Mr. Wilmot asked the Secretary of State for the Home Department whether Mrs. Ingham, who was tried at the Derby Assizes in July, 1869, for the murder of her child, and acquitted on the ground of puerperal insanity, had been certified by the Medical Officer of the Derby County Gaol to have become perfectly sane within a few days of her trial; whether the Visiting Justices had twice applied for her discharge; whether, in answer to the last application on April 4, 1871, they were informed that if her health was suffering she might be received into a criminal lunatic asylum; and whether he would be good enough to state to the House on what grounds he did not feel justified in granting her discharge after her recovery had lasted for twenty-two months.

Mr. Bruce, in reply, said that these cases, as hon. members could easily imagine, were extremely difficult to decide. The facts, however, were not exactly as stated in the hon. member's question, for Mrs. Ingham was not acquitted on the ground of puerperal insanity. After apparently a fit of extreme depression she cut the throat of her child, and on her trial she was acquitted on the ground of insanity. It was no doubt true that she had been certified to be sane; but Mrs. Ingham had another child, only 3 years of age, and it was quite possible that if she were released another fit of depression might occur, and the life of the remaining child might be endangered. All these circumstances had to be taken into consideration by a Minister in deciding a question of this nature, and he should be departing from the practice of his predecessors if he were hastily to order her release after a short confinement.

In answer to Mr. Eykyn,

Mr. Bruce said that an inquiry into the matter had failed to show that the conveyance of foul linen in metropolitan cabs had caused any mischief in the way of the transmission of contagious or infectious diseases. In the case of one establishment, cabs were used for the conveyance of the linen of patients, but the cabs were employed for that purpose only. If it could be shown that diseases had been transmitted by the conveyance of foul linen in cabs, it might become necessary to introduce an Act of Parliament to prevent the practice in future.

Mr. Bruce said that, in consequence of the objections of many hon. members to the Metropolis Water Bill, and of the suggestion of the hon. member for Ayrshire, the Government proposed to withdraw the Bill and ask leave to introduce a new Bill on the subject.

Mr. Craufurd expressed his satisfaction at the course taken by the Government.

The order for the second reading was discharged, and leave was given to introduce a new Bill.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XIII.

By J. F. CLARKE, M.R.C.S.,

For nearly forty years on the Editorial Staff of the "Lancet."

A Private Medical School Forty Years Since—Latitude of Students—A Batch of Lecturers: Michael Ryan, George Darby Dermott, and John Epps—London Medical and Surgical Journals—Rival Editors—An "Original" Editor—A Host of Witnesses—A Wager and Practical Joke—Politics and Medicine.

At the time of my entering to lectures (October, 1833), the private schools were in their zenith. I shall have something to say about them generally in a future paper, so, on this occasion, I shall give a description of one only. The "Gerrard-street" or "Dermott's" School was situated at the Westminster Dispensary, in Gerrard-street, Soho. The lecture- and dissecting-rooms were on the second floor of the building, and, at that time, were as complete as almost any other in London. At this period a lecturer was permitted by the Examining Boards to lecture on three subjects. The staff of the Gerrard-street School consisted of Dr. Michael Ryan, who lectured on Medicine, Midwifery, and Medical Jurisprudence; Dr. John Epps, on Materia Medica, Chemistry, and Botany; Mr. Dermott, on Anatomy, Physiology, and Surgery. The fee for "perpetual" attendance on these courses was £22. The "entries" were numerous, and, at the time when I joined the School, the *alumni* numbered nearly 300. At the present day the course of education pursued in this School would be regarded as most imperfect and unsatisfactory; but it is doubtful whether it did not fulfil all the requirements of the period, *quoad* the examinations at the College and Hall. These were very different from what they are now. Many of the Gerrard-street scholars attained, in after-life, distinction and eminence. The three lecturers named above had no academical distinction, but they were representative men of the period, and some account of them may not be without interest to the present generation. I shall describe them in the positions they occupied as important teachers. George Darby Dermott was of Irish extraction, and, I believe, the son of an Irish Presbyterian minister. He had many of the merits and some of the faults of his countrymen. He was eloquent and impulsive, often wayward and uncertain; but it may be doubted whether any man of his time had a more consummate knowledge of anatomy, or could convey that knowledge more forcibly and instructively than he did. It is true that he had no "system," and it was no uncommon occurrence for us to have a demonstration of the bones of the foot one day, and of the brain the next. He had, however, the excuse of a deficiency of subjects, at a time when the teachers had to depend entirely on the supply afforded by the resurrectionists. Moreover, he had no prosector. In one respect this was an advantage to his class, for he would constantly dissect while demonstrating. This proceeding had the effect of arresting the attention of his audience, and of instilling into their minds what may be called the first principles of anatomy. His great fault was his attention to what may be regarded as unnecessary *minutiæ*. This was sometimes wearisome and unproductive. To give an instance:—The first six weeks of his course on anatomy were devoted to a description of the bones of the head. Every foramen, however minute, every sulcus, however unimportant, was unnecessarily enlarged and elaborated upon. In this respect he was undoubtedly at fault, but he could never see his error. He published two works eminently illustrative of his peculiarities as a teacher. The first was a large octavo volume of the Anatomy of the Bones of the Head; the second was his Surgical Anatomy of the Head and Neck. Nothing less practical than the first could be conceived, nothing more practical than the second ever issued from the press. In the first production I was his amanuensis. The preface is one of the "curiosities" of Medical literature, and was concocted between us. Our connexion in literary subjects was something peculiar. The plan pursued was our retirement to some tavern in the neighbourhood, where we could have a private room. Dermott primed himself with gin-and-water. I invariably fortified myself with a glass of port wine. He walked about the room dictating to me what he wished to say. Great anatomist as, undoubtedly, he was, he was marvellously deficient in bringing to bear upon his subject what a soldier would call the influence of the "light artillery." He was singularly wanting in placing his views in an attractive form. He was minute; I was discursive. He made the Corinthian column; I was the humble assistant in attempting to adorn it. It may well be supposed that the assistant architect had very little work to perform. After the lapse of nearly forty years, I feel it my duty to my old preceptor to acknowledge the great obligations which I owe to him, and there are thousands throughout the length and breadth of the land, and in various parts of the world, who will bear witness to the remarkable ability of Dermott as a teacher of anatomy. Dermott was the assistant of the celebrated Joshua Brookes, at his Theatre of Anatomy, in Blenheim-street, Oxford-street. That once renowned school is now a lead warehouse, and is situated just behind Colbourn's, the late publisher's house, in Great Marlborough-street, and is the first building on the right in Blenheim-street. After Brookes's death, within a fortnight of the opening of the Medical session, Dermott being unable to obtain possession of the Blenheim-street premises, bought the lease of a house in Little Windmill-street. He made a contract with a builder to alter the house in fourteen days in such a way as to fit it for an anatomical school. He used to boast, in after-life, that he superintended the workmen, and, by having relays for night and day work, and by "giving them as much beer as they could drink," they worked with a good will and alacrity such as he had never seen surpassed. "Don't talk to me," he would say, "about the injurious effects of beer—at all events, for a certain time." Dermott opened the session with a moderate class. This school was afterwards well known as the "Little Windmill-street School," at which Tuson, Guthrie, and Jewel lectured. It is the second or third building on the left from Brewer-street, and is now in the occupation of Mr. Nichols, a leatherseller. Dermott was an enthusiastic reformer, and interspersed his lectures with sarcastic allusions to the deficiencies in the Medical corporations, the necessity for legalising the sale of dead bodies for dissection, and for Medical reform generally. He ridiculed with much humour the wearing of gowns by Professors when lecturing at the Universities or other schools. He characterised the gown as a "piece of black rag hanging from their dorsal spine." He came daily to lecture with a great bundle of petitions to Parliament for the removal of grievances, and these, signed by his pupils, were continually being presented to the House of Commons, and had, no doubt, considerable influence in the carrying out of the Anatomy Act. He was very unpunctual as to the time of commencing his lecture. This gave rise to many quarrels between himself and his pupils. His lecture in the afternoon usually occupied two hours, and if he observed symptoms of weariness in his audience, he would say, "Gentlemen, you are fatigued with the subject; let us have a little interlude to revive you." He would leave off demonstrating the muscles of the thigh for a few minutes, and give us the soliloquy of "Hamlet," or the death scene in "Richard III.," amidst the enthusiastic applause of his audience. He would then finish his demonstration. He was not a great physiologist, and of practical Surgery he knew very little; but nobody could take exception to his teaching of the principles of Surgery. At the time to which this paper refers, students of Medicine had none of those ideas of propriety of conduct which happily characterise the present generation, and some of them "broke loose" to an extent which could not now be tolerated. The morning lecture commenced, or was supposed to commence, at ten, and on the names being called over certain well-known "fast young gentlemen" were frequently absent. "They will soon be here," Dermott would say; and he was right. A sound was heard on the lower stairs, and a chorus of voices of "See the conquering hero comes," announced that the night revellers were returning to their allegiance. The lecturer would pause for a few moments to allow the "denizens of the night" to take their seats, occasionally loaded with the trophies of their night's amusements, consisting of knockers and other articles, which they had brought forward as symbols of the previous night's exploits. Once seated, however, Dermott would not permit any deviation from the strict rules of decorum necessary to be observed in the lecture-room. If anyone ventured to infringe those rules, he was instantly silenced by the lecturer. Dermott was convivial to a fault in his habits, and took a great delight in inviting his class to his house on certain evenings to "drink punch and smoke." He generally accompanied his invitations to these meetings with some remarks on the advantages of keeping within reasonable bounds with respect to the quantity of punch they would imbibe. "But," he would observe, "I do not wish to be inhospitable; I wish every man to enjoy himself under my roof; and, gentlemen, if any of you, or all of you, after leaving my residence, has or have the misfortune to be intercepted on your way to your lodgings, send for me, and I will bail you; I make it a point not to go to bed early on these evenings, in order that I should be forthcoming to relieve you in any difficulty in which you may be placed." Unfortunately this promise required to be often acted upon, and it is to the honour of Dermott that he never failed in fulfilling it. In those days the offender was not required to go before a magistrate. The habits of the students of Medicine have happily so greatly improved during the last thirty-five years that they can bear comparison with the *alumni* of any other profession or calling. In summing up the character of this remarkable man, thousands of whose pupils are now practising their Profession with honour and credit, and many of whom, I have no doubt, will read this account of their old master with the conviction of its truthfulness, I should say that Dermott, so far as anatomy is concerned, had a talent for teaching beyond any man of his time. He was plain, clear, and energetic, and if a student failed to appreciate the value of his instruction, it was the fault of the pupil, and not of the teacher. That he had faults may be readily imagined after what has been already stated. These were partly due to his erratic mode of teaching, but more, probably, to the circumstances under which he was placed. This short and imperfect account of him, if not entirely correct, is, in the main, just to his memory, and anyone acquainted with the history of his time will have no doubt that he exercised a very important influence on the future of anatomical teaching. It should be stated, to his honour, that his pupils were seldom rejected at the College of Surgeons, and many students from other schools entered his private class, in order to complete their knowledge of anatomy. In person, Dermott was above the middle height, active, and firmly built; his face was expressive of some power; he had a good forehead, bright, intelligent black eyes, and a somewhat large mouth. In lecturing, he spoke in a loud shrill voice, almost amounting to a falsetto.

Dr. Michael Ryan, the Lecturer on Medicine, etc., was a genuine Irishman. His lectures were of a somewhat "rigmarole" kind, or, more properly speaking, compilations of almost every author from the time of Hippocrates downwards. Ryan was totally deficient in originality, and was a very inferior Practitioner; but he was learned, had most agreeable manners, and was strongly impressed with the importance of appearance in a Physician. He dressed in black, wore a white "choker," carried a large gold watch, as big as a turnip, to which was appended a massive chain, with seals and keys. It is true, he did not carry a goldheaded cane, but he had a huge gold snuff-box, the contents of which were frequently applied to his olfactory organ. He was one of the Physicians of the Western Dispensary, in Charles-street, Westminster, and most of his students at the Gerrard-street School were also his pupils at that institution. At this time the Apothecaries' Company received the certificate of fifteen months' attendance at a recognised Dispensary as evidence that the candidate for their licence had passed through a sufficient course of Practical Medicine. Ryan had a curious way of eking out a lecture. He would select for his theme some case which he had treated at the Dispensary, and if any remarkable case occurred there, he had a fine opportunity of availing himself of this privilege. I recollect, on one particular occasion, he had treated a case of hypertrophy of the heart "successfully" with the iodide of potassium. He did not think it sufficient to state the fact; he would take from his pocket a list of the names of students who attended his practice at the Dispensary. "Gentlemen," he would say, "I have the honour of giving you the names of those who witnessed this remarkable case;" and he read from the list the names of 150 of those who were, or ought to have been, present. The reading of this list necessarily occupied a considerable portion of his lecture, and he would conclude with the remark —"With such a host of witnesses, gentlemen, I think I am entitled to assert that my diagnosis was correct and my treatment most successful." His audience, of course, cheered and laughed. Ryan, however, at this time, did valuable service to the cause of the Profession. He was editor of the *London Medical and Surgical Journal*, then published by Renshaw, in the Strand. This journal might be regarded as a counterpoise between the *Lancet* and the old *Medical Gazette*; it avoided the personalities and virulence of the *Lancet*, and the tameness and milk-and-water contents of the *Gazette*. It ought to have been the leading journal of the time, but, unfortunately, a dispute between the editor and publisher of the journal led to a disruption between them. The consequence was, Renshaw carried on the *Journal*, which was edited by John Foote, then a General Practitioner in Tavistock-street, Covent-garden. Foote was a man of undoubted ability, but conceited and pragmatical. Ryan published an opposition journal, to which he appended the title of "original." Foote was not a match for his learned and cumbrous antagonist. I have reason to believe that if the *Medical and Surgical Journal* had been carried on in the manner in which it was originally framed it would have had a most beneficial influence on the Profession. Whilst it excluded from its pages the disgraceful attacks on personal character which then were a prominent feature of the *Lancet*, it afforded to a large class of contributors to periodical literature a medium of expressing or publishing to the world their experiences in the science and practice of Medicine. Unfortunately, the quarrel between Renshaw and Ryan terminated in a collapse of both the journals, each having deteriorated in every way, and Ryan's "original" was badly printed on bad paper. For some months I assisted Ryan in the editorship of the journal, and for a little time was sole conductor of it. I need scarcely say that it would have been a wonder if it had been successful under the management of a boy just out of his teens. Still, we had some contributions which were of great value. Thus, we published Fletcher's lectures on "Medical Jurisprudence," and Gully's translation of Broussais' lectures on Medicine. But Ryan had become involved in pecuniary difficulties, and the journal was neglected by him. He died at a comparatively early age. He was attended at his house in Charlotte-street, Bedford-square, by Drs. Bright, Roots, and myself. The post-mortem examination was made by me at seven o'clock on a January morning, the two Physicians being present at that early hour. I never saw so much general visceral disease in any body before or since. Ryan wrote a work on Medical Jurisprudence—a mere compilation—and one on the "Philosophy of Marriage," which it is well never reached a second edition. Ryan was just above the middle height and inclined to corpulency; he was of fair complexion and red haired. His face was truly Milesian. He had a large head. He was a goodnatured, kindhearted man; but too facile, and with little consistency and firmness. He was a favourite with his pupils.

John Epps, Doctor of Medicine of the University of Edinburgh, was, I believe, the eldest son of Mr. John Epps, who some fifty years ago was noted for having a ham and beef shop in almost every part of London, and was the subject of one of the most humorous of Hudson's comic songs. Dr. Epps was a better educated man than either of his colleagues, and he had natural abilities of a very high order. He was conscientious and painstaking as a lecturer, but he had an imperfect practical knowledge of either of the subjects on which he lectured; somehow or other he managed to instil a fair amount of information into his pupils. He knew more of Materia Medica than of chemistry or botany. The two latter sciences were taught by him less practically than could have been desired. He, however, "pegged away" with his experiments in chemistry, and would make the students alternately prepare gases, apply the tests for poisons, etc. His laboratory was somewhat small, but compact. The amount of glass destroyed on some mornings was very great—a serious loss at that time, when glass was of an enormous value compared with the present day. He, however, never lost his temper, never said an unkind word; even when the blundering pupil had smashed a dozen or more of the best glasses, the goodnatured little man would say, "Try it again, my friend, you will get on better soon." He confined his teaching of botany chiefly to the system of Linnæus. His style of lecturing was clear and attractive. He had a fund of anecdote, and was what Bacon called "a full man." He had read much, and was possessed of varied knowledge. I recollect, on one occasion, two or three of the students played him an innocent trick, which afforded him an opportunity of showing his readiness in resources. A bet was made that Epps would not be able to tell the name of a plant which one of the students would present to him; this wager was accepted. Accordingly, H——, a Yorkshire pupil, after lecture one morning, produced a plant. I think it was the *mercurius perennis*—and, handing it to the lecturer, said he would feel obliged by being informed of its name. Epps smiled, and said, "My friend, I should be happy to tell you, but you would derive more benefit by finding it out yourself. Do so, and if I find you correct when I come to-morrow morning, I will give you my life of Dr. Walker." In the meantime a name was invented; I cannot recollect exactly what it was. The next morning punctually at ten—for he was always punctual—in walks the little Doctor with a book under his arm. "Well my friend," said he, addressing H——, "have you discovered the name of the plant." "Yes," said H——, "it is so-and-so." "Very good; and here is my life of Dr. Walker." Those in the secret could scarcely refrain from a laugh; but a proper decorum was observed. H—— won his wager.

Epps had very strong political views. He was one of the school of Burdett and Cobbett; but, unlike Dermott, he never mentioned politics in his lectures, or, if he did, it was in the most cursory manner. Out of school he had no such reserve, and would speak at public meetings, or write articles of the most advanced kind. When an election was going on in his borough (Finsbury), it was his custom to have in front of his house in Great Russell-street a huge placard with the names of his favourite candidates emblazoned on it. He was an excellent speaker; spoke always to the point, and had a dry, quiet humour, which made him a favourite with his audience. He was a man of extraordinary industry and perseverance, and never succumbed to difficulties or hard work. He was a firm believer in phrenology; Dermott was as much opposed to it. Dermott, though an energetic and practised speaker, was no match for Epps in debate. He lost his temper, and blurted out offensive epithets; his wit was low and personal. Epps, on the contrary, never got out of temper; made fun of his antagonists in a goodnatured way, and was usually thoroughly up in the subject he was treating.

In person he was below the middle height, and had something the appearance of a Quaker. He wore a broadish-brimmed hat, low down over the forehead, which was one of the finest I have ever seen. His features were regular, and pleasing in expression. After the Gerrard-street School broke up he took to the practice of homœopathy. He died a year or two since, full of years, and with the kind regrets of many of those who admired the man whilst they regretted his "nonconformity."

WÜNDERLICH'S MEDICAL THERMOMETRY.(a)

It is a remarkable circumstance in the history of Medicine, that great discoveries are sometimes allowed to lie unnoticed for a series of years. That Dr. Currie's reports on the temperature of the body in disease should have been so long overlooked is the more remarkable, because his work had been preceded by observations on the same subject by Physicians in this and other countries. Little, however, was done on the temperature of disease for the first forty years of the present century, and it was not until about thirty years ago that the subject began to excite the notice of observers in France and Germany. Since then, Roger, Demarquay, Zimmerman, Helmholtz, Liebig, Mayer, Bärensprung, and Traube commenced from various points of view and by various methods the work of establishing the knowledge of animal heat on a physiological basis. To Mayer we owe the doctrine of the unity and correlation of forces in the body, the change of chemical work into heat, or into motion, or into electricity, etc., the theory on which depends the true explanation of animal heat, both in health and disease.

For the last twenty years our author has been registering thermometric observations in his clinique, and it was only after he had with true scientific patience accumulated 100,000 observations that he ventured to determine what he justly calls the most important and most decisive question in pathology—viz., Do certain diseases in their progress obey fixed laws or rules, and can this be determined and displayed by the course of the temperature?

He claims to have proved the domain of law in disease by discovering that the alterations of temperature in disease are subject to fixed rules; and he divides maladies into three groups:—

1. The true typical states of disease; those which almost invariably show more or less clearly a characteristic type, and in which there is seldom, if ever, a complete deviation from the typical form.

2. The group of approximatively typical forms of disease, in which characteristic types may be certainly recognised in the abstract, but which, although in certain stages they exhibit great regularity, yet occasionally deviate very widely from the typical, and almost constantly display a great breadth and laxity of behaviour.

3. Another group, formed by those diseases which, in certain circumstances, conform to a regular type, but which generally run their course without fever. When, however, fever supervenes, a regular type is generally displayed.

As a result of his observations with the thermometer, Wünderlich would divide febrile disease into five principal groups—1. Including cases of fever running a short course. 2. Continuous fevers, ending by crisis. 3. Acute remittent fevers, ending by lysis. 4. Intermitting and relapsing fevers; and, 5. Chronic fevers. But the value of thermometry in Medical practice is not confined to the mere diagnosis of the disease. The varied modifications diseases exhibit, the passage of one stage into another, the times of exacerbation and remission, the development of complications, the severity of the attack, and the amount of danger, are at least of equal importance; and thermometry serves as an indicator to the Practitioner on these points at an earlier period and more trustworthily than any other method of investigation.

In speaking of the temperature of health, and whilst stating that our knowledge of the temperature of healthy human beings must be the basis of all our conclusions to the temperature met with in disease, our author advises caution in transferring results so obtained to the organism of sickness. As illustrations of the need of his caution, we may adduce the effect of menstruation in raising the temperature in many women labouring under various maladies, whilst in health this function is seldom preceded by any such elevation; the lowering of temperature consequent on the toxic effects of alcohol in disease so often surpassing the effect in health; the considerable rise in temperature on muscular exertion in cases where there is any previously existing morbid condition, however slight, as well as the elevation of temperature occurring during the period of digestion in sick people, which so generally exceeds considerably the effect of the same process in health. We commend these examples to the consideration of experimental pathologists.

The phenomenon of specific heat and its constancy is the result, on the one hand, of the continual production of warmth, which occurs in almost every part of the body, and, on the other hand, of the ceaseless loss of heat, processes which are always going on simultaneously whilst life remains. The innumerable chemical processes going on in the system, and especially the combinations of the alimentary materials converted into blood, and, although in a less degree, of the tissues with the oxygen inspired, the oxidation of this material, the (so to speak) continuous slow combustion of the blood, and of all the materials capable of oxidation introduced into the body—these are the sources of a ceaseless and copious development of heat; whilst the continuous loss occurs by radiation, by conduction, or transmission to other bodies, by evaporation of secretions in a gaseous form, and, lastly, by the furnishing of mechanical work, the change of heat into motion.

But whilst we acknowledge the constancy of this equipoise in the healthy human frame, we are still far from having found the regulating influence that maintains the balance so evenly between production and loss. The instinctive variation of food according to the climate, and the increased perspiration and respiration when the production of heat is augmented, will, to some extent, account for the equilibrium maintained under varying conditions; but, allowing full scope for these phenomena, there still seems to be wanting some regulator, under the influence of which the loss of heat so exactly balances the production. It is very tempting (though proof is deficient), to attribute this regulating power to the nervous system, partly because of its close relations with the other portions of the economy, and partly because the change in the calibre of the smaller vessels, and, consequently, the blood-supply of all the organs, depends upon one part of the nervous system itself. If, however, we were to allow this to a far greater extent than with our present knowledge is possible, it would only be putting the difficulty one step farther back. What gives the nervous system this regulating power? The more reasonable theory is, that increased production of heat necessitates increased loss; activity of secreting organs necessitates loss of heat by loss of the secretion; chemical change, causing muscular contraction, necessitates loss by the amount of work done, or by increased perspiration, or augmented radiation, etc. To say that the nervous system is the regulator of these conditions is simply to say that it is the medium of reflex phenomena, the connecting-link that binds one organ to another.

(a) Translated by Dr. Woodman. New Sydenham Society.

The causes of altered temperature in disease—of defective balance, in short—may be many and various. Increased production of heat and diminished loss of it, or increased giving-off of heat and diminished production, may exist singly or in combination. The more or less rapid destruction of tissues, the formation of abnormal chemical products of the metamorphosis of tissues may form new sources of heat-production; whilst the copious losses of the fluids of the body, and the deposit of larger but less vitalised masses, such as exudation and extravasation products in the body, may cause a morbidly lowered temperature. Among the most interesting phenomena with respect to these causes of altered temperature are those observed after the injection of putrid solutions, and those depending on injury of some portion of the nervous system.

From a review of experiments on the nervous system, Tscheschichin holds the theory of centres of control, which have their seat in the brain, in order to regulate the activity of the spinal cord. By the ceaseless activity of these, the intense activity of the spinal cord is diminished; when they are destroyed or isolated, the activity of the spinal cord is morbidly increased, and for some time exhibits itself in excess of functional activity, increased reflex action, quickened respiration, acceleration of the cardiac systole, and increased animal heat. Wünderlich himself says that, although some fluctuations of temperature may be attributed to alterations of circulation, yet, from another series of observations—those, namely, with enormous elevation of temperature—we learn that some hitherto unknown power has sway over animal heat, since the most remarkable alterations of temperature occur with profound disturbances of the nervous system without corresponding anomalies of circulation; and it is perhaps not too much to affirm that the integrity of certain parts of the central nervous system is more necessary for the regulation of animal heat than that of any other part of the body.

He proceeds to discuss rigor, pyrexia, and collapse: of the former we shall only say that it is found with a normal, an ascending, and a very elevated temperature, and also with one of depression and collapse; but it is when the temperature of the trunk rises rapidly, whilst that of the hands and feet remains stationary or even falls, that a rigor most usually occurs, and especially if with this rapid rise of the internal temperature the warmth of the surface of the body is rapidly abstracted in great quantities. An increase of temperature all over the body is determined in Wünderlich's opinion by an accumulation of heat caused by deficient abstraction of warmth; by the communication to the body from a local centre of increased warmth-production; by increased activity of the normal processes for the production of heat; by an over-production of heat, resulting from abnormal chemical processes so extensive as to exceed the power of the ordinary channels of loss to compensate it; by alterations in the degree of activity of the vaso-motor nerves; and lastly, by morbidly increased action of the spinal centres, in consequence of loss of power in the moderating portions of the brain. The range of temperature observed in human beings during life is limited to 8° C. (about 15° Fahr.); but it is a remarkable phenomenon that high degrees of temperature, that are positively indicative of a fatal event in some diseases, are borne without harm in others. In both typhus and enteric fevers, higher temperatures are borne more safely than in pneumonia, and higher in scarlet fever than in measles. This fact is another point in favour of definite laws for different diseases.

It is useful in many diseases to determine the time of day at which the greatest elevations occur. In most acute diseases, characterised by pyrexia, we generally find the remission begins in the time between the late evening and the early morning, and lasts through the later hours of the morning. The exacerbation begins in the late morning hours, or even the first hours of the afternoon, and lasts till late on in the evening—till midnight, perhaps, or even later. As exceptions to this rule we must place malarial fevers and pyæmia, and sometimes the hectic of phthisis and tuberculosis. So regular are these periods in diseases of ordinary severity, that the occurrence of the exacerbation increasing, early in the day warns us of an abnormal severity of the disease. Many other points useful to the Practitioner are worked out by our author, with a fertility of illustration that could only be based on a very large number of observations. The varieties of ascent, of acme, and of defervescence in different diseases; the relation of the latter to the pulse; the fact that when diseases which usually exhibit a remittent or non-continuous course assume a continuous type it is always to be regarded as an unfavourable symptom; the temperature of the pro-agonistic stage, and of the agony, and in some morbid conditions the rise of temperature after death, caused by the occurrence of changes in the substance of the muscles, and by post-mortem decomposition, whilst the cooling processes of respiration and perspiration have come to an end, are all subjects well worthy the study of all Physicians.

Our volume ends with a *résumé* of the author's extended experience of the temperature of acute diseases. To this portion of the book in detail we commend our readers, and shall only refer to the temperature in acute miliary tuberculosis and acute phthisis. In the former, gradually deep remissions, which almost descend to the normal point, occur, and alternate with febrile evening exacerbations of considerable height. Yet even by this behaviour of the temperature Wünderlich says it is not possible to distinguish acute tuberculosis from acute non-tuberculous phthisis. It would be satisfactory to know what he means by the latter term. If he is referring to that condition of condensed lung which constantly breaks down into isolated abscesses, so beautifully figured by Dr. Addison, the statement may be received; but if he means that condition of disease which is manifested in the lung by soft infiltration of semi-caseous material, here and there breaking up into irregular cavities filled with grumous matter, *débris* of sphacelated lung, etc., we would venture to assert that in this latter condition the intervals of normal or nearly normal temperature are much more frequent, and often much more prolonged, than in acute miliary tuberculosis.

We cannot close this notice of Wünderlich's book without congratulating the New Sydenham Society on the excellent translation of Dr. Woodman. The original text is often crabbed and involved to an unusual degree, and in some places it would have been impossible to give the author's meaning without a paraphrase. The translator has rendered into readable English, and enriched with practical notes, a book which, even in its original form, has startled into active work many Physicians in England, France, and America, and which now, in its more popular form, must render the diagnosis of disease infinitely more accurate. His appendix of thermometric equivalents is most useful, although we agree with Dr. Clifford Allbutt that it would be better that all observations were registered on the Centigrade scale. The publication of a book like this, and the clinical work to which it will give rise, will go far towards making Medicine one of the exact sciences, and will establish the fact, hitherto not fully recognised, that disease, like all other natural phenomena, is under the domain of law.

SUPPOSED CASE OF SMALL-POX IN UTERO.—The death of an infant, said to be still-born, but having marks apparently from violence, was recently reported to Mr. Carttar, one of the coroners for Kent. The mother was unmarried. Two women were present at the birth, but no Medical man. The report of the post-mortem examination stated that there were some marks about the face, and that the lips were swollen and blistered, and bloody, but there were no positive marks of violence. There were two or three spots upon the face, something resembling small-pox, and the bones of the head were very flaccid, and the body was rapidly decomposing, from which it was concluded that the child must have died from disease in utero. It appeared that the grandmother had died from small-pox, and that the mother took charge of her, and went in the same van with her to the Hospital, only a short time since, and the grandfather said that she had "smelt like her mother" (the grandmother) ever since, but had not evinced any sign of small-pox herself. Query: Could the grandchild have contracted small-pox in utero without its mother showing any sign of it?

FELIX VON NIEMEYER: A NECROLOGY.

Of all the accounts which we have perused of this distinguished Physician and Professor, the following, contributed by an intimate friend to the pages of the Berlin *Klinische Wochenschrift*, is by far the best:—

The news of the death of Felix von Niemeyer, which occurred on March 14, at Tübingen, fell upon the wide circle of his friends and admirers like a thunderbolt from a clear sky, for only his friends who were near at hand had cognisance of the severe malady which had placed him in a hopeless state. Those at a distance were scarcely aware, amidst the crash of war, that he was even ill, and were the more painfully surprised at the news of his death as accounts of his valuable labours near the seat of war continued to appear in the newspapers to the end of December. Everyone at once asked himself whether the toil of his efforts, continued over several months, in the Hospitals of Lorraine, had not led to the rapid development of the germs of the disease which had some time since been planted in his system. And there can scarcely be any doubt that his wearing activity in France did shorten his life by some months; but although last autumn he was pretty well aware of his own condition, yet he resolved to undertake the mission, regarding, as he did, all services to Fatherland as a paramount duty. He had, indeed, already furnished proof of patriotic self-sacrifice by consenting to his only son serving as a volunteer in the Würtemburg cavalry. For this, in truth, he had his recompense, by the return of his son a few weeks before his own death, bearing with him the Iron Cross, conferred on him by the Emperor as a reward for his bravery.

Niemeyer was born at Magdeburg, December 31, 1820, his father, Dr. Carl Edouard Niemeyer, who died in 1837, being a highly esteemed Practitioner of that city. After he had received his education at the Gymnasium, Felix repaired to Halle, in 1839, in order to study Medicine, and remained there until 1842. Thence he went to Prague and Vienna, to complete his studies, and settled down in Magdeburg as a Physician in 1844. He rapidly acquired the confidence and favour of the public; and being an enthusiastic lover of his Profession, and thoroughly penetrated with a love of mankind, his restless activity enabled him fully to meet all the demands of a very extensive practice. In 1847 he married a lady, who, in after-life, proved in every way congenial; but of the three children which resulted from the marriage, only his son Felix has survived. The great epidemic of cholera which visited Magdeburg in 1848-9 was the occasion of Niemeyer's first appearance as an author. He maintained the view that cholera was primarily an inflammation of the intestinal mucous membrane, and recommended a corresponding antiphlogistic treatment, as by cold applications and calomel, which, when resorted to early, furnished favourable results.

In 1853, one of his strongest wishes was fulfilled by his having the direction of the Medical Division of the Magdeburg Town Hospital confided to him. The manner in which he conducted this, and how the results of his observations were utilised, can be best judged by his *Klinische Mittheilungen*, published in 1855, which gave token of that great talent for observation, and that original and fertile apprehension of therapeutical problems that at a later period rendered his clinical teaching so attractive. Attention had been for some time called to Niemeyer in the Prussian *Cultusministerium*, when a vacancy in the Medical Faculty of Greifswald furnished the opportunity for his employment in that practical teaching which he himself regarded as his true vocation. In 1855, he was placed in the chair of Special Pathology and Therapeutics, having also the direction of the Medical Clinic and the Provincial Lunatic Asylum. He infused into this Clinic a new and laborious life, which all those who officiated as his assistants or as observers remember with great satisfaction. Insufficient and ill-provided as was the old Hospital until 1859, and sparing as was the means at his disposal, yet Niemeyer, wisely calling in the Polyclinic to his aid, was able to carry on his teaching in the most instructive and interesting manner. His great practical experience here proved of much service, imparting to his lectures an unusual freshness, and banishing the dry doctrinarianism, which in all its profundity so tired out and repelled the student. From every case he learnt while he taught, and never hesitated to thoroughly expose to his pupils any error in diagnosis or therapeutical omission he may have committed. At the same time, he was working with untiring zeal at the development of his own theoretical views, and in the preparation of his "Lehrbuch der Speciellen Pathologie und Therapie." Of this book, which was destined to exert so remarkable an influence on Medical views, the first edition appeared in 1858. Its success was complete, for even during the first year several re-issues were called for.

Niemeyer left Greifswald in 1860 on receiving an invitation to Tübingen. The University, and especially the Medical Faculty to whose rapid prosperity he had so much contributed, parted with him very unwillingly, and great was the grief of the students, to whom he had endeared himself not only by his great teaching powers, but also by his genial personal intercourse with them, entirely free from any academical pedantry. At Tübingen he entered with great vivacity and pleasure into his new circle of activity. Not only was he gratified by the idea of filling a chair which had been occupied by Autenreith, Wünderlich, and Griesinger, but also with the prospect of being brought into community of action with men of such eminence as those engaged in developing the resources of the Faculty. A North-German by birth, he yet readily entered into the conditions of South-German life. His reception was very warm, every confidence being shown him, and every wish to meet his wishes. How well he appreciated this courtesy, and how soon he became well satisfied with his new home, are shown most forcibly by his declining the highly prized invitation to Halle, which was offered to him in 1861. Other propositions made to him were also refused, and it is only natural that this attachment, which he exhibited to the University, should render his position there still more agreeable and honoured on all sides. Appointed Physician to the King of Würtemburg in 1865, he retained the royal goodwill undiminished to the end—which was, indeed, manifested during his last illness in the kindest and most considerate manner.

Niemeyer's scientific eminence was acknowledged by numerous learned bodies, who received him among their ordinary or corresponding members. His "Lehrbuch," the eighth edition of which he completed just before setting out for France, has not only continued in increasing demand among German Practitioners, but has met with the fullest recognition abroad, as witnessed by its translation into most living languages. His lectures on Pulmonary Consumption, edited by Dr. Ott, also have been translated into French, English, and Dutch. Besides these works, we have from his pen a pamphlet on Cerebro-spinal Meningitis, some lectures on Popular Medicine, an essay on the Banting Cure of Corpulence, and another on Animal Temperature. The number and value of the Academical dissertations produced by Niemeyer's pupils at his instigation are remarkable, not less than thirty of these appearing during the years 1862-70, and several of them being of considerable excellence.

It is evident that there was plenty of work going on at Tübingen; and when we consider that Niemeyer had many claims upon his attention in the affairs of the University and Faculty; that he had duties to fulfil as Court Physician, as well as those which attached to an extensive consulting practice, consuming a great deal of time; and that a new edition of his "Lehrbuch" was called for almost every second year, we are lost in astonishment at the power for work which he exhibited. This incessant activity continued from earliest morning till late in the evening—indeed, caused some uneasiness to his relatives and friends, accompanied, as it was, with a peculiar vivacity and restlessness, which, without being exactly morbid, yet conveyed to unbiassed observers the impression of exhaustion. Indeed, Niemeyer himself felt that his bodily powers would not long hold out, for he repeatedly expressed the opinion that he should not reach old age. Of late years he sought and found the restoration of his strength in a charming country residence which he possessed. He passed his vacations there in complete quietude, occupied only with his family and nature, the chase, and convivialities. Such pauses of repose, however, only continued a few weeks, so that the favourable influence of rest of body and mind did not prove durable. An unappeasable craving for work rendered longer inactivity insupportable. At the very least, he must visit his Hospital from time to time, see some interesting case, or spend the morning with his books. Above all things, Niemeyer was anxious to secure the greater completeness of his "Lehrbuch," by which he hoped to hand his name down to posterity. The time has, perhaps, not yet arrived for delivering a final judgment upon this work, which, while so many prize it as constituting an epoch, some, although not openly, visit it with harsh judgment. As yet, judgment is too likely to be influenced by personal recollections for his opponents to do him justice, or his admirers to speak of him with moderation. Another generation will be more impartial, and to it the definitive verdict must be confided. To ourselves, Niemeyer's "Lehrbuch"—of its kind, and within the limits which its author assigned to it—seems a masterpiece. In spite of its limited extent, the immense mass of material is dealt with with a completeness, lucidity, and objectivity which leave nothing to be desired. An exhaustive treatise, embracing all that is worthy of being known in clinical Medicine, Niemeyer never had the pretension of including within the narrow limits of a "Lehrbuch."

Niemeyer is especially prominent in his delineation of portraits of diseases as derived from nature. The figures of disease stand out, if we may so express it, in their plastic form, and impress the mind of the student far more forcibly than the most exhaustive enumeration of the symptoms of the affection. Having at his hand all the facts which have been furnished by the rapid progress of physiology and pathological anatomy and chemistry, he endeavours in a happy manner to furnish a better comprehension of the symptoms, and to explain how these become developed by the pathological processes going on in the economy. Not less fortunate is he in his efforts to impart more precision to therapeutical indications, and to analyse the operations of approved means and methods of treatment. That this search for clearness and comprehension leads him frequently beyond the limits of ascertained fact, and within those of hypothesis, cannot be denied, but we cannot still but regard his efforts in this direction as happy and most praiseworthy. On him was conferred the gift of discovering with ease and pointing out with precision where lay the germinal points of a scientific problem, and he possessed the power of bringing out clearly and formularising exactly ideas and observations which may have lain consciously or unconsciously in the minds of many observers. Many of his conclusions seem so simple and so obvious, and yet no one had ever arrived at them. Finally, we are indebted to Niemeyer for a large number of important clinical facts, especially in the province of therapeutics, which have been derived from the investigations conducted in his Clinic, as also for a great abundance of suggestive ideas and arguments. The style of the work is throughout very expressive, lively, and often even striking (*pikante*), and the diction is flowing. This departure from the usual dry style of manuals acts most favourably and attractively on the reader. Take it all and all, we may say that the book has not its like in Medical literature. For the Practitioner its perusal is at once a pleasure and a necessity; and for both young and old, for the newly-started Doctor as well as for the old-established Practitioner, it proves an enduring source of instruction as well as of inducement to resort to their own powers of thought, observation, and study.

Niemeyer's clinical lectures were just as instructive and stimulating. At bottom he liked not those brilliant discourses which may as well be delivered in the lecture-theatre as at the bedside, but much preferred the thorough examination and explanation of particular cases. While the preparation of his "Lehrbuch" necessitated his generalising his descriptions of diseases, and briefly to treat of their various deviations from their ordinary course, yet he held it of the highest importance to individualise his clinical teaching, so as to draw his pupils' attention to the peculiarities of every case which came before them. He carried this principle out, not only in relation to the symptomatic and diagnostic point of view, but with reference to therapeutics; and this is one of the reasons why Niemeyer's pupils became distinguished not merely as thinking but as successful Practitioners. His method of teaching, indeed, was eminently practical and instructive, and his Clinic proved, for the greater number of the students, highly captivating and suggestive. He was, moreover, known to them not only as their teacher, but as their sympathising friend. How many of them has he encouraged to industrious labour and the higher aspirations; how many has he assisted with material aid; and how many of those who seemed lost in the indolence and sluggishness of the students' *dolce far niente* has he rescued, by interposing at the right time, and incited them to energetic exertion. Finally, regarding Niemeyer for an instant as a practical Physician, we find his reputation spread far and wide, founded as it was upon a full trust alike in his diagnostical penetration and his successful therapeutical applications. At the bedside the amiable and humane aspects of his disposition became prominent. Untiring in his efforts for the benefit of his patients, he knew well at the right time how to resort to earnest encouragement or humorous jocularity. Poor and rich were alike welcome to him, and hence it was that he was received in every circle with honour and gratitude, and his name was one of the most popular throughout Wurtemburg, as, indeed, was amply testified by the impression which the news of his death produced.

Niemeyer was what he only aspired to be—a clinical teacher in the right sense of the word. By his ability and industry he advanced his science; employing both word and pen he has exercised a preponderating influence in the formation of able and reflecting Practitioners both at home and abroad. His name is indissolubly connected with the revival of clinical teaching of the last ten years; and the History of Medicine, which deals impartially, will, we feel certain, assign him a honourable place by the side of Sydenham, Boerhaave, Van Swieten, and Peter Frank.

MR. C. MACNAMARA'S LETTER TO MR. SIMON ON CHOLERA IN INDIA.

Mr. C. Macnamara, of the Indian Medical Service, whose recent work on cholera is favourably known in this country, appears to have come to the conclusion that his views on that disease have not received from the authorities in India the recognition and attention to which he considers them to be entitled. Finding that it is useless for him or anyone holding the same ideas regarding the propagation of cholera to expect a hearing from the local authorities, or to influence their action in the adoption of means for tracing the rise and progress of cholera epidemics in India and limiting their ravages in that country, he has appealed unto Cæsar in a letter addressed to Mr. Simon, the Medical Officer of the Privy Council, in the hope that the information at his command may be of use in, at least, preventing the extension of cholera from India to Europe. He observes that, with the knowledge of the fact that previous epidemics of cholera in Europe had been preceded by outbursts of the disease in Calcutta during the cold season, in which ordinarily it has been observed to be less prevalent than during the hot season or rains, it is more than probable that Mr. Simon, had he been informed of its exceptional virulence in Calcutta during the early months of 1866, when pilgrims were leaving that port for Mecca, would have taken precautions to prevent the disease being imported from India to Mecca, or, at any rate, presuming it would break out in that place, would have prevented its being carried by pilgrims over Europe.

It is the firm conviction of Mr. Macnamara that, with the differences of opinion on the subject of cholera, and the want of forethought on the part of those whose duty it is to regulate such matters, any number of vessels, carrying either pilgrims or other human freight or merchandise contaminated with cholera poison, might at any time proceed from Calcutta, not only to Arabia, but directly to Europe. And that, if the authorities in India hold with Mr. Strachey, that cholera spreads in a mysterious roundabout way from certain points—it may be by the wind or any other agency—it is out of the question to expect regulations to be enacted for the purpose of preventing the spread of the disease by vessels or other means of human intercourse. It seems to him, therefore, that Mr. Simon's influence is urgently called for, to regulate through the Home Government matters of this kind, for the preservation of this country from the approach of cholera from India.

Mr. Macnamara further remonstrates against the number, and unnecessarily voluminous nature, of the reports on cholera from the several branches into which the Indian Medical Service has been divided, in supersession of the head of that department in India. In order to trace out the history of cholera in India during 1868, it would be necessary, he says, to toil through a mass of reports absolutely overwhelming. The aggregate weight of those issued by the newly-created sanitary department alone in Bengal, exclusive of gaol reports and those of the Indian Medical Department, dispensaries, etc., amounted to thirteen pounds, whereas the Army Medical Department Report for 1868, containing the sanitary, statistical, and Medical history of the British Army in India and every other part of the world, weighs only one and three-quarter pounds. The reports from Madras and Bombay would probably furnish as much more material to be laboured through. Mr. Macnamara therefore maintains that these reports should all be correlated and condensed a thousandfold in a single office before being published, and that, being systematically arranged, they would then become useful, not only as works of reference in India, but for the rest of the world.

Having already ourselves uttered opinions very much to the same effect, we shall now only express the hope that the hint may be taken, and that future reports from India may be in a condensed form, more suitable for readers in this country, who, with only a limited amount of time at their disposal, are deterred by the bulk of the volumes from devoting to them the study necessary for the extraction of the really valuable information which many of them contain.

Mr. Macnamara gives a table comparing the number of deaths from cholera in Calcutta from 1865 to 1869, before the establishment of the waterworks—opened in January, 1870—with the mortality from the same cause during that year. It is very satisfactory to remark that the latter is less than in any previous twelve months, and it is still more encouraging that during the cold season the number of deaths has not undergone any increase—a fact which augurs well for the present year. But Mr. Macnamara warns us against speculating too much, from the results of last year, as to what may occur in future, as, with the exception of the improved waterworks and drainage, the circumstances of the disease were very similar in 1867, and yet the number of deaths from cholera in 1868 was remarkably large. Doubtless, the waterworks must have exerted a beneficial influence; but, as Mr. Macnamara observes, he would be a bold man who would assert that this was the immediate cause of the immunity from cholera in Calcutta in 1870, when we know that the general mortality from that cause throughout the presidency during that year was low.

The whole of Calcutta is now supplied with an abundance of pure water, and one-half of the town is perfectly drained, the other half being as yet in its former filthy condition. Will the mortality from cholera be diminished by the improvements already effected, or must the drainage works be extended into the still neglected parts of the city, before any permanent benefit will be observed, are questions of great interest to be decided by consistently following up the subject—a work which Mr. Macnamara suggests may be accomplished by Mr. Simon exciting the intelligent interest of the Home Government in the matter, but which is too expensive for him to continue on his own account. The necessity and advantages of a systematic record of the mortality from cholera in Calcutta are so obvious, that Mr. Macnamara's suggestion, that any action on the part of Mr. Simon or of the Home Government can be necessary to ensure its being effected, appears to us rather the idea of an enthusiast who cannot brook delay in the reception of his own views than the calm opinion of an unprejudiced observer.

Mr. Macnamara appends to his letter a diagram indicating the daily number of deaths from cholera in Calcutta during the five years from 1866 till 1870, the rainfall, and the rise and fall of the subsoil water; and in separate tables he gives the number of deaths from cholera, and the meteorological observations on each day of the year. He can trace no definite relation between the increase and decrease of mortality from cholera and the rise and fall of the subsoil water in Calcutta. It appears from the observations of Dr. Fawcus that the rise and fall of the subsoil water in one of the wells of the Alipore gaol were not connected with the rainfall, but corresponded with the level of the water in the neighbouring canal; that with spring tides the water in the well rose, and it fell with the neap tides. The same rule being supposed to apply to all the wells in Calcutta, Mr. Macnamara takes the daily mean of high and low tide as indicating the rise and fall of the subsoil water.

Mr. Macnamara has not observed, after a careful study of the meteorological tables, any constant meteorological conditions to account for the remarkable rise and fall in the number of deaths from cholera. With reference to the influence of the rainfall, Mr. Macnamara considers his former convictions to be strengthened by the facts brought out in the returns and diagram. He observes that a slight rainfall is often followed by an increase in the mortality, the surface impurities, including the poisonous material of cholera, being washed into the tanks and wells, and hence introduced into the system of persons drinking the water so polluted; while, on the other hand, a tremendous rainfall might wash away all cholera matter into the river, and thus well-nigh stamp out the disease for the time being. On June 9, 1869, there was such a rainfall, amounting to eleven inches; the deaths from cholera were rather numerous at the time, and continued so—"probably among persons affected before the 9th"—till the 17th, when there was a remarkable diminution, which continued till the end of the month, and through July. On the other hand, the downpour of rain of August 12, 1868, was followed by an *immediate* increase in the mortality from cholera. Such facts appear to us to invalidate one another as to the influence of rain. In the first instance, a period of incubation of at least eight or nine days is assumed to account for the decrease of mortality not following immediately on the heavy rainfalls; and, in the second, no incubative period—or a very short one—appears to have been passed through before the development of the disease and consequent increase of mortality.

Mr. Macnamara, at the same time, publishes an extract from a letter addressed by him, on July 7, 1870, to the Inspector-General of Hospitals, Indian Medical Department, on the plan which he would propose for preventing the spread of cholera among European troops. The chief features of the plan are—prompt moving out into previously selected camps, provided with covered wells, from which the only means of drawing water should be by iron pumps, the water also to be distributed in iron vessels, and never in the water-carrier's skin bags; the camping-grounds to be in the proportion of four to each European regiment, to have cooking-houses fit for Europeans, and, when possible, to be on the banks of rivers, in which not only should the men bathe regularly, but should wash their own clothes, all native washermen and other followers being as far as possible excluded from the camps, one native servant only being allowed to each officer. Mr. Macnamara asserts that if such a plan be strictly carried out as regards officers and men, no cases of cholera can occur after the regiment has reached the fourth camp, unless from fresh contamination; but unless carried out in its entirety the plan will certainly fail. The extreme difficulty of excluding every disturbing element in carrying out this crucial experiment, and the actual hardships and exposure which it would involve for the soldiers in pitching tents and transferring all necessary equipage from camp to camp—the assistance of natives being rigorously excluded—will, we fancy, prevent its ever being tried.

We have thus noticed, at considerable length, Mr. Macnamara's letter, as there is much in it which will interest our readers, and of which we entirely approve. We regret to add that we cannot so fully approve of the tone of personal irritation which pervades it. Mr. Macnamara appears to us not to have been well advised in addressing to a member of a home department such stringent observations on the proceedings of a Government of which he is himself a servant.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts:

Districts.	No. of Cases week ending						
	April 22.	April 29.	May 6.	May 13.	May 20.	May 27.	May 27. Sent to Hospital.
West—							
Chelsea	9	9	4	16	7	?	—
St. George, Hanover-square	19	23	14	11	9	15	10
St. James, Westminster	6	2	3	8	4	3	4
Paddington	24	12	20	24	15	?	—
North—							
St. Pancras	121	89*	104	101	117	116	—
Islington	67	59	64	59	42	50	29
Hackney	46	30	?	18	28	17	—
Central—							
City of London	14	13	5	13	11	8	6
St. Giles-in-the-Fields	2	14	5	5	?	?	—
Holborn	8	9	5	13	10	5	5
St. Luke's	17	25	12	13	17	12	12
East—							
Whitechapel	17	23	7	4	23	13	?
Poplar	?	?	?	?	11	14	6
South—							
St. Mary, Newington	37	47	28	28	29	30	24
St. Olave, Southwark	3	5	3	2	2	5	2
St. George-the-Martyr, Southwark	31	26	?	28	?	?	—
Lambeth	?	32	20	?	26	?	—
Clapham	23	32	29	13	16	6	4
Wandsworth	6	8	4	4	1	5	3
Streatham	2	?	?	?	?	2	?
Camberwell	?	?	?	?	45	?	?
Greenwich	?	—	?	?	12	?	—
Plumstead	3	3	?	6	6	5	?

* Return imperfect.

VACCINATION.

The Select Committee appointed to inquire into the operation of the Vaccination Act (1867), and to report whether such Act should be amended, have considered the matter referred to them, and have agreed on the following Report:—

Eight sittings of your Committee have been occupied in hearing the evidence of persons who assert that vaccination is useless and injurious, and who therefore object to its enforcement and encouragement by the law.

After careful consideration of this evidence, and of Medical and other evidence given in reply, your Committee agree with the general opinion—

That the cow-pox affords, if not an absolute, yet a very great protection against an attack of small-pox, and an almost absolute protection against death from that disease.

That if the operation be performed with due regard to the health of the person vaccinated, and with proper precautions in obtaining and using the vaccine lymph, there need be no apprehension that vaccination will injure health, or communicate any disease.

That small-pox, unchecked by vaccination, is one of the most terrible and destructive of diseases, as regards the danger of infection, the proportion of deaths among those attacked, and the permanent injury to the survivors; and therefore

That it is the duty of the State to endeavour to secure the careful vaccination of the whole population.

Your Committee have no doubt that the almost universal opinion of Medical science and authority is in accordance with Dr. Gull when he states that "vaccination is as protective against small-pox as small-pox itself"; with Dr. West when he gives as the result of his experience as Physician to the Children's Hospital in Great Ormond-street, and as having had charge of between 50,000 and 60,000 children since 1835, that "he does not think that vaccination does produce disease"; and with Sir William Jenner when he says, "I should think myself wicked, and really guilty of a crime, if I did not recommend every parent to have his child vaccinated early in life."

Against this evidence in favour of vaccination, the prevalence of the present small-pox epidemic, especially in the metropolis, has been alleged.

Your Committee, however, believe that, on the one hand, if vaccination had not been general, this epidemic might have become a pestilence as destructive as small-pox has often been where the population has been unprotected; and that, on the other hand, if this preventive had been universal, the epidemic could not have approached its present extent.

Vaccination is generally believed to require repetition about the age of puberty; but, as it is almost impossible to enforce revaccination, it is most important that all children should be vaccinated, both for their own sakes and that of the community, to prevent their catching and spreading disease.

There are three classes of children who being, by the conduct of their parents, left unvaccinated are themselves in great danger, and may become centres of infection to others:—1. There are the children who are utterly neglected by their parents. 2. There is the much larger number of children of parents who, while not denying their duty or desiring to disregard it, postpone its fulfilment, and who from carelessness or forgetfulness delay to protect their children until driven to the vaccine station by the panic fear of an epidemic. 3. There are the children of those parents, very few in proportion to the whole population, who assert that vaccination will do harm.

With regard to the first and second of these classes, there can hardly be any objection to the principle of a compulsory law, though there may be practical difficulties in its application; but in dealing with the third class, it becomes necessary to weigh the claims of the parent to control as he thinks fit the Medical treatment of an infant child, as against the duty of the State to protect the health of the community, and to save the child itself from a dreadful disease.

While weighing these conflicting claims, your Committee have had to consider the effect of the change in the law introduced by the Act of 1867, which, contrary to the provisions of the previous English or present Irish Acts, makes the parent liable to repeated convictions and penalties for not allowing his child to be vaccinated.

There appear to have been several cases of infliction of more than one fine or imprisonment with regard to the same child; and your Committee, though by no means admitting the right of the parent to expose his child or his neighbours to the risk of small-pox, must express great doubt whether the object of the law is gained by thus continuing a long contest with the convictions of the parent.

The public opinion of the neighbourhood may sympathise with a person thus prosecuted, and may, in consequence, be excited against the law; and, after all, though the parent be fined or imprisoned, the child may remain unvaccinated. In such a case the law can only triumph by the forcible vaccination of the child.

In enactments of this nature, when the State, in attempting to fulfil the duty, finds it necessary to disregard the wish of the parent, it is most important to secure the support of public opinion; and as your Committee cannot recommend that a policeman should be empowered to take a baby from its mother to the vaccine station, a measure which could only be justified by an extreme necessity, they would recommend that whenever in any case two penalties or one full penalty have been imposed upon a parent, the magistrate should not impose any further penalty in respect of the same child.

It has been suggested that the parent's declaration of belief that vaccination is injurious might be pleaded against any penalty, but your Committee believe that if the law were thus changed it would become a dead letter. Prosecutions would soon cease, and the children of the many apathetic and neglectful parents would be left unvaccinated, as well as the children of the few opponents of vaccination.

Your Committee are glad to find that wherever the guardians endeavour to carry out the law it is very generally, and, indeed, almost universally enforced; but there are some amendments by which they think the Act referred to them might be made more efficient.

By section 28 the guardians of any parish may appoint an officer to promote vaccination, and to prosecute persons offending against the Act; and it appears that in the majority of the unions such officers have been appointed, and that the law in consequence is more efficiently administered. Your Committee recommend that this appointment be made obligatory on the guardians.

They are also strongly of opinion that the registration of vaccination should be simplified; that the vaccination officer should keep the vaccination register, and therefore that the certificates under the Act should be sent to him; and also that the registrar of the district should forward to him a monthly return of births and of the infants that have died.

The suggestion has been made that a considerable proportion of the expenses of working the Act should be contributed from moneys to be voted by Parliament. Your Committee believe that efficient working would be promoted by such contribution. Without doubt, local agency must be relied on for administration, but central inspection and control are also needed, and would be much more powerful if a payment towards the expenses could be withdrawn in cases of maladministration.

Your Committee cannot conclude without expressing their opinion on two questions beyond the scope of the Act referred to them, though not of the subject of their inquiry.

A compulsory registration of births, such as exists in Scotland and Ireland, is needed, as the non-registered children are those most likely to escape the notice of the vaccinators.

There also appear to be disadvantages in the present division of sanitary responsibility between the departments of the Government. The Medical department of the Privy Council inspects the vaccination of every union, and advises the Poor-law Board in regard to the arrangements proposed by guardians, which arrangements are then approved or disapproved by the Poor-law Board.

This division of duties cannot but tend to delay and to non-efficiency, and though your Committee do not pretend to decide to which of these departments the duty of administering the law should be intrusted, they do not think such duty should be shared between two offices, and they believe that one and the same department should advise, inspect, approve, and control.

May 23, 1871.

NEW BOOKS, WITH SHORT CRITIQUES.

Sui Restringimenti Laryngei Monografia. Del Dottor Ferdinando Massei, Specialista per la Malattie di Gola, Medico-Straordinario nell' Ospedale Muliebra di S. Eligio. Napoli. 1871.

Monograph on Narrowings or Constrictions (Stenoses) of the Larynx. By Dr. Ferdinand Massei, Specialist for Diseases of the Throat, etc. Pp. 62.

⁂ Dr. Massei's monograph, which is gracefully dedicated to his "Teachers in the Laryngoscopic Art" in Paris, London, and Berlin, "i Professori," C. Fauvel, Morell-Mackenzie, and L. Waldenburg, contains a concise but fairly full description of the many diseases and accidents that may produce a narrowing of the laryngeal aperture and chamber, with their diagnosis and treatment, and he modestly hopes that his pamphlet may at least tend to make more fully appreciated "a means of diagnosis which ought now to be familiar to every Medical man—viz., laryngoscopy." First, he treats of the pathological anatomy of his subject, speaking successively of—I. Tumours; (1), carcinoma; (2), polypi, the most frequent seats of which, he states, are—1st, the vocal cords (especially the anterior two-thirds); 2nd, the epiglottis; 3rd, the borders of the ventricle of Morgagni; 4th, the cavity of this ventricle; 5th, the ary-epiglottidean ligaments; 6th, rarely, the arytenoidei; and, lastly, the inferior surface of the vocal cords, upon the tracheal mucous membrane; (3), bony and cartilaginous tumours; (4), syphilitic neoplasms. II. Neuroses, paralyses of the abductor muscles of the vocal cords, laryngismus stridulus. Then he describes acute laryngitis, abscess, inflammatory hypertrophy of the sub-mucous membrane, hypertrophy of the vocal cords, croup, cicatrices, adhesions, wounds, fractures, and foreign bodies. And he alludes to other causes of partial or total occlusion of the larynx, such as retro-pharyngeal abscess, and falling-back of the tongue. Then he treats of the etiology of these affections; their symptoms and course, diagnosis, prognosis, and treatment; finally, he gives several cases with illustrations. The author shows himself well acquainted with the literature of his subject, as well as with its clinical history and treatment, and it will, no doubt, be a comfort to our countrymen who may be travelling in Italy to know that in case of need they can find in Naples so competent and accomplished a *Specialista per la malattie di Gola* as Dr. Massei. In conclusion, however, we must remonstrate with the author for having sent forth his valuable little work without either table of contents or index.

Tarasp and its Mineral Waters. By the Rev. N. B. Whitby.

⁂ This is a concise and interesting account of the virtues of the mineral waters at Tarasp. The editor has embodied a reprint of Dr. J. Burney Yeo's article on "Tarasp in the Lower Engadine," which appeared in this journal on April 23 last.

The Goldsmiths' Company has sent a donation of £50 to the City Dispensary.

GENERAL CORRESPONDENCE.

BRITISH MEDICAL ASSOCIATION.

LETTER FROM DR. A. P. STEWART.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your article of last week, with its implied censure of the British Medical Association and its express reference to the Metropolitan Counties Branch, of which I am and have for some time been one of the secretaries, seems to demand from me some explanations, for which, I feel sure, your sense of fairness will secure immediate insertion in your columns. As regards the document which has prompted your comments, and the subject of which it treats, I will only say that to make any public use of a memorandum of an unfinished inquiry, drawn up by a single member of a committee, and headed "Confidential—for the use of the Committee of Council only," appears to me, to say the least, somewhat unusual.

In your observations as to the objects and work of the British Medical Association, you correctly stated that it was founded "to meet the want felt by provincial Medical men of a common meeting-ground, where they might exchange the results of their labours and experience, get rid of the insulation implied by provincial Medical practice, and promote the science which they knew they cultivated as ardently and as successfully as their brethren in the metropolis." Abundant proof, did no other exist, that this original intention has not been lost sight of, is to be found in the recent great annual meetings at Dublin, Oxford, Leeds, and Newcastle, the most numerously attended in the whole history of the Association, and, indeed, of the Profession, in this country. And so far are the meetings from having degenerated into "an annual picnic," that the scientific business has so multiplied as to render absolutely necessary the establishment of sections, in order to get through the papers approved by the Committee of Reference, and to permit of their being fully discussed. This, I need scarcely say, was never the case in the early history of the Association. But this is not the whole of my case. Still greater facilities for intercourse have been afforded of late years by the great increase in the number of branches, by the more numerous meetings of each branch, and by the institution, in some quarters—as in the eastern counties—of district meetings, and, in Birmingham, of a Clinical and Pathological Section. Once more, I need scarcely remark that these scientific reunions fulfil the objects of the founders of the Association in a degree which surpasses their most sanguine expectations.

But the metropolitan branch, it seems, "undoubtedly overshadows and leads the rest of the Association." Pardon me for doubting this statement, which, indeed, has no facts to support it. The metropolitan branch is not even the most numerous in the Association; for, although nearly all the most eminent Practitioners in and around London belong to the Association, I regret, for the sake of the branch, that many of them do not belong to it. The metropolitan branch confines its attention chiefly to questions of public Medicine, and is happy to aid, so far as it can, the Association and its Parliamentary committee in the management of its ordinary Parliamentary business. The business of the Association, again, is conducted almost exclusively by eminent provincial Practitioners. It would be difficult to find a more democratic or truly representative constitution than that of the Committee of Council. It consists of local secretaries, elected by the suffrages of the members of each branch; of presidents, past and present, who have been selected annually by the Practitioners of each neighbourhood in which the Association has held its annual meetings; and of ten gentlemen selected by the General Council from among themselves, the General Council being a representative body freely elected by all members of the branches, each of which returns members to the Council in proportion to its own numerical strength. This constitution, therefore, bears no resemblance to that of the College of Surgeons, or of any of the Corporations, but is based upon the most popular form of manhood suffrage that could be devised.

One word more; there can be as little doubt of the growing influence as of the increasing numbers of the Association. Let me point to the Royal Sanitary Commission, the appointment of which was confessedly due in great measure to its efforts, which are about again to be put forth in reference to the proposals of that Commission. The Government reluctantly acknowledged the power which it wielded, when it demanded last year for the Profession the right of direct representation on the Medical Council. That power it still directs; and if the Medical Reform Committee of the Association have not pressed forward their measure this session, it is because they have been advised to avoid coming into public collision with gentlemen who have adopted the cause *en amateur*, and have assumed untenable positions, which the Association could not support, but would not incur the public scandal of combatting. They will shun that scandal, and leave with those to whom it belongs the undivided responsibility of the needless delay. Every Bill which has affected Medical interests has received the attention of the Parliamentary Committee, and their intervention in respect of several of them has been attended with beneficial results.

If with this organisation the members are enabled by a yearly subscription of a guinea to receive a journal which publishes weekly the proceedings of their branches and committees, explains and assists the policy of the Association and its executive, and, at the same time, as you gracefully state, answers the purposes of an ordinary weekly Medical journal "of acknowledged excellence," it is not wonderful that they should be contented for the present and hopeful for the future; that new branches are in process of formation; that the Association has doubled its numbers in five years; and that it has received a large accession of members since the commencement of the present year. I am, &c., A. P. STEWART.

Grosvenor-street, May 30.

⁂ The memorandum referred to by Dr. Stewart was sent to us in the ordinary course by a correspondent, who invited our comment as the readiest mode of reforming evils which he complained of. Amongst those evils was the absorption of the provincial Association into a London publishing firm, which also would willingly direct the course of Medical politics, and get the control of the Profession.

LOUISE LATEAU.

LETTER FROM DR. F. A. HARTSEN.

[To the Editor of the Medical Times and Gazette.]

SIR,—In *Macmillan's Magazine* for April last, Dr. E. Day has published a most interesting paper upon the investigations made by Professor Lefebvre, of Louvain, upon the subject of Louise Lateau the *stigmatisée*, which has created so great a sensation in Belgium.

I crave a place in your columns to recommend the perusal of the original publication of Dr. Lefebvre, which I consider a masterpiece of sagacity, erudition, and eloquence.(a) It contains, besides, some valuable remarks upon mesmerism, spiritualism, and similar subjects, and deserves to be read by those even who are acquainted with the *résumé* of Dr. Day.

May 27. I am, &c., F. A. HARTSEN.

VAPOROUS ANÆSTHETICS.

LETTER FROM MR. J. T. CLOVER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the *Medical Times and Gazette* of May 13, Mr. Lewis Thompson called attention to the variability in strength of vaporous anæsthetics, arising from the variations in the temperature of the air and in atmospheric pressure. He rightly observes that the inhalation of any given anæsthetic might be safe with the thermometer at 60° and barometer at thirty-one inches, but fatal with the thermometer at 80° and the barometer at twenty-nine inches.

As chloroform ether, etc., are usually administered, there is a further variability with the temperature of the chloroform, which is diminished by its evaporation, and increased by the warmth of the hand, and by the patient's face and breath.

To obviate these objections, I contrived an apparatus by which any percentage of vapour wished for may be administered. I exhibited this apparatus in the great Exhibition of 1862, and have used it in some thousands of cases without a fatal result.

I find that three and a quarter minims of chloroform per 100 inches of air is the best proportion to use. It usually takes four or five minutes to render a patient perfectly quiet and fit for a severe operation. The time varies according to the freedom with which the patient breathes. I have tried stronger mixtures of chloroform and air, and am certain that the tendency to the production of death by syncope increases with the proportion of chloroform to the air. But whatever the mode by which death is threatened, there can be no doubt that a patient with three and a quarter per cent. of chloroform in his lungs at the time of alarm has a much better chance of being saved than one who has twice or thrice that amount, which is not impossible in a hot room when chloroform is first poured on a handkerchief.

(a) "Louise Lateau, de Bois d'Haine: sa Vie, ses Extases, ses Stigmates." Par le Dr. F. Lefebvre, Louvain. Chez Ch. Peters, Editeur.

Bichloride of methylene (so-called) is a mixture of chloroform with a lighter body, and there is the same objection to its use as to the mixtures of ether and chloroform—viz., that the components do not evaporate equally. A bottle of "bichloride of methylene," if left uncorked, or badly stoppered, loses a large proportion of the lighter substance, and what remains is less safe than the original mixture. I have found this "bichloride of methylene" act very nicely for short operations. It certainly does produce sickness when the administration is prolonged. I am disposed to think that its reputation for not producing sickness depends on its having been hitherto principally used for short operations. I am, &c.,

J. T. Clover.

3, Cavendish-place, Cavendish-square, W., May 30.

BIRMINGHAM HOSPITAL FOR WOMEN.

Letter from Mr. Arthur Chamberlain.

[To the Editor of the Medical Times and Gazette.]

Sir,—In reply to your inquiry, the consulting officers only were elected to-day. They were—Dr. Bell Fletcher, Senior Physician at the General Hospital, and Dr. Fleming, Senior Physician at the Queen's Hospital, Consulting Physicians; Professor Berry and Furneaux Jordan, Esq., Consulting Surgeons. There are vacancies for the office of acting Surgeons. Candidates must possess both a Medical and a Surgical degree or diploma, and must send in to me their applications, together with their diplomas and degrees, on or before June 26 next.

In spite of the inspired paragraphs that appeared in some of the London Medical organs, it is now certain that a much-needed and most useful charity will be shortly opened in Birmingham with the sanction and support of the highest Medical authorities in the town. I am &c.,

Arthur Chamberlain, Hon. Sec.

Elm House, Arthur-road, Edgbaston, May 29.

REPORTS OF SOCIETIES.

◆

THE PATHOLOGICAL SOCIETY.

Tuesday, May 16, 1871.

J. Cooper Forster, F.R.S., Vice-President, in the Chair.

The Committee (which consisted of Dr. William Marcet, Dr. Samuel Wilks, Dr. T. S. Bristowe, Dr. J. Andrew, and Dr. W. Howship Dickinson) appointed to consider the subject of lardaceous or amyloid disease reported as follows:—

"The Committee, in presenting their report, think it right to state that it comprises the fruit of much time, labour, and expense. The analyses by Dr. Marcet, whose report is appended, show that the organs which have been examined as presenting the alterations in question are considerably deficient in potash and phosphoric acid, while they contain an increase of soda, chlorine, and cholesterine. Where the tissue is extensively affected, it is rendered much less soluble in water than in its normal condition, the insoluble portion, which is nitrogenous, being readily soluble in potash. When iodine is brought into contact with the affected structure it enters into combination with a peculiar nitrogenous substance, by which the tissue is pervaded, and produces the reddish-brown reaction familiarly recognised as the test of the morbid change. When the lardaceous change is incomplete, the nitrogenous material which gives the reaction can be extracted by water. Both the iodine reaction and the substance to which it is due have been carefully investigated, together with the relationship existing between this substance and a solution of fibrin in dilute hydrochloric acid. In reference to the name which should be applied to this morbid condition, the Committee, after due deliberation, suggest that the term *lardaceous* should be adopted by the Society. This term, they believe, is widely used and well understood in the sense to which they desire to restrict it, but they, nevertheless, think it proper to insist that the word be explicitly limited to organs so altered as to present the chemical characteristics described in the report, the most obvious of which is the reddish-brown reaction with iodine."

Drs. Murchison and Bastian reported on Dr. Sutton's case of supposed Small-pox in the Fœtus. There were marks of successive eruptions in the infant; there was no history that the mother ever had small-pox; and, in short, they could not confirm the opinion as to the nature of the disease.

Dr. Green, reporting on Mr. Morris's specimen of Tumour of the Fibula, confirmed the statement as to the nature of the tumour—viz., a round-celled sarcoma.

Dr. Bristowe reported on Dr. Dickinson's specimen of Tumour of the Mesenteric Glands. The mass consisted of fibrous tissue and fat, with cartilage and bone. Its cysts contained mucus, and were lined with ciliated epithelium.

The same gentleman reported on Dr. Risdon Bennett's Tumour of Lung. He confirmed the report handed in.

Dr. Bristowe also read a report on Dr. Tilbury Fox's specimen of Madura Foot. He found the foreign matter fungoid, thus confirming Dr. Carter's opinion.

Dr. Tilbury Fox said that in a former specimen examined no trace of fungus could be found.

Mr. Hulke confirmed the report made by Mr. West as to the nature of a Tumour of the Upper Jaw he had exhibited.

Dr. Church, in reporting on Mr. Spencer Watson's specimen of Epithelioma of the Cheek with Cysts, confirmed the account given of it.

Dr. Cayley reported on Mr. T. Smith's Tumour of the Mamma. Some portions were scirrhous.

Mr. Arnott read a report on Dr. Whipham's specimen of Columnar Epithelioma of the Liver. This account of the structure he confirmed. It was, however, mixed up with ordinary cancer.

Dr. Marcet then gave some account of the Chemical Reactions of Amyloid or Lardaceous Material. The body was colloidal, and highly nitrogenised. It existed in fatty as well as in amyloid disease.

Mr. Gay exhibited Tumours removed from the buttock of a woman for the second and third times. At first the tumour seemed myxomatous, but on the third recurrence is was plainly fibroid, with some myxomatous structure. The last time of removal it was found invading the surrounding tissues.

Dr. Bristowe exhibited two specimens of Malignant Tumour of the Œsophagus. One was from a woman, aged 48, who had been ill twelve months. She complained first of dysphagia, then lumps came in her neck. These ulcerated, and the fauces were laid open. She could not swallow, and died exhausted. The lungs and glottis were slightly affected. The other occurred in a man, aged 51, who complained of dysphagia, and latterly of dyspnœa. The left vocal cord was paralysed. He died from the disease opening the left common carotid. It was found that an opening existed between the trachea and the œsophagus. This was not discovered during life, owing to the presence of a tube in the œsophagus for feeding.

Mr. W. Adams showed a Fibroid Tumour from the Hard Palate, which had projected into the mouth and impeded the jaws. The patient was a female, aged 40, and the tumour had existed for six years. It was supposed to be an exostosis, but came away easily with the gouge. There were no myeloid bodies in the tumour.

Mr. Maunder exhibited a specimen of Axillary Aneurism in the first part of the vessel. The subclavian was tied in the third part of its course, but the patient died on the eighth day after the operation. He had tied the vessel after Lister's method, yet there was much pus in the neighbourhood of the wound. There had been a double bruit over the innominate. The aneurism was filled with clot.

Dr. Risdon Bennett showed a specimen of Intra-thoracic Growth from a female, aged 17. She had been rather delicate, and twelve months ago began to cough with some expectoration and shortness of breath. The chest was dull in front and the spleen enlarged. She died exhausted, when it was found that the lungs contained peculiar deposits. These had been examined by Dr. Sutton, who reported on them. There was a large growth in front of the pericardium, apparently rising from or in the site of the thymus. It attacked the pericardium, the lungs at their sides, and surrounded the trachea. The glands were enlarged throughout the body, and there were deposits in the liver and kidney as well as in the spleen. The structure of these masses was lymphoid. The masses in the lung were similar. He had seen a similar case in the London Hospital.

(*To be continued.*)

MEDICAL SOCIETY OF LONDON.

Monday, April 3.

Dr. Andrew Clark, President, in the Chair.

Dr. Brunton narrated Anomalous Cases occurring in his practice—small-pox following measles, small-pox following scarlatina, and scarlatina following varicella. The first case was that of a woman in the sixth month of her second pregnancy. On March 15 she experienced a rigor, became feverish, and "out of sorts." Two days after the author saw her a reddish rash had appeared on the forehead, limbs, and abdomen, where the rash was confluent, punctated, and slightly papular. The eruption of measles then became distinct, but in the course of three days became fainter; and, in addition, the eruption of small-pox in the papular form succeeded and became vesicular, the vesicles changing into pustules, and the eruption was disappearing fast on the 31st, when the patient was doing well. He thought that in this case the symptoms were quite distinct—first, as regards the measles; and, secondly, as regards modified small-pox. The next case was from the notes of Dr. Hay: S. H., aged 41, in the fifth month of her seventh pregnancy, was seized with rigors, followed by headache and pains in the limbs, on August 18 last. The next day she had sorethroat, and was covered with a profuse scarlatiniform eruption. On the 20th labour set in; and abortion followed on the 21st. In the evening vomiting came on, and lasted until the morning of the 22nd. The rash disappeared, and an exaggerated form of measles was apparent, but of a darker colour. On the 23rd she was completely covered with small-pox pustules, and death ensued on the 24th. In this case the abortion followed the onset of the scarlet-fever; the patient did well until the vomiting set in, the forerunner of the small-pox; the scarlet eruption faded on the fourth day, then followed the roseolar rash, next the eruption of small-pox, and on the sixth day of illness death occurred. Abortion in small-pox is usually met with in severe cases isochronous with the eruption on the following day, and in milder cases later on in the disease. In this case abortion took place three full days before the eruption of small-pox, and on the second after the onset of scarlatina. In the third case, P. P., aged 4, the eruption of varicella came out on March 22, and four days after, when the author saw him, the skin was covered from head to foot with scarlatinal eruption, very distinct, co-existent with the varicellous eruption. On April 3, eruption of scarlatina gone; desquamation has commenced; varicellous scales still in parts of the body; doing well. The author thought that Dr. Hunter's statement, "that two eruptive diseases cannot co-exist," had been disproved by Mr. Marson, and the above strengthened his position.

In the discussion that followed, Dr. Edwards-Crisp, Dr. Ross, Dr. Broadbent, Dr. Tilbury Fox, and Mr. Rogers Harrison took part, the President remarking, at the conclusion, that it was reasonable to suppose that two acute diseases could be co-existent; further facts must be sought, and the procession and order of the events occurring in a case carefully tabulated.

The President then showed a case of Peribronchial Fibrosis. We hear much said in praise of modern Medicine and Surgery and of their triumphs; but we are not perfect, in consequence of the presence of vagueness and strong dislike to precision. Phthisis, up to a recent time, was thought to be ulcerative destruction of deposits in the lung. There were different kinds of phthisis—viz., that due to the presence of tubercles, giving rise to tuberculous phthisis; ulceration may take place; pneumonic exudation may happen (pneumonic form of phthisis); also a fibroid exudation giving rise to fibroid phthisis. The symptoms are so much alike that it has been difficult to recognise and define a case in life; but they are as distinct clinically as pathologically. The cases are at times complex, there being pneumonic inflammation present with the different kinds of deposit. The young patient shown, aged 19 years, suffered, fourteen years ago, from an attack of pleuro-pneumonia. He was very ill, had cough, fever, pain in the side, a high temperature, and expectoration. He never fully recovered, but for a month or two seemed well; but he suffered from an attack of bronchitis, which on admission was found to be general. There was wheezing all over the chest, muco-purulent expectoration, and some fever. On percussion, there was solidification of the left lung in front. The dulness increased, and there was considerable bronchophony. The bronchitis disappeared, but the consolidation remained, and the left side, which before was full, began to contract; the vocal thrill and bronchophony decreased, all fever disappeared, and the respiration and pulse became normal, the physical signs alone being present. On examination under the microscope of small pellets of mucus expectorated, small quantities of the areolar tissue were found, showing the presence of a small cavity, which is quiescent, and gives no trouble. The consolidation and cavity have followed the pleuro-pneumonia; the corpuscular stuff, after the subsidence of the bronchitis, has been converted into a fibroid mass, and the patient has returned to health. There is now no evidence of a change going on, but consolidation and contraction. The prognosis in these cases was favourable. Cases, under advantageous circumstances, went on for eighteen or twenty years or more. The left lung of this boy was solid as regards its middle two-thirds, and a small excavation was present. That side of the chest was contracting. The vocal thrill and the bronchophony were diminishing, and the boy appeared in perfect health.

An interesting discussion followed; after which

Dr. Meymott Tidy read a paper "On the Estimation and Detection of Sugar in Diabetic Urine." The first circumstance that attracted notice was the ordinarily high specific gravity of diabetic urine; yet some specimens loaded with sugar had almost a normal specific gravity. This was difficult of explanation, unless solids may be present in liquids in different molecular states. Ordinary urinometers are not to be trusted, some being correct within ten or fifteen degrees. The presence of torula cerevisiæ is not to be regarded as any proof of the existence of sugar. No less than three kinds of fungi are to be found in diabetic urine, and all three without a trace of sugar. With reference to the different kinds of sugar found in diabetic urine there was—(1) the ordinary grape-sugar; (2) a variety resembling misilæ; (3) one differing from both these, and remarkable in several particulars. Passing to the chemical tests, the author remarked that if carbonic acid was to be collected for the purpose of estimating the quantity of sugar, it was better collected over oil than any other way, and if great accuracy were required, he suggested allowing the carbonic acid to pass into baryta water, the precipitate being weighed as a sulphate. 1. Dr. Roberts, of Manchester, had suggested taking the specific gravity both before and after fermentation, and from this estimating the amount of sugar present. The test gave very variable results. At one time very accurate, at another very inaccurate results had been obtained. 2. The copper test was valuable, although there were several bodies that interfered with its action, and, as a quantitative test, Dr. Tidy had very little opinion of it, as it was impossible to mark the exact point where the blue colour had disappeared. 3. Moore's Test: The dark colour due to molassic acid produced when diabetic urine was boiled with potash solution. A series of solutions were placed on the table containing different but known quantities of sugar, but in each the same quantity of alkali. They ranged from 0·25 gr. of sugar to 2·0 gr., and the difference of tint was perfectly marked. Dr. Tidy proposed this, an adaptation of Vogel's method, for estimating sugar. The method of working was as follows:—A potash solution containing 1 gr. of potash to every septem (7 gr.) of water having been made, take 10 septems of the urine, add 10 septems of the solution; boil for one minute, dilute with distilled water in a four-ounce phial (similar to those used for the test solutions), and then compare with the test solutions labelled as containing known quantities, until the exact tint is found. The small quantity of urine employed does not colour the water so as to interfere with the test. If any precipitate is produced by boiling, it must be filtered. If the tint was more than that indicated by two-grain standard bottle, it must be marked and diluted. The experiment made gave—

1·25 gr. in 10 septems }
12· 5 gr. in 100 ,, } = 17·86 per 1000 gr. of urine.
12· 5 gr. in 700 ,, = about 8·6 per oz.

Dr. Tidy proposes to get rid of the trouble of the standard solutions by using gelatine coloured of different tints, as standards for comparison.

LEGAL INTELLIGENCE.

CONVICTION FOR REMOVING A SMALL-POX PATIENT.

William Lyall Aitchison, a baker, and Priscilla, his wife, of 13, Tothill-street, Westminster, and Ann Whitton, of 19, Dartmouth-street, Westminster, were charged at the Westminster Police-court with wilfully exposing Georgina Jennett in certain public places and public conveyances without proper precaution, she, to their knowledge, suffering at the time from small-pox.

The chief point of interest in this case was that the opinion of Dr. Simpson was quoted by the defence as an authority that the disease did not mature into the stage of infection for some days after the eruption showed itself, and that therefore at the time of removal the disease was not of an infectious character. The words quoted from a pamphlet written by Dr. Simpson on small-pox are the following:—"As the disease does not mature into the stage of infection for some days after the eruption shows itself, a free period would thus be secured for arranging proper measures of isolation, either at home or in Hospital, before the date and danger of infection were reached."

Dr. Langton, who ordered the removal of the girl by the South-Western Railway, bore out Dr. Simpson's statement, and was of opinion that at the time the girl was moved there was no infection, or he should have directed her removal to a Hospital.

Mr. Woolrych was of opinion that the charge was established, and fined the two Aitchinsons £5 each, and Whitton 30s.

OBITUARY.

DR. G. H. FIELDING

Was born at Hull, on October 26, 1801. He practised in his native town, first as a Surgeon and afterwards as a Physician, in partnership with his late father. He then relinquished practice for several years, but afterwards recommenced it at Tonbridge, where he died on May 24. Dr. Fielding devoted a considerable portion of his time to scientific pursuits, more especially meteorology, and was author of several pamphlets on scientific subjects, one of the most remarkable of which was a paper "On a New Membrane in the Eye," read before the British Association, of which he was a life member. He was also a member of the British Meteorological Society (to whose *Proceedings* his last paper, "On the Summer of 1868," was contributed), and a Fellow of the Royal Society. Amongst his works is one "On the Influence of Colour on the Effect of Light, Heat, and Odours."

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, May 25, 1871:—

Burton, Edward Theodore, Spring-hill, Birmingham.
Cogman, Charles, 267, New North-road.
Johnson, Charles Hargitt, Royal Infirmary, Hull.
Lee, Alfred Robert, Great College-street, Camden-town.
Monks, Frederick Aubin, Darnley-road, Hackney.
Palmer, Henry Drake, Olney, Bucks.
Wall, Abiathar, Bishop's-road, Bayswater.

As Assistants in Compounding and Dispensing Medicines:—

Carr, George, Sheffield.
Clarke, George Ernest, Norwich.
Smyth, Arthur William, Aldborough.

The following gentlemen also on the same day passed their first Professional examination:—

Hosking, Ethelbert, King's College.
Laver, Arthur Henry, St. Thomas's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Burchell, P. L., M.D. Lond., F.R.C.S. Eng., L.S.A.—Surgeon-Accoucheur to the City of London Lying-in Hospital, City-road.

Iles, Daniel, M.R.C.S. and L.S.A.—Medical Officer to the Third (First Division) District of the Northleach Union.

Leapingwell, A. H., L.S.A., etc., of the London Hospital.—House-Surgeon and Dispenser to the West Ham, Stratford, and South Essex Dispensary.

Rutherford, Thomas, M.B., C.M. Edin.—A Resident Physician in the Royal Infirmary, Edinburgh.

Smyth, J. E., M.D., L.R.C.P. Edin., etc.—Public Vaccinator for the Waterloo District Vaccination Station, Stamford-street, Waterloo-road.

Thompson, Reginald E., A.B., M.D., F.R.C.P.—Visiting Physician to the Seamen's Hospital, Greenwich (late *Dreadnought*), *vice* Dr. Hughlings-Jackson, resigned.

Vincent, Osman, M.R.C.S.—Surgeon to the National Orthopædic Hospital, *vice* Henry Dick, M.D., resigned.

Way, Edward Willis, L.R.C.P. Lond., M.R.C.S. Eng.—A Resident Physician in the Royal Infirmary, Edinburgh.

Wills, T. M., L.K.Q.C.P.I., L.R.C.S.I.—Resident Medical Officer to the Bootle Hospital and Dispensary.

MILITARY APPOINTMENTS.

12th Foot.—Staff Surgeon James Greig Leask, M.B., to be Surgeon, *vice* William Sinclair, deceased; Staff Surgeon Edward Louis McSheehy, M.D., to be Surgeon, *vice* Frederick Tydd Abbott, appointed to the Staff.

23rd Foot.—Surgeon Benjamin Tydd, having completed twenty years' full-pay service, to be Surgeon-Major, under the provisions of the Royal Warrant of December 27, 1870.

Medical Department.—Surgeon Frederick Tydd Abbott, from the 12th Foot, to be Staff Surgeon, *vice* Edward Louis McSheehy, M.D., appointed to the 12th Foot; Staff Assistant-Surgeon James Parr, to be Staff Surgeon, *vice* James Greig Leask, M.B., appointed to the 12th Foot; Assistant-Surgeon William Armstrong, from half-pay, late 25th Foot, to be Staff Assistant-Surgeon, *vice* James Parr, promoted on the Staff.

BIRTHS.

Cribb.—On May 26, at 37, Compton-terrace, Highbury, the wife of Arthur John Cribb, M.D., of a son.

Ireland.—On May 23, at The Limes, Linton, Cambridgeshire, the wife of Edward Ireland, Surgeon, son of the late J. G. J. Ireland, Esq., J.P., Kendal, Westmoreland, of a son.

Lloyd.—On May 27, at 42, Finsbury-circus, the wife of T. Franklin Lloyd, M.R.C.S.E., of a son.

Long.—On May 29, at South Park, Salehurst, the wife of C. F. Long, M.D. of a son.

Morris.—On May 30, at 13, Somer's-place, Hyde-park-square, W., the wife of James Morris, M.D., London, Fellow of University College, of a daughter.

Wilson.—On April 16, at Coonoor, the wife of Surgeon-Major J. Wilson of a son.

MARRIAGE.

Turner—Birkett.—On May 26, at the Church of St. Mary the Virgin, Kingston, Henry Morten Turner, solicitor, to Edith, eldest daughter of Edmund Lloyd Birkett, M.D.

DEATHS.

Bacot, Jessie Margaret, fifth daughter of J. T. W. Bacot, Deputy Inspector-General of Hospitals, on May 25, at Gravesend, aged three and a half years.

Fawcett, Elizabeth, the wife of R. M. Fawcett, M.D., at 3, Scroope-terrace, Cambridge, on May 24, aged 72.

Fielding, George Hunsley, M.D., F.R.S., etc., at the Grove House, Tonbridge, on May 24, aged 69.

Hore, Henry Augustus, M.R.C.S.E., third son of the late James Hore, Esq., of Dulwich-common, Surrey, at Park-street, Bristol, on May 24, aged 48.

Impey, James William, younger son of the late Alfred Impey, M.D., of Great Yarmouth, at Caius College, Cambridge, on May 23, aged 22.

Jackson, Henry Erskine, son of Dr. James Rawlinson Jackson, at Allygurh, N.W.P. India, on May 4, aged 16 months.

Lowe, William Thomas, F.R.C.S., at 33, Highbury-hill, on May 27, aged 62.

Wake, Martha, widow of the late Charles Wake, M.D., at Leamington, on May 24.

Williams, David, M.D., of Disquilfa, Carmarthenshire, and of Curborough, Lichfield, and forty-six years Honorary Physician to the North Dispensary, Liverpool, at 12, Imperial-square, Cheltenham, on May 24, aged 83.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Ampthill Union.—Medical Officer for the Maulden District; must possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. John Wright, Clerk to the Union, on or before June 7. Election on the 22nd.

Dental Hospital of London, 32, Soho-square.—Assistant Dental-Surgeon; must be L.D.S.R.C.S. Eng. Applications and testimonials to the Honorary Secretary on or before June 9.

Huddersfield Infirmary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians, and be duly registered. Applications and testimonials to John Marsden, Esq., Hon. Sec., on or before July 28.

Leeds Public Dispensary.—Resident Medical Officer; must be duly qualified. Applications and testimonials to Mr. John Horsfall, 34, Albion-street, on or before June 14.

Leicester Infirmary and Fever House.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to Mr. T. A. Weekes, Secretary, on or before June 5. Election on June 13.

London School of Dental Surgery, 32, Soho-square.—Lecturer on Mechanical Dentistry; must be L.D.S.R.C.S. Eng. Applications and testimonials to the Honorary Secretary on or before June 15.

Lunesdale Union.—Medical Officers wanted for five districts of this Union. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Further information may be obtained of Mr. John Hoggarth, Clerk, 87, Church-street, Lancaster, to whom applications and testimonials are to be sent on or before June 12. Election on June 13.

Lutterworth Union.—Medical Officer and Public Vaccinator for the district comprising the parishes of Arnesby, Bruntingthorpe, Kimcote, etc. Candidates must have a certificate of proficiency in Vaccination, and possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. James Driver, Clerk, on or before June 7. Election on the 8th.

Macclesfield Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before June 10. Election on the 15th.

Narberth Union.—Medical Officer for the Third District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board, and understand the Welsh language. Applications and testimonials to Mr. John Thomas, Clerk, Narberth, on or before June 17. Election on the 19th.

St. Bartholomew's Hospital.—Lecturer on Mental Diseases. Applications and testimonials to Mr. H. Cross, at the Hospital, on or before June 9. Any further information may be obtained of Mr. Morraut Baker, Hon. Sec. of the Medical School.

Salop Infirmary, Shrewsbury.—Resident House-Surgeon; must be a Member of the College of Surgeons of London, Edinburgh, or Dublin. Applications and testimonials to the Board of Directors, on or before June 9.

Samaritan Free Hospital for Women and Children, Lower Seymour-street, Portman-square.—Physician for out-patients; must be M.D., not practising pharmacy. Applications and testimonials to the Secretary, on or before June 3.

Somerset County Asylum, Wells.—Assistant Medical Officer; must be duly qualified and registered. Applications and testimonials to the Medical Superintendent.

Worcester General Infirmary.—Dispenser; must have had considerable experience. Applications and testimonials to Mr. A. P. Watkins, Secretary, 50, Foregate-street, Worcester, on or before June 17.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Brackley Union.—Mr. Richard Jones has resigned the First District; area, 16,250; salary, £60 per annum;—and the Workhouse; salary, £40 per annum.

South Molton Union.—Mr. Richard Ley has resigned the Ninth District; area, 11,650; population, 2069; salary, £33 10s. per annum.

APPOINTMENTS.

Camelford Union.—Arthur Wade, M.R.C.S. Eng., L.S.A., to the Boscastle District.

Hawarden Union.—Robert Platt, L.R.C.P. Edin., M.R.C.S. Eng., to the Second District.

Holbeach Union.—Arthur B. Ewen, M.R.C.S. Eng., L.S.A., to the Tydd District.

West Derby Union.—John W. H. Watling, M.R.C.S. Eng., L.S.A., to the Childwall District.

Woodstock Union.—Edward V. Hemingway, M.R.C.S. Eng., L.S.A., to the Second Deddington District.

SUPERANNUATION.

Knaresborough Union.—Mr. James Walker, after a service of seventeen years as Medical Officer for the Knaresborough District, has been awarded a superannuation allowance of £42 per annum.

It is expected there will be an examination of candidates for the Army Medical Department in August next.

Dr. J. E. Smithies has been elected vaccinator for the Waterloo district by the Lambeth Board of Guardians.

Mr. Gowan, late of the Montrose Asylum, has been elected assistant Medical officer to the Worcester Lunatic Asylum, in the place of Mr. Ceeley, resigned.

Dr. C. R. A. Wright has been appointed Lecturer on Chemistry to St. Mary's Hospital, Dr. Russell, who formerly held that appointment, being now Professor of Chemistry at St. Bartholomew's Hospital.

John Tomes, Esq., F.R.S., of 37, Cavendish-square, and Samuel Cartwright, Esq., F.R.C.S., of 32, Old Burlington-street, have been appointed Consulting Dental Surgeons to the Dental Hospital.

It is proposed, says the *Glasgow Herald*, to found a chair in the Andersonian University for the study of Applied Physics, and already one friend of the University has offered £2000 towards this object.

Dr. Tripe, the Medical Officer to the Hackney District Board of Works, reported at the last meeting that small-pox was again on the increase in the district, as well as in London generally.

The President of the Poor-law Board has given notice of an amendment to the Bill now before Parliament to provide for the punishment of persons who abscond from Hospitals for the reception of contagious diseases before they are discharged by the Medical Superintendent.

Lord Overstone, a member of the Senate of the University of London, has announced his intention of purchasing the rare mathematical library of the late Professor De Morgan—valued at £1200—for the purpose of presenting it to the library of the new University building.

Last week the Dowager Marchioness of Westminster laid the foundation-stone of a Cottage Hospital, to be erected at Shaftesbury as a memorial to the late Marquis of Westminster.

Fifteen deaths from measles occurred on the homeward voyage of H.M. Indian troop-ship *Euphrates*, which arrived at Plymouth on Friday; there are still a large number of cases of measles on board.

Cholera has broken out in an alarming manner in Cashmere. The political resident in the Persian Gulf, writing on April 8, reports a rumour, at Bushire, of the plague having shown itself at Deyer, and states his impression that the cholera now prevailing is in its origin attributable to the famine from which the neighbourhood of Bushire has suffered.

The Metropolitan Asylum District Board have accepted the offer of the Lords of the Admiralty to lend them the ship *Rhin* for the purposes of a Hospital. It will accommodate from 150 to 200 patients.

A Small-pox Hospital not a Nuisance under the Act.—Vice-Chancellor Wickens has just decided, in a suit in which the Metropolitan Asylum District Board were the plaintiffs, that a small-pox Hospital is not a nuisance under the Act, and refused to grant an injunction to restrain the Board from erecting such a building.

The House of Commons Committee on the schemes for utilising the sewage of the metropolis have declined either to permit the Essex Reclamation Company to alter and limit their original plans, or the Metropolitan Board of Works to take over the works and plant of the Company.

According to the latest advices from Buenos Ayres, the deaths from yellow fever reached about 222 daily, which was a considerable decrease from the previous mortality, and there were signs of a decline in the epidemics. The sanitary state of Paraguay was improved, but fears were entertained of fever being introduced from Buenos Ayres. In Corrientes the epidemic was decreasing.

The Middlesex magistrates, last week, fixed the salaries of the several coroners in the county, from January 1, 1871, as follows:—Eastern district (J. Humphreys, Esq.), £2207 14s. 8d.; Central district (Dr. Lankester), £2099 13s. 4d.; Western district (Dr. Diplock), £633 10s. 1d.; Westminster (Mr. Bedford), £474 6s. 2d.; Duchy of Lancaster (Mr. W. J. Payne), £59 9s. 3d.

The Holborn Guardians have resolved, on the proposal of the Clerkenwell Vestry, to instruct their Medical officers, on the outbreak of any case of small-pox in their respective districts, to ascertain and report whether or not the patient has been vaccinated—a thing which has not yet been done—and also to permit the Medical officer of the vestry to have access to their books for the purpose of embodying the results in his ordinary return concerning the health of the parish.

At a meeting of the Medical Society held recently in the Royal Society's Rooms, Melbourne, Mr. Archer brought forward some new and interesting facts relating to the mortality of infants under 1 year in Victoria. He shadowed forth something like it, in "Facts and Figures," in 1858, and he now indicated that hygienic improvement had been steadily going on ever since. The annual rate of mortality out of every 100 infants living, as shown by Dr. Farr (*Statistical Journal*, vol. xxix.), is in Italy, $27\frac{1}{3}$; in the Netherlands, $23\frac{3}{4}$; in England, $18\frac{1}{4}$; in Sweden, $14\frac{1}{5}$; and Denmark, $13\frac{3}{4}$; and Mr. Archer exhibited tables proving the death-rate of children under 12 months old for the past ten years in Victoria to be only $13\frac{4}{10}$ per cent. So, in fact, infant life in Victoria is twice as valuable as it is in Italy, far in worth before that in England, and better even than in two of the most favoured countries on record—as far, at least, as vital statistics are concerned—namely, Denmark and Sweden.

Action against Miss Jex Blake.—On Tuesday, at Edinburgh, the action for damages brought by Edward Craig, a student in the Edinburgh University, against Miss Jex Blake, for defamation of character, was opened in the first division of the Court of Sessions. The alleged libel was contained in a speech delivered by defendant before the contributors to the Royal Infirmary, at a meeting held in Edinburgh on January 2, 1871, and related to a riot which took place in November, 1870, at the Surgeons' Hall, in consequence of the admission of lady students. Miss Blake said that the plaintiff was one of the ringleaders, that he used foul language, and appeared intoxicated. Damages were laid at £1000. William Anderson, a reporter, deposed that Miss Blake read from manuscript, which she gave to the representatives of the press at the close of the meeting, and which contained even stronger expressions than those given in the papers. Dr. Christison, whose assistant the plaintiff was, stated that Miss Blake had withdrawn the charge of intoxication before the Lord Provost, but had refused to apologise. Mr. Rhind, writer to the *Signet*, deposed to sending a letter on the subject to the defendant, and getting no reply thereto. Mr. Watson then addressed the jury on behalf of the defendant. He said they intended to maintain that the words founded upon were not calumnious, that they were used in the course of fair debate, and were pertinent to the occasion, and that they did not betray any feeling of malice or ill-will towards any person, but were used fairly and honestly for the purpose of maintaining the cause which Miss Blake, in common with many other ladies present at that meeting, had very much at heart—namely, the admission of ladies to Medical colleges. Miss Jex Blake, being called, stated that there were about 226 male and 6 female students. On the occasion in question the females were going towards the Surgeons' Hall, when they saw a large concourse of people, who seemed mostly to be Medical students. They were making a great noise, shut the gate in the faces of the females, and insulted them by yelling, hissing, and hooting at them, leaning also against the gate, smoking, and preventing them from entering. Other witnesses having been called, the jury considered the case, and returned a verdict for the plaintiff. Damages, one farthing.

THE first of Mr. Moore's lectures on Medical Botany was given at the Botanical Garden of the Society of Apothecaries, at Chelsea, on Wednesday. A large number of Medical students and Practitioners attended. The lecture was for the most part introductory. The lecturer followed the late Dr. Lindley's distribution of the vegetable kingdom into Thallogens, Aerogens, Endogens, Dictyogens, Gymnogens, and Exogens, and occupied the hour in pointing out the differences between these groups. The lectures will be continued on Wednesdays and Saturdays up to June 17.

AT a meeting recently held in New York, with the view of effecting a reorganisation of the Infant Asylum and Foundling Society of that city, Dr. Willard Parker gave some statistics which will be interesting to the Select Committee of the House of Commons now investigating the mortality due to baby-farming. Among the 35,000 annual births, he stated that about 2500 are illegitimate, and that about 3000 children are annually thrown away to be destroyed or got rid of in any way whereby the individual can be saved from the law. In 1869, 27·4 per cent., and in 1870, 31 per cent., of all the deaths were of infants under one year of age. In the Foundling Asylum at Montreal, out of 4059 infants received, 3769 died, or only 7 per cent. lived one year. On Randall's Island they save 10 per cent. of infants reared by hand; with nurses 27½ per cent. are saved. When nursed by the mother 70 per cent. are saved, while in rural towns 88 per cent. survive. Dr. Parker argues in favour of placing the Asylum in the country, and against the separation of the child from its mother.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

J. S.—You are bound to advise your patient for *his* benefit.

M.B.—Try the Water-purifying Company's small filter, sold in the Strand, near Somerset House. Solid germs, that can be detained by a filter, are more dangerous than anything in solution.

C.—Professor Haughton's third lecture at the Royal Institution on Tuesday next, the 6th, will be devoted chiefly to the structure of the heart. His rap at Darwinism was fair; certainly it was effective.

Vinosus.—Bitterness in wine is the result either of the action of certain fungous germs, or else of artificial admixture. Some germs cause the wine to become bitter, and to lose its strength; such wine may be preserved by brandy, but is not nice nor wholesome.

Mr. J. Henry (Charleston, New Zealand).—Your letter and enclosure have arrived safely.

Competitive.—Regulations have been issued for an open competitive examination for the situation of Assistant of Excise in the Department of Inland Revenue. Candidates will be required to satisfy the Civil Service Commissioners that they are natural-born subjects of her Majesty; between the ages of 19 and 22 on the day of the examination; that they are unmarried, and without family, and of good health and character. The examination will be in handwriting, orthography, arithmetic (to vulgar and decimal fractions), and English composition. A fee of £1 will be required from each candidate attending the examination. An open competition will be held in London, Edinburgh, Dublin, Cork, Galway, and Belfast, under the above regulations, on Friday, June 23, 1871. Sixty persons will be selected, if so many should be found qualified, with the view of filling the sixty vacancies which are expected to occur before October 31 next. Second-class Assistants of Excise receive a salary of £60 per annum, with an additional allowance of 2s. per diem when actively employed. They are eligible for promotion to higher situations. For further particulars apply to the Civil Service Commision.

T. W.—Chlorine gas was discovered, we believe, by Scheele, the Swedish chemist, in 1774.

S. C.—The country branch of the "Hospital for Sick Children, Great Ormond-street," is at Highgate.

Gravesend.—Dr. Gramshaw's application to the Board of Guardians of the Gravesend Union for increase of salary occupied the attention of the Board on the 18th inst. We shall be glad to know the result of the adjourned discussion.

MURPHY ANNUITY FUND.

First List of Subscriptions received.

	£	s.	d.		£	s.	d.
Dr. Arthur Farre	5	5	0	Dr. F. Weber	2	2	0
M. Bell, Esq.	1	1	0	Fairlie Clarke, Esq.	0	10	6
T. Alderton, Esq.	1	1	0	T. W. Nunn, Esq.	2	2	0
D. de Berdt Hovell, Esq.	1	1	0	Dr. Edward T. Watkins	0	10	6
Dr. J. Hall Davis	2	2	0	W. H. Wonfor, Esq.	1	1	0
Dr. H. M. Duncan	1	1	0	Dr. Fred. Simms	1	1	0
Septimus W. Sibley, Esq.	3	3	0	Dr. Hope	1	1	0
— Berryman, Esq	1	1	0	J. R. Gibson, Esq.	1	1	0
Miss Martin	0	10	0	Edwin Saunders, Esq.	2	2	0
Dr. Fearnside	1	1	0	W. F. Forsyth, Esq.	1	1	0
Benjamin Barrow, Esq.	1	1	0	Dr. Hardinge	2	2	0
Dr. Bisset Hawkins	10	0	0	Thomas Hunt, Esq.	1	1	0
Dr. Beatty	5	0	0	Dr. Thorowgood	1	0	0
Dr. M'Clintock	5	0	0	A. B.	0	10	0
Dr. Denham	2	0	0	A. Prince, Esq.	0	10	6
A Friend	1	0	0	D. G.	1	1	0
F. C. Hicks, Esq.	2	2	0	Dr. William Cholmeley	1	1	0
James Clifton, Esq.	3	3	0	H. Royes Bell, Esq.	0	10	6
Wm. Richard Davies, Esq.	0	10	0	H. Burford Norman, Esq.	5	0	0
Dr. Albert Fleming	1	1	0	Soelberg Wells, Esq.	1	1	0
Dr. T. W. Bogg	1	1	0	Dr. T. Mackern	2	2	0
Dr. Fred. A. Gange	1	1	0	William Gill, Esq.	1	1	0
G.	1	0	0	Dr. John Harley	1	1	0
Dr. Henry Briggs	2	0	0	William Bartlett, Esq.	1	1	0
Dr. Charles Coates	1	1	0	Dr. Priestley	5	5	0
H. Gardener, Esq.	0	10	0	Dr. Davies	1	1	0
Dr. Dyce Duckworth	0	10	6	C. Wortham Pearce, Esq.	1	1	0
Dr. Alfred Mackwick	2	2	0	Dr. Cook	0	10	0
Sir Henry Thompson	5	5	0	J. Penn Harris, Esq.	1	0	0
Sir T. Watson, Bt., M.D.	5	0	0	Dr. Laycock	1	1	0
Campbell De Morgan, Esq.	3	3	0	Dr. J. L. Down	1	1	0
Dr. C. J. B. Williams	5	0	0	Dr. William Fair	1	1	0
Dr. George Harley	1	1	0	Dr. Bannister	0	5	0
Henry Bullock, Esq.	1	1	0	Dr. Graves	0	10	6
Cæsar Hawkins, Esq.	5	5	0	Dr. P. Allen	1	1	0
George Critchett, Esq.	5	0	0	Dr. Cleveland	1	1	0
Dr. Bayes	1	1	0	Dr. J. R. Bennett	1	1	0
Dr. R. Martin	2	2	0	Dr. Drury	0	10	6
S. Berry Niblett, Esq.	1	1	0	J. Hakes, Esq.	5	0	0
Dr. Protheroe Smith	10	10	0	Dr. Radcliffe	2	2	0
Dr. Owen Rees	2	2	0	Dr. Meadows	2	2	0
H. Cripps Lawrence, Esq.	1	1	0	W. Adams, Esq.	1	1	0
Dr. Barr Meadows	1	1	0	Dr. Stocker	0	10	6
Dr. Oscar Clayton	2	2	0	Dr. Blandford	1	1	0
Dr. R. P. Cotton	1	1	0	P. Marshall, Esq.	0	10	0
Dr. C. Murchison	1	1	0	Dr. Jones	0	10	0
Dr. Andrew Clark	5	0	0	G. L.	0	10	0
Dr John Jones	0	5	0	*Per Union Bank.*			
Dr. Black	1	1	0	Sir R. Martin	1	1	0
Dr. Little	2	2	0	F. G. Forbes, Esq	2	2	0
Dr. Sturges	1	1	0	W. R. Madden, Esq.	1	1	0
Henry Smith, Esq.	2	2	0	E. A. Berry, Esq.	0	10	6
G. King Stevens, Esq.	2	2	0	B. Duncan, Esq.	0	10	
Walter Coulson, Esq.	5	0	0	J. Scott, Esq.	1	1	
Prescott G. Hewett, Esq.	5	0	0	J. Fairbank, Esq.	0	10	

Amount of subscriptions to the present time, £205 6s. 6d.

OUT-PATIENT HOSPITAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Since last acknowledging receipt of donations for the above object I have received the following sums:—

	£	s.	d.		£	s.	d.
Mr. Bowman	1	0	0	Mr. Baumler	0	2	0
Mr. Gant	0	5	0	Dr. Dickenson	1	1	0
Dr. Douglas Powell	0	5	0	Dr. Theodore Williams	0	5	0
Dr. Stewart	0	10	6	Dr. Dobell	0	10	0
Dr. Ford Anderson	0	10	0	Dr. F. Churchill	0	2	6
Mr. J. Hutchinson	1	1	0	Dr. Fuller	0	10	0
Mr. Adams	1	1	0	Dr. Hickman	0	5	0
Mr. Arnott	0	5	0	Dr. Dudley	0	5	0
Mr. F. Smith	1	1	0	Mr. Owen	0	5	0
Dr. Cholmondeley	0	10	0	Mr. Henry Smith	1	1	0
Dr. Burrows	1	0	0	Mr. Rogers	0	4	0
Dr. Day	2	2	0	Mr. Jabez Hogg	0	10	0
Dr. Tilbury Fox	1	1	0	Mr. Brownfield	1	1	0
Mr. Crichett	1	0	0	Mr. Atkinson	0	5	0
Dr. Power	0	5	0	Mr. Clifton	0	10	0
Dr. Glover	0	5	0	Per Dr. H. Smith	0	5	0
Dr. Anstie	0	5	0	Dr. Curtis	1	1	0
Dr. Thorowgood	0	5	0	Dr. Langston	0	5	0
Mr. Middlemist	0	5	0	Mr. Barrett	0	10	0
Dr. Burdon-Sanderson	0	10	0	Mr. Lord	0	10	0
Dr. Buzzard	0	10	0	Mr. George Wight	0	5	0
Dr. W. Ogle	1	0	0	Mr. James Workey	0	10	6
Mr. Weeden Cooke	0	5	0	Stamps, etc., for reports	3	15	0

Up to the present time the total receipts have been £48 0s. 6d., and the total payments £49 4s. 10d., to which have to be added liabilities to the amount of about £3, leaving a present deficit of £4 4s. 4d. It is obvious that the last appointed committee cannot undertake the responsible and expensive work entrusted to it on such terms. At all events, I must certainly decline the office of cashier unless those interested in the work will come forward to help it. This is the last appeal with which I shall trouble you or your readers, unless a liberal response is made; and I must say I think it will be a grievous shame, as well as a great mistake, if the labour bestowed by the late committees is thus to come to nought. The responsibility of such a failure will at all events not rest with them, nor with

Yours, &c.,
A. Meadows.

George-street, Hanover-square.

New Medical Comers.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the case of a Medical man coming to practise in a town where there is another Medical man, whose duty is it to call upon the other?

Q.

⁂ The new-comer should call upon the established Practitioner; or, better still, should write to him, informing him of his intention to practise, of his qualifications, references, and proposed style of practice. Then, if all is satisfactory, and the established man a gentleman, he will probably call on the new-comer and welcome him, assuring him of a fair field—of course he may add, no favour.

A Portrait of Jenner.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was much pleased on being shown, the other day, at 239, Tottenham-court-road, a fine old likeness in oil of Dr. Jenner, the discoverer of vaccination, and Mr. Jenner, both in a good state of preservation. Thinking many of your readers may enjoy the same pleasure, is my excuse for writing to you.

I am, &c.,

Kensington, May 30.
J. M. Jones.

BOOKS RECEIVED—

Gamgee's Lecture on Ovariotomy—Hardie on the Pathology of Club-foot—The Irish Poor-law Medical System, by Dispensarius—A Few Words about Vaccination, by John C. Salmon—Statistical Tables of Patients treated in Guy's Hospital during 1870, by John Charles Steele, M.D.—Good Vaccine Lymph; an Inquiry as to what Extent it is desirable to employ Heifer Vaccination, by Dr. John Greeve—Proctor's Light Science for Leisure Hours—The Desideratum; or, Electricity made Plain and Useful, by the Rev. John Wesley.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Gravesend and Dartford Reporter—Philadelphia Medical Times—Pharmaceutical Journal—The Freeman's Journal—The Dublin Express—Saunders's Newsletter—Dark Blue, June—Dublin Quarterly Journal of Medical Science—The Scotsman—The Overland Ceylon Observer—Medical Press and Circular—Edinburgh Medical Journal, June—The Practitioner, June.

COMMUNICATIONS have been received from—

Mr. Stiles; Dr. C. F. Moore; Mr. Mackintosh; Mr. Kemball Cook; Dr. Letheby; Mr. Fielding; Dr. Smyth; Mr. Oswald Baker; Mr. T. E. Tonge; Mr. A. Chamberlain; Mr. F. R. Hogg; Mr. J. T. Clover; Dr. Meadows; Dr. Playfair; Dr. A. P. Stewart; Mr. F. W. Lowndes; Mr. J. M. Jones; Mr. T. M. Wills; Dr. Long Fox; Mr. J. F. Clarke; Mr. J. Chatto; Dr. Cholmeley; Mr. Stephen Mackenzie; Dr. Day; Dr. H. S. Purdon.

APPOINTMENTS FOR THE WEEK.

June 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

5. Monday.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 2 p.m. General Monthly Meeting.

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Rev. Prof. Haughton, M.D., F.R.S., "On the Principle of Least Action in Nature."

7. Wednesday.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Obstetrical Society (Council Meeting, 7½ p.m.), 8 p.m. Dr. Meadows, "On Pelvic Hæmatocele" (adjourned discussion). Dr. Tilt, "On the Diagnosis of the least known Varieties of Uterine Inflammation." And other Papers.

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Prof. Tyndall, LL.D., F.R.S., "On Sound."

9. Friday.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal Institution, 9 p.m. Prof. Tyndall, LL.D., F.R.S., "On Dust and Smoke."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 27, 1871.

BIRTHS.

Births of Boys, 917; Girls, 1009; Total, 1926.
Average of 10 corresponding weeks, 1861-70, 1969·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	705	696	1401
Average of the ten years 1861-70	657·0	603·1	1260·1
Average corrected to increased population	...	...	1386
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	11	2	5	1	5	...	...	...	1
North ...	618210	108	3	9	...	18	4	3	2	2
Central ...	383321	10	...	3	...	4	2	1	1	...
East	571158	31	6	3	...	9	...	1	...	3
South... ...	773175	97	12	8	1	12	1	3	5	6
Total	2803989	257	23	28	2	48	7	8	8	12

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·861 in.
Mean temperature	56·7°
Highest point of thermometer	79·5°
Lowest point of thermometer	38·8°
Mean dew-point temperature	47·6°
General direction of wind	Variable.
Whole amount of rain in the week	0·22 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 27, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending May 27.	Deaths Registered during the week ending May 27.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	1926	1401	79·5	38·8	56·7	13·72	0·22	0·56
Portsmouth ...	125464	13·2	80	54	77·2	42·0	58·1	14·50	0·14	0·36
Norwich	81787	10·9	58	33	74·0	38·5	54·3	12·39	0·26	0·66
Bristol	173364	37·0	119	61	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	69	25	79·0	38·3	55·6	13·11	1·75	4·44
Birmingham ...	378574	48·3	233	161	79·0	42·2	55·9	13·28	1·70	4·32
Leicester	101367	31·7	78	42	79·2	40·7	55·8	13·22	0·97	2·46
Nottingham ...	90480	45·3	53	29	79·5	40·4	56·0	13·33	1·26	3·20
Liverpool	526225	103·0	294	321	75·5	45·1	55·1	12·83	0·84	2·13
Manchester ...	379140	84·5	277	198	...	...	...	...	...	...
Salford	123851	23·9	109	79	78·9	37·9	56·1	13·39	1·12	2·84
Bradford	148030	22·5	99	63	76·5	43·0	56·5	13·61	0·76	1·93
Leeds	266108	12·3	176	118	77·0	42·0	54·8	12·66	0·73	1·85
Sheffield	255247	11·2	171	144	78·0	42·0	56·6	13·66	1·13	2·87
Hull	135195	38·0	102	52	...	...	...	...	...	...
Sunderland ...	103037	31·2	50	68	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	106	87	70·0	41·0	51·8	11·00	0·48	1·22
Edinburgh	179944	40·6	133	103	72·7	44·0	55·8	13·22	0·30	0·76
Glasgow	477627	94·3	351	327	75·6	43·5	57·1	13·94	0·23	0·58
Dublin (City, etc.)	322321	33·1	175	129	69·9	39·5	54·3	12·39	0·05	0·13
Total of 20 Towns in United Kingd'm	7336961	34·4	4662	3498	79·5	37·9	55·7	13·16	0·75	1·90

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·86 in. The highest was 30·17 in. on Sunday morning, and the lowest was 29·64 in. at noon on Thursday.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

ORIGINAL LECTURES.

LECTURES ON THE PRINCIPLE OF LEAST ACTION IN NATURE, ILLUSTRATED BY ANIMAL MECHANICS.

DELIVERED AT THE
Royal Institution of Great Britain.

By the Rev. SAMUEL HAUGHTON, M.D., D.C.L., F.R.S., etc.

(Corrected by the Rev. Professor.)

TUESDAY, JUNE 6, 1871.

LECTURE III.

*Application of the Principle of Least Action to the Heart and other Involuntary Muscles—The Mechanism of the Heart explained, and the Amount of Work done by it—*Experimentum crucis *of the entire Theory, derived from the Measurements of the Fibres of the Heart of Man and the Ox—General Conclusions as to the Future Progress of Animal Mechanics and Comparative Anatomy, when subject to the Rule of Geometry, the Queen and Mistress of all the Sciences.*

LADIES AND GENTLEMEN,—I have reserved for my closing lecture to-day the most wonderful and remarkable of all the examples of the principle of Least Action in Nature. It relates to the question—deeply interesting to every person in this room—of the action of our hearts. It shall be my effort to lay before you an account of the work done by our hearts. The story of the heart is a wonderful and mysterious story, and you must make allowances for the difficulties of the subject if I am not able to make all about it as clear as could be desired. It is not easy to convey in a short hour the results of the labour of ten years. The progress of discovery is slow, and it is difficult to explain to those not travelling in the same paths of research all the meanings and bearings of the facts I have to state. If occasionally you fail to see the connecting link of my discourse, I trust you will take it for granted that I could make you perfectly understand all that I know of the subject if time would permit.

We have first to consider the question of *the amount of work done by our hearts.* The heart is a small muscle, weighing only a few ounces, beating perpetually day and night, morning and evening, summer and winter; and yet often an old man's heart nearly 100 years of age is as perfect and complete as when he was a young man of 20. In order to measure the force and power of the human heart, the most obvious way is impossible, because it would require the death of the person on whose heart the experiment was made. We have experimented on the hearts of horses, oxen, dogs, and sheep, however. The first of these series of experiments were made by the celebrated Dr. Hales of the last century, who measured, by direct experiment on the vessels of these animals, the amount of hydrostatic pressure to which they were subjected. These experiments showed that it varies in the horse and ox, amounting to about nine feet; and in the smaller animals to somewhat less. We can calculate the total amount of work done by the heart of an ox, by the heart of a horse, by the heart of a dog, or of a sheep. But it would be impossible to perform such an experiment upon man, because the experiment is accompanied with certain death.

The co-efficient of capillary resistance must be determined. The heart pumps the blood into the capillary vessels, which permeate every tissue of our frames, and the greatest resistance lies in these capillary vessels. The co-efficient of capillary resistance, as I have determined it in some of these animals, is as follows:—

In the sheep	. . . .	$\frac{1}{18{\cdot}6}$
,,	dog	$\frac{1}{19{\cdot}6}$
,,	horse	$\frac{1}{39{\cdot}3}$
,,	ox	$\frac{1}{39{\cdot}8}$

You observe that in the sheep and dog the co-efficients are double those of the horse and ox. These large and small animals naturally group themselves together. Now, with which of these groups of animals are we to associate ourselves in making a calculation of the amount of work done by our hearts? We cannot perform the direct experiment, but an accident on one occasion placed in my power the means of making a close approximation to the true result. When the artery of the horse or cow is cut we can measure with ease the height to which the blood will spout. But we find that the artery does not spout to the height of nine feet, as we should have supposed. There is a hydrostatic pressure of nine feet in the horse, but the blood will only spout to the height of two feet and a half. The reason of this is, that Nature shuts off the pressure to prevent the loss of blood. If we could by any process arrive at the knowledge of the height of blood from the wounded artery of man, and compare it with that of the horse, cow, and sheep, we should find the animals to which man is most closely allied in this respect are the larger. On March 18, 1863, in the Meath Hospital, Dublin, an operation was performed on a poor man in whom I was interested. I was merely a spectator, and was therefore able carefully to watch the following phenomenon in the course of the operation. A large artery was cut through, because it occurred in an unusual place. The blood spouted in jets for a minute or for two minutes before the artery could be tied. When the operation was over, I examined with care the height of the table on which the man lay, and the exact position of the farthest spurts of blood upon the floor: and by the application of a little geometry and mathematics to this problem, I was able to ascertain—by taking the spots of blood thrown to the greatest distance—the velocity with which the blood flowed from the wounded artery. The course of the blood is a parabola, and, two points being given, we can construct the angle of elevation and the velocity of the fluid. As soon as I had made this calculation, I found that, if I cut the artery of a man, it would spout to the height of 2·58 feet, or rather more than thirty inches. Now, taking the mean of all Dr. Hales's experiments upon horses, I find that it is 2·53 feet. We cannot, indeed, compare the hydrostatic pressure of the human heart directly, but we can by this determination of the velocity of the spouting blood show the force of the circulation in our system, and apply to it the co-efficient of resistance which we find directly from the horse and ox. When this co-efficient of the hydrostatic pressure inside the human heart is used, and knowing how often the human heart beats—seventy-five times every minute—we can calculate the amount of work done in a given time by the human heart. This work I shall represent in an extremely easy way, and show you the extraordinary amount which it attains. If I cut out an ounce of muscle from the heart, and ask myself the question—What number of pounds can that contracting muscle lift in the course of a minute? I find that a single ounce of the human contracting muscle will lift 20·576 pounds through the height of a foot in a minute! This I believe to be a close approximation to the power of the heart; but, inasmuch as it is not obtained by direct but by indirect reasoning, I tried to verify it in another way; and in verifying it by a second process I made use of an interesting phenomenon originally observed by the celebrated Dr. Wollaston, and recorded in the *Philosophical Transactions* for 1809. He was the first person who noticed that *when our muscles were contracting they gave out a deep note.* If any of you wish, you may try it for yourselves. If you go into a room alone, and, in perfect silence, place your elbows on a table and place your forefingers lightly in the ears, clenching the hands at the same time, you will hear a sound you never heard before—a deep, low hum; or, if you waken at night and clench your teeth, so as to call the masseter muscles into action, you will hear a hum, the pillow acting as a sounding-board. You can, therefore, soon satisfy yourselves that the action of a muscle is accompanied by something which produces a musical note. My attention was directed to this in a remarkable way. A young Physician of Marseilles—Dr. Collongues—was directed to the study of this curious phenomenon in examining some of the cases of cholera which died. I found the same fact in Dublin at the same time, and quite unknown to Dr. Collongues, as his discovery was to me. The patient in cholera has his temperature much lower than in health. 98° F. is the natural heat of the blood, and it is well known to Physicians that if it rises some 7° or 8° the patient will die; and so, if the temperature of the blood falls about the same number of degrees, the patient will die. But it is a strange fact, that, if you examine the body of a patient who dies of cholera, it is warm. The temperature rises after death to 103° or 104°, as if the person was in a fever. This is accompanied by the movements of the limbs which cause such great alarm to those who know no better. Happening to place my ear against a person who had just died, I heard a hum. I placed my ear to the heart, to see if he was yet alive and if I could save his life, but he was dead.

His muscles still continued to live after the heart, which has been called *primum vivens ultimum moriens*—the first to live, and the last to die. After the heart has ceased to live and the brain to think—after the man is dead—the muscles still live and have the last traces of life in the body, like the last notes of the harp which vibrate when the master's hand has ceased to play. I constructed a number of organ-pipes, and succeeded in imprisoning the muscular hum in one of them, where I could afterwards measure its correct kind and force at my leisure. The muscular hum which vibrates is C on the musical scale, two octaves below the C of the bass staff, or D, two octaves below D on the bass staff. I found that it is certainly between C or D, and by fixing a second organ-pipe to my own muscles, and comparing them, I was able to ascertain with a considerable degree of precision the exact hum. This I made to be 35⅓ vibrations per second.

Well, after I published this result, Dr. Collongues, who had removed to Paris, sent me a book, in which he had succeeded in proving by tuning-forks that the number of the vibrations of muscular contraction is thirty-six. This very remarkable result, obtained by two persons with different instruments, attracted attention, and Dr. Collongues was uneasy about the priority of the discovery. I went over to see him. When I admitted his priority, and said that I was more pleased to find that we had both found out such a remarkable fact than that I should have been the first in its discovery, he embraced me. My object in determining the musical note was to calculate by a second process a co-efficient to represent the work an ounce of muscle could perform. I also placed my arms horizontally, and held them out in that position until they were completely tired, placing weights upon them to produce this result. In this way I tried to find the force with which the muscular contraction took place by means of the musical note. These vibrations seemed to occur thirty-six times in a second. A second co-efficient of power gained from the above experiments came out to be 20 lbs. to be lifted by an ounce-weight of the heart every single minute through one foot. This comes in an extraordinary degree close to the hydrostatic amount. I am therefore entitled to consider that 20 lbs. can be lifted through a foot by every ounce of my heart in a single minute. But this conveys to you no adequate conception of the work done by the heart. I therefore devised a plan of comparison for showing you how much you ought to wonder at the great work of the heart. I obtained from Mr. Main, of Oxford, and Mr. Maclaren, the trainer, the cross-sections of the Oxford eight, and other particulars. The time in which this race has been done is on an average 23 minutes 3½ seconds, and the length of the course 4·31 miles. From these data, and from plans and sections of the boats, I was able to determine the amount of work done by the muscles of these young men. I find that, during the twenty-three minutes that the race lasts, every ounce of muscle in the arms and legs is working at the rate of 20·124 lbs. This comes out very like the work of my heart at this present moment. I am not sure but that my heart is just now doing more. If any of you have seen the exhausted condition of these young men, when lifted out of the boats, you will agree with me that human beings could not endure such exertion for forty minutes; and yet an old man, 100 years of age, has a heart which has worked all these years as hard as the young men of the Oxford and Cambridge races!

We have now discussed—and, I trust, to your satisfaction, solved—the question how much work is done by the heart. But the question is naturally asked—How does the heart do that work? I cannot pretend to tell you how that is done by nervous supply, as that is beyond our present knowledge; but I have succeeded in getting some information from the muscular fibres of the heart. I have applied a strict and rigorous testing of least action to the structure of the heart, so as to ascertain, if possible, some law which must be fulfilled by the arrangement of the fibres allowing this principle to be carried out. The law of muscular contraction which must be complied with is this:—Let the length of the muscular fibre be fixed; the order comes from the brain, or some other nervous centre, for this fibre to contract; *it must be shortened to eight-ninths of its length*. Now, wherever a group of fibres are so arranged, as in the triangular muscle, we saw that each fibre could not contract to this extent. So we must find some principle in the heart by which every fibre can contract to eight-ninths of its length. Borelli compared the arrangement of the heart's fibres to a ball of twine; but it is more like two balls of twine wound up inside a third. The whole heart consists of two ventricles, certain groups of fibres running round one cavity, and certain groups running round another. These are called the proper fibres of the heart. But there is a third group of fibres incasing the whole, and these are called the common fibres, because common to both cavities. I have taken my diagrams from Dr. Sibson's book on this subject. These fibres start from the tendinous zone, wind round the heart to the apex, and then run back to the zone internally. The outer fibres enter the heart at the apex, and in their return form the lining and internal parts of the heart's cavities. Imagine millions of these fibres, and you will have an idea of the complexity of the form of the heart. We have three systems of fibres running round these cavities, then, according to extremely beautiful geometrical law. The law is—that *the spiral fibre which goes round the entire two cavities of the heart describes* 180 *degrees before it returns; whereas the others describe an entire circumference and a fifth.* This fifth is to give a twist to the cavity, to prevent the blood, even the least quantity, remaining in the cavities, just as you would give an extra wring to a cloth. I have to thank Dr. Sibson for placing at my disposal his unrivalled preparations of dissected hearts—indeed, he placed all his stores of knowledge at my disposal. As he is not present, and therefore cannot blush at what I say, I may add that his great knowledge of the heart is fully equalled by the kindness with which he places his knowledge at the disposal of the humblest student. Jealousy is so generally a quality of scientific men that it is a great pleasure to find one without it. But I suppose this quality of jealousy in scientific men may be regarded as raising them to the level of the gentler sex!

Each of these fibres is so arranged, then, that it contracts to eight-ninths of its length, and the lengths of each group of fibres are the same. Since this is so, you will easily see that, as far as they are concerned, the principle of least action is fulfilled. But there is a manner of applying a crucial test to the principle of least action here. I have got two groups of fibres—one surrounding two cavities, and another surrounding one cavity only. By the application of geometry I was able to prove a remarkable result. If I call L the length of one of these spiral fibres, the volume of the whole will be proportional to the cube of L—so that if I had two hearts I might calculate the difference of their volume. The difference of the heart before and after contraction is the sum of the volumes of the two cavities, thus—

$$\frac{\lambda + \rho}{\lambda} = \frac{L^3 - L'^3}{l^3 - l'^3}$$

And so, also—

$$\frac{L^3}{l^3} = \frac{\lambda + \rho}{\lambda}$$

where L is the length of the common fibres, l is the length of the proper fibres, and λ and ρ are the volumes of the left and right ventricles.

There are theoretical grounds to lead us to suppose that these two cavities are of equal dimensions. But I have taken the mean of measurements made by ten observers, and find that the mean is 2·125 inches. From theoretical grounds, I believe that more accurate observations will lead to 2. I measured the outer fibres of many hearts of oxen, and found them 10·875 inches. I measured the fibres of the left ventricle, and found they had a mean of 8·625. Well, I suppose there is no one in the room who will be able to tell me the ratio of the cubes. I get it out as 2·004. I believe that to be a most remarkable result, and to entitle us to assert that the principle of least action is capable of solving the difficulties of the heart's action, and bringing us to know one more of the many beneficent laws of the all-wise Creator. How it would have rejoiced the heart of the great Kepler had he known this ratio! Divine Geometry! Queen and Mistress and Judge of all Sciences, thy right to rule them shall never be disputed!

This principle of least action applied to the heart consists of simply making every fibre and part of the heart do the entire amount of work of which it is capable. Engineers have admitted the same thing. If you take a fowling-piece, it is of less consequence how the fibres in it are arranged, as it is quite able to resist the explosion for which it is constructed; therefore, no one thinks of asking how its fibres run. But when you come to the construction of 600 lb. guns—such as the Armstrong—then you must calculate your arrangement of the fibres so as to compel every fibre of steel or wrought iron, as the case may be, to bear its own strain. I went down to see this great gun. It consists of eight rings. The first, sixth, and eighth rings were burst, the other five were whole. But a perfect gun would burst so that all the eight rings would give way together, each perishing with its neighbour. And that problem—which engineers have yet failed to solve—is solved in the heart of every person sitting in this room.

I shall now apply briefly the principle of least action to the *ellipsoidal muscle*—generally a muscular bag surrounding a cavity containing fluid. In attempting the solution of the ellipsoidal muscle, I found myself before a problem of architecture, which is, to find the equilibrium of the elliptical dome. Every portion of the curved ellipsoidal muscle forms a part of such a dome, and to determine its strain is the same thing as to solve the problem in architecture, What are the strains in various directions of the elliptical dome? I think I have solved it completely, and by the aid of pure geometry. With the exception of the Pantheon of Paris, which happily has escaped the flames, there is no equally balanced dome in existence. The dome in this city—St. Paul's—is propped up with chains of iron and otherwise. Even the great Sir Christopher Wren was not able to apply in practice the principles of architecture so as to make the dome of St. Paul's stand by its own strength. In the dome of St. Peter's at Rome, many hoops of iron are put round it, certainly not intended by the great Michael Angelo. The dome at Florence is an octagonal one. The attempt has been made in the roof of the Albert Hall—a building to commemorate the good father of England's future king—but whether that construction has been successfully carried out on the principles of least action I cannot say. The principle I would convey to you is this—that not a single pound of material should be used more than is necessary.

I shall now apply this to the muscle which is used in all placental mammals to cause the birth of the young. It is produced by Nature for a special purpose, and as soon as it has accomplished this it is removed. Therefore, if you can find a test of my principle anywhere, you can find it here. If Nature makes the muscle too strong, there is waste of power; if she makes it too weak, the life of the animal is risked. It is not a muscle intended to bear its trials of strength from day to day: such muscles grow day by day to meet its demands of strength. But the muscle which causes the birth of the young mammal never tries its strength till the moment of actual exercise. By measuring the curvatures and thickness of these muscles, I ascertained that the hydrostatic pressure of 3·4 pounds per square inch can be produced by the muscle. Dr. Matthews Duncan, of Edinburgh, and Professor Tait have made experiments with the membranes ruptured by this muscle, and in no case did they find it necessary to use a pressure greater than 3·1 pounds per square inch. This is a most remarkable case of least action; there is an adaptation of force to resistance, the force to overcome the resistance found exactly of the right degree of strength. Here, also, we see Nature attain perfection at a single bound; on the principle of foresight, there is no necessity to suppose that she attains perfection by means of an endless succession of blunders.

Ladies and Gentlemen,—I have now to take my leave of you. I have to thank you for the kindness with which you have listened to me, and I sincerely hope that you will make some allowance for the difficulties and novelty of my subject. I come among you bringing new facts, and have to place these facts before you in the minimum of time. I am here as a traveller from a strange country, where I have seen strange things. The pleasure of making these researches, and the novelty of the results, encouraged me to bring the matter before you, thinking they might interest you. I am but an humble craftsman hewing stones for the temple of science; but after us there must arise some great master-builder. The science of animal mechanics is only commencing. It is impossible to know what will ultimately come from its application. We are even now, however, in a position to lend most valuable aid to the science of geology. You see its fossil skeletons and you mark the points and processes of their bones for the attachments of muscles. We now can calculate with precision what the weights, the forms, the sizes were of the muscles of these extinct animals, and can re-clothe the fossil megatherium with his muscles and form. And many lessons and applications of this principle of least action will start up yet.

But let us suppose that all sciences are carried to perfection—let us suppose that man has found the key of knowledge, and knows all mysteries—he will still find himself a worshipper in the temple, and before the altar of an Unknown God, whose true nature and moral relation to himself must be sought from other sources. There are truths in religion as real and as certain as any of the laws of Nature, although we cannot see them. My eyes cannot see them, my ears cannot hear them, nor can I feel them with an outward sense; but they are there, and they shall endure when Nature and her laws shall pass away like a troubled dream. I have many a time seen the smile of joy light up the face of the departing like a sunbeam on the troubled waters at the remembrance of these blessed truths. These truths are more dear to me than all that Nature can teach me, because they reach my inner consciousness. I learned these truths at my mother's knee; I cherish them as my dearest treasure; and if it should be necessary to vindicate them, and I were called upon, for them I should give up my life

ORIGINAL COMMUNICATIONS.

CLINICAL REMARKS

ON THE SEVERAL FORMS OF PULMONARY PHTHISIS.

By R. DOUGLAS POWELL, M.D., M.R.C.P.,
Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, and to the Charing-cross Hospital.

Introductory—Pathology: Two kinds of Morbid Processes—Inflammation: affecting the Parenchyma, Catarrhal Pneumonia in Three Degrees of Intensity; affecting the Fibrous Stroma, Pulmonary Fibrosis—Tubercle: Nature and Seat of, Development—Hereditary Predisposition to Tuberculosis and Consumption—Mechanical Effects of the Respiratory Movements upon the Lungs and Pleura: Pleural Adhesions, Mode of Production, Significance of Friction—Thickening of Pleura, how produced—Bronchiectasis.

The subject of Pulmonary Phthisis may be thought by many to be well-nigh worn out, and yet it is not beyond the truth to say that at the present time the general opinion of the Profession as to what constitutes pulmonary phthisis; how many kinds of phthisis there are; whether there is sufficient difference in prognosis between the several kinds to make it worth while to distinguish them; whether all are not merely different degrees of the same disease, or the same disease localised in different parts of the lung by different local causes; whether an attack of hæmoptysis means that the patient is already phthisical, or that he is liable to become so as a result of the hæmoptysis; whether diarrhœa or laryngitis complicating a case of chronic lung disease is a sure sign of the supervention of tuberculosis or not—Professional opinion on all these questions, I say, and more which might be mentioned, is still in a very divided and fragmentary condition. The more so, because Phthisis, a long and (as generally regarded) an essentially fatal malady, is somewhat shunned at the large clinical Hospitals; it but rarely forms the subject of a clinical lecture; the points of diagnosis once shown to the student, the prognosis—fatal sooner or later—once announced, and the doomed sufferer, whose case ceases now to be of interest, passes in future unnoticed, or is recommended to a Consumption Hospital. The student, when he enters into private practice, becomes bewildered with the Protean forms of this disease, and the great difficulty of forming a reasonably accurate prognosis. One case comes to him with an amount of disease so slight that he cannot feel certain that any at all exists; the chest is only delicate, but the patient dies in a few months. He is shocked, in another case, to find a large cavity at one apex, and his prognosis is very grave; yet the patient enjoys fair health for years. He finally resolves never again to venture upon a decided prognosis in such cases at all.

If, therefore, the few cases hereafter to be narrated, illustrating some of the principal forms of Pulmonary Phthisis now recognised, with such practical comments on diagnosis, prognosis, and treatment as may be suggested by them, should tend in any degree, by bringing forward in an applied form the doctrines of the present day, to increase the precision and definiteness of the general knowledge of this always-prevalent disease, the object of these papers will have been entirely achieved.

It is not proposed to enter with any historical or descriptive minuteness upon so wide a subject as the morbid anatomy of the forms of lung disease included under the common term Phthisis; but it would be scarcely possible to carry out the objects in view without first giving a brief sketch of those pathological changes upon which the clinical features of the different varieties of phthisis are based. It must here, too, be observed that, though for the moment the morbid processes going on in the lungs will be alone considered, yet this is in no disregard to the importance of constitutional changes of which we can take no anatomical note, nor of degenerations or active complications of other organs which are comparatively simple anatomically, and about which there has consequently been less confusion of terminology and vagueness of thought. To all these conditions reference can best be made incidentally in the discussion of the points specially illustrative of individual cases.

On inspecting the lungs of those who have died of phthisis, we meet with a very great variety of appearances, which may, nevertheless, be recognised as the results of a comparatively few morbid processes; we see consolidation of the lung in every stage of formation, decay, and removal; and, glancing at the emaciated form before us, we have a very practical definition of Phthisis Pulmonalis—progressive consolidation and decay of the lung with progressive wasting of the body.

As to the exact nature of the morbid processes which lead to this destruction of lung and waste of body, there are numerous and diverse opinions. These processes may, however, be said to be of two kinds. 1. Inflammation affecting with different degrees of intensity the different tissues of the lung, and running an acute, chronic, or chequered course. 2. A new growth—Tubercle—with its characteristic granulations disseminated through the lungs, or collected into nodular groups, or mingled with inflammatory changes, developing into fibroid tissue, or abruptly undergoing fatty change. We may meet with either of these processes in the acute or chronic form without any admixture of the other, but it is comparatively rare to meet with *chronic* tubercle unmixed with inflammatory changes.

It may be here recollected that fatty degeneration is the necessary consequence of inflammation, and is the means by which the products of inflammation become removable by absorption or expectoration, or sequestered for a time by caseation. The fate of all new growth is also sooner or later fatty decay, and in Tubercle we find no exception to this rule.

There is yet a third set of processes of a physical kind, but having pathological results, which must be taken into account as leading to very important modifications in the signs of disease during life and the appearances post-mortem—viz., 3. The respiratory movements of the chest walls, with the mechanical effects which they produce upon the lungs and pleura when modified in their physical condition by disease.

The inflammatory process takes the largest and most important share in the production of the various appearances met with in phthisical lungs: it is the destroying element in this disease, according to Addison. It may therefore be appropriately spoken of first. With that form of inflammation of the lung—acute sthenic pneumonia—agreeing in many of its characters with an acute specific disease (*e.g.*, idiopathic erysipelas), we have but little to do in dealing with cases of phthisis; we only meet with it as a very exceptional complication. Doubtless, the subject of acute basic pneumonia already cachectic, or rendered so by neglect during the disease, may become phthisical; some cases of basic phthisis have this origin. But the pneumonia which is the most constant element of true phthisis is of a very different kind; its onset is usually insidious, and its origin appears to be generally by extension of a catarrhal process from the finer bronchial tubes to the interior of the alveoli: hence its name—*catarrhal* or *broncho*-pneumonia. It is identical pathologically with the lobular pneumonia with which we are familiar in hooping-cough.(a) This form of pneumonia is essentially lobular, though the coalescence of many adjacent lobules may cause the consolidation of a whole lobe. The alveoli are affected by this inflammation with all degrees of intensity, from mere superficial catarrh causing slight epithelial desquamation to the most deeply destructive involvement of their walls. In the simplest alveolar catarrh the cellular products may escape with the expectoration, leaving the alveolar wall undamaged. In the next degree of intensity, the alveoli and minute bronchi become blocked with the large granular cells, which are produced in great abundance. These cells, thus stuffing the alveoli, almost immediately begin to undergo fatty degeneration—the process by which *resolution* is naturally effected. They may liquefy, and be partially absorbed, partially expectorated; but the alveolar walls have been damaged, and permanent local collapse remains behind from their agglutination. This is the natural cure of the disease in this degree.

In some cases the cellular products, after having undergone complete fatty degeneration, become inspissated by absorption of fluid matter, and remain for a long time—perhaps for the lifetime of the patient—in the cheesy condition, or subsequently become cretaceous. This may be called natural arrest by obsolescence, and these cheesy masses are commonly looked upon as "old tubercle."

In the still more intense degree of the process—catarrhal pneumonia—now under consideration, the alveolar wall is deeply involved in the inflammation, so that it subsequently undergoes, to a greater or less depth, according to the degree, fatty degeneration, together with its cellular contents, and breaks down in the subsequent liquefaction, gradually or rapidly, according to circumstances.

The elastic tissue of the lung takes no active part in any of its inflammatory processes; it escapes, but little altered, when the alveoli break down, and thus, on being recognised in the sputa, affords certain evidence of pulmonary destruction. It will, of course, be understood that there is no real line of demarcation between the degrees of severity above described separately. The intensity of the first attack may at once determine the depth of injury, or the lighter may gradually pass into the graver degree.

But, in addition to the parenchyma(b) proper of the lung, which, with its epithelium, is the special seat of catarrhal pneumonia, there is the fibrous stroma (if one may so style it) formed by the interlobular areolar tissue supplying sheaths to the vessels and bronchi, contributing also to the formation of the alveoli, and intimately connected at the surface of the lung with the investing pleura. It could not be expected that an inflammation of the lung of any great severity would leave this widely spread tissue untouched; and it might also be anticipated, on reflection, that a tissue thus (comparatively speaking) deeply placed would, as a very general rule, only be affected secondarily to disease of the parenchyma or pleura. From this interstitial tissue are derived the tough, fibrous, pus-secreting walls of cavities, and the trabeculæ which for a long time resist the most severely destructive processes. The inflammatory process in this tissue is, as a rule, a much more deliberate one; even when in a state of active ulceration, as in the walls of some cavities, the destruction is molecular, sphacelus is rare. But the inflammatory process in this tissue much more generally partakes of the character of growth under irritation, producing a more or less general condition of *fibrosis* of the lung. Decay, however, the inevitable result of inflammation, finally sets in; the fibrous tissue, at first merely hypertrophous, loses its characters as such; its nuclei, at first very abundant, gradually fade; its fibres fuse into tough homogeneous bands (*fibroid* tissue), and, in their turn, become granular and fatty, and finally crumble away.

The various primary diseases—broncho-pneumonia, croupous pneumonia, chronic tubercle, pleurisy, etc.—upon which pulmonary fibrosis supervenes are thereby marked by clinical features of great interest and of significance for prognosis; but sometimes the fibrosis is so extensive as to become, whatever its origin may have been, the essential disease. Such cases have been very conveniently classified separately by Dr. Andrew Clark under the term "fibroid phthisis." He regards the disease as sometimes of idiopathic origin, or—what amounts to nearly the same thing—as a disease which progressively invades and destroys the lung from some one point of origin, as a local pleurisy or bronchitis. I must confess that in my much smaller experience I have not yet met with a case in which the fibrosis has been either idiopathic or has thus extended widely beyond the primary disease without the supervention of another disease, such as tubercle, or a repetition of the primary malady. I will refer to this again, however, later.

It would be exceedingly profitless to go historically into the question as to the essential nature and mode of origin of tubercle.

Sufficient evidence has now accumulated to render it tolerably certain that Tubercle is a morbid growth of the lymphatic gland class, and that it may be a mere hyperplasia of gland tissue normally minutely disseminated through the organs of the body (Sanderson). The characteristic form of tubercle is the grey granulation which has its seat in the alveolar wall, or in the connective tissue sheathing the vessels, or under the mucous membrane of the bronchial tubes. It is vascular, and under favourable circumstances undergoes development into a peculiar form of fibroid tissue, at first very recognisable from ordinary hyperplastic fibrous tissue, but which subsequently becomes converted into bands or tracts of uniform homogeneous texture, and finally fattily degenerates and crumbles away. This development of tubercle, before its final decay, has hardly been sufficiently insisted upon as an essential character always observable if circumstances permit the attainment of the necessary stage. It is, however, in strict accordance with the lymphatic gland type of this morbid growth, and it is of some importance as affecting the clinical characters of chronic tuberculosis. In acute tuberculosis, the patient does not often live long enough for any process of the kind to take place. In chronic pulmonary tuberculisation, however, and when tubercle attacks a lung rendered quiescent by previous disease, the development of tubercle into fibroid tissue may be seen.

(a) Professor Niemeyer states, on the authority of Bartels and Ziemssen, that pulmonary collapse always precedes catarrhal or broncho-pneumonia. This is a question of little importance to the present subject; but I cannot think that such is the case with the most typical forms of broncho-pneumonia. It certainly very often occurs in hooping-cough that inflammation succeeds to collapse, less frequently so in measles; but induration and agglutination of the air-cells is the result—not their occupation by the large catarrhal cells characteristic of true broncho-pneumonia. Professor Niemeyer's description of broncho-pneumonia, as presenting, on cutting through the consolidation, a smooth surface, makes it appear that he must have drawn his description from collapsed lobules, which have become subsequently inflamed. In my experience, certainly, lobules of catarrhal pneumonia are strikingly granular on section.

(b) The term "parenchyma" is conveniently, and perhaps correctly, restricted to the minutest bronchi and the alveoli into which they are expanded.

As regards the origin of tubercle, opinions are extremely various and, indeed, irreconcilable; but the tendency of modern research—the experiments on inoculation in animals, and the very powerful advocacy of the late Professor Niemeyer —is certainly to show that tubercle is much more commonly a secondary disease than has until lately been suspected—that people are, in fact, only very exceptionally, if ever, born to die of tuberculosis. A due appreciation of this doctrine, so different from that even now accepted by many, is of almost national importance in giving encouragement to those hygienic and other measures of prevention, the neglect of which has too often been sanctioned by a foregone conclusion. It would, I think, however, be extremely injudicious to deny hereditary predisposition to tubercle altogether. Moreover, when we come to the question of hereditary predisposition to those forms of consumption which originate in catarrhal pneumonia, it is freely admitted that the offspring of consumptive parents have a tendency to this form of pulmonary phthisis, that the scrofulous have a like tendency [Niemeyer], and that scrofulosis is sometimes hereditary.(c) Moreover, from the tendency to the occurrence of chronic inflammation especially in glands, leaving behind cheesy deposits, by which the scrofulous diathesis is characterised, it is regarded as the constitutional state in which true tuberculosis is most likely to occur. My own observation would not enable me to agree in this latter view. These statements necessitate a considerable addition to the list of those who are hereditarily liable to tubercle in the old-fashioned sense of the term. But it must be remarked that catarrhal pneumonia and scrofulosis can be more efficiently guarded against, by attention to climate, soil, etc., and more successfully treated, than truly tubercular disease. My colleague, Dr. C. Theodore Williams, the latest authority on the question of hereditary predisposition to consumption (in its broad sense), in a paper read before the Medical and Chirurgical Society in January last, gave 48 per cent. as the proportion in which, out of 1000 carefully noted cases, family predisposition could be traced, using the term "family" to include brothers and sisters and first cousins. It thus appears that, even making every allowance for alterations in terms and views, fewer people die of hereditary consumption now than formerly. It may be, of course, that traditional opinion has simply been erroneous in regarding consumption as so strongly hereditary, but it is perhaps nearer the truth to say that under the influence of superior hygienic circumstances, since Sanitary Science has been so much popularised, hereditary predisposition, as strong and real as ever, gets fewer opportunities of being nursed by neglectful hygiene into confirmed disease.

To return from this digression—perhaps a pardonable one, considering the importance of the subject and the convenience with which it is here introduced—there are yet a few words to be said respecting the mechanical effects of the respiratory movements of the chest walls upon the lungs and their investing pleura.

In health, ordinary inspiration is a muscular act, by which the elasticity of the lungs is overcome, and their expansion is effected to a certain degree. Ordinary expiration, on the other hand, is the elastic recoil of the lungs, bearing with it the chest parietes to a point beyond that to which their natural resilience would bring them. There is, consequently, a resilient force in reserve, which goes to help muscular action in the first part of inspiration. It is easy to see how greatly this arrangement adds to the smoothness of the mechanism of respiration, the commencement of each act of which is normally almost wholly accomplished by elastic power. A glance at one diseased condition—emphysema—in which the elasticity of the lungs is impaired so that they do not contract to the normal extent in expiration, awakens our attention to the importance of what may at first sight appear a trivial matter: the thoracic parietes in emphysema are not drawn in beyond their position of rest—*i.e.*, that position which they would naturally attain on a free opening being made into the pleural cavity. The abrupt and jerking manner in which inspiration commences in cases of emphysema, being effected by a conscious, albeit an habitual, effort on the part of the sufferer, cannot be regarded without offending one's instinctive sense of mechanical perfection. But in cases of Phthisis we have to do with local, rather than general, alterations in the pulmonary texture; diminution, rather than enlargement, of the space occupied by the lungs; increased local resistance to expansion, rather than diminished tendency to recoil; and the parts within the chest which are most affected by these causes are the pleura and the bronchial tubes.

Why is it that pleural adhesions are so common in chronic lung diseases, and especially in phthisis? The answer usually given is—Firstly, that inflammation of the lung is very apt to extend to the pleura; secondly, that tubercle is very prone to attack serous membranes, and tubercular pleurisy is conspicuously a dry adhesive pleurisy. Both these statements are doubtless true, so far as they go; but they are by no means sufficient to explain the frequent and inevitable pleurisies and local adhesions of Phthisis, and notably of those varieties of phthisis about which there is most dispute as to their having anything to do with tubercle.

Confining our attention now to cases of Phthisis, though these observations are really applicable to other chronic pulmonary diseases, there are a few points worthy of remark concerning pleural adhesions.

1. They are pretty accurately limited to those portions of pleura corresponding with diseased lung beneath.

2. The more contractile the lung disease, and the tougher its texture, the thicker the pleura covering it.

3. Post-mortem there is frequently to be found no tubercle at all in the adhesions, and still more frequently no tubercular granulations in the pleura immediately in the neighbourhood of the adhesions.

4. In cases of very chronic phthisis (not secondary to pleurisy), with contraction and induration of part of one lung, we find post-mortem opposite the oldest part—*e.g.*, the apex—the two pleural layers perhaps intimately fused together, forming a white fibrous covering half or three-quarters of an inch in thickness. Lower down, however, we find the layers, each somewhat thickened, separated by a striated jelly-like material—œdematous connective tissue—the fine striæ of which pass vertically from one pleural surface to the other.

The real explanation of the recurring pleuritic pains and adhesions in cases of phthisis is, that when a portion of lung becomes damaged in texture by disease it ceases to follow accurately the expansile movements of the chest-wall; a certain gliding or rubbing motion takes place between the two normally corresponding pleural layers at this point; friction, local pleuritis, and adhesion result.

We can readily understand, therefore, how it is that a friction sound is often the first evidence we get of local pulmonary disease, and that a new friction sound means most generally more than mere dry pleurisy: it means, in fact, an accession of lung disease. When the lung disease is of a very chronic, indurative, contractile character, as in the cases referred to above in section 4, the effect of the continued inspiratory efforts to expand the toughened lung is to stretch out the adhesions and to separate the pleural layers to a certain extent; the further contraction of the lung continues the process, so that the parietal and visceral pleuræ become separated by a considerable interval of half or three-quarters of an inch. This space is at first filled by serous fluid effused into the meshes of the areolar tissue of the stretched adhesions. We thus get the œdematous pleura. At a subsequent stage, however, of the disease, by the continued growth of the areolar tissue, the whole space becomes occupied by tough fibrous tissue, and the two layers become completely welded together into one uniform fibrous thickness. That this is the real history of the enormous thickening of the pleura in many cases of chronic phthisis I have satisfied myself by repeated observation.(d)

It has seemed to me that thickening of the pleura has been regarded too much in the light of a very dangerous pathological process, liable to extend into, and, by its contractile power, to squeeze out of existence, so to speak, the proper lung tissue, whereas it will be found on careful examination to be most generally a condition secondary and quite subsidiary to the lung disease. In primary pleuritis the thickened pleura is produced in a different way. After absorption of the fluid a certain thickness of lymph often remains between the two layers of the pleura, into which the granulations from each surface penetrate, and finally unite, completing the adhesion. There are many cases of phthisis of the pneumonic kind of tolerably acute progress, and attended with little contraction, in which, though the pleural surfaces are inflamed and covered with finely granular lymph, they do not become united. It is in these cases that pneumothorax is especially likely to occur.

(c) Waldenburg, "Die Tuberculose," etc., p. 521.

(d) *Vide Path. Trans.*, vol. xx., pp. 59-61.

Bronchial dilatation (bronchiectasis) is another important morbid condition with which the chest movements have something to do. The main causes of brocbiectasis may be summed up as follows:—1. Damage to the texture of the bronchial tube—atrophy of mucous membrane and thickening of fibrous coat (Biermer).(e) 2. Increased air-pressure during cough, acting principally at those portions of the lungs where there is least support, notably the apices. 3. The expansion of the chest wall, or rather the struggle to expand it failing to affect the air cells, which are obliterated by disease, acts indirectly upon the bronchial tubes. 4. The diseased lung (in its contractile forms) contracting in various directions tends to widen the imbedded bronchial tubes.

The constant movement of the lungs no doubt goes far to modify and hasten the progress of morbid processes going on within them. This must have occurred to the minds of many Physicians, and even more forcibly to Surgeons, who have to deal with wounds of the lung. Practical difficulties and the prejudices of patients against any mechanical appliances have, however, prevented the principle of rest from having been hitherto fairly tested in pulmonary phthisis, even when one-sided.

I have now passed in brief, and I fear very imperfect, review some of the main points in the pathology of phthisis which have a direct clinical bearing, and a due appreciation of which will, I think, materially assist in the correct reading of the cases as they appear before us in the subsequent papers.

(*To be continued.*)

ON SPECTRUM ANALYSIS OF BLOOD-STAINS.

By H. C. SORBY, F.R.S., etc.

The *Lancet* of May 20 (page 693) contains an article on the above-named subject, the whole bearing of which is to the effect that this method of analysis cannot be relied upon in such inquiries. Now, I think myself entitled to express a very decided opinion on the subject. I have for some years devoted the greater part of my time to investigations by means of the spectrum microscope, have examined many hundred different spectra, and seen those of the colouring matter of blood, and of the various compounds derived from it, times without number, and all that I can say is, that as my experience has increased, so much more has increased my confidence in the recognition of blood by this method. Of course, an inexperienced observer could not be trusted, no more than anyone ignorant of chemistry could be relied on in detecting poisons. I must be pardoned for saying that I can only explain the remark in the *Lancet* by supposing that the writer is not conversant with the subject; for how otherwise could he say that "no discovery has yet been made by means of those [absorption] spectra," when so much light has been thrown on the behaviour of blood in presence of oxygen and other gases, and when there have been discovered in some of the lower animals other substances than hæmoglobin, having similar properties, and supplying its place, besides some hundreds of different colouring matters in animals and plants, which could not have been studied in any other manner? Moreover, it appears to me that, if the writer ever saw the spectra of blood, it must have been under most unfavourable circumstances; he must have examined a bad preparation, with an unsuitable instrument, perhaps out of focus. I cannot otherwise understand how he could say that "all that is to be observed is a little dimness here and there in the spectrum. The dim spaces, which are not sharply bounded, have been dignified with the name of 'absorption-bands.'" Now, I could undertake to show the writer in a few minutes that the absorption bands seen in the spectra of oxidised hæmoglobin, and deoxidised hæmatin, instead of being a mere "dimness," are as black and distinct as could be desired. He would see that they are as well defined as if we had a piece of rainbow upon paper, and had marked bands in it with the blackest ink. I willingly admit that, in the case of some substances, absorption-bands are indeed faint, or quite absent; but that fact, amongst many others, only serves to distinguish them still more certainly from blood.

My general conclusion is that it is the fault of the experimenter himself, if, except in a few special cases, he fail to recognise a blood-stain containing only the hundredth of a grain of blood, and if he do not easily recognise one that has been kept dry even for a period of fifty years.

For a description of the method to be employed in various cases, I refer to my paper on this subject in Guy's Hospital Reports, Third Series, vol. xv., 1870, p. 274; and to Dr. Letheby's paper in the third volume of the London Hospital Reports. Of course I do not pretend to say that human blood can be thus distinguished from the blood of other animals, but I unhesitatingly say that we can distinguish blood from all other animal and vegetable colouring matters.

NOTE ON THE LOCAL USE OF PEPSINE.

By H. S. PURDON, M.D.,

Physician to the Belfast General Hospital and to the Hospital for Diseases of the Skin.

I have only materials for a few brief notes on the local use of pepsine. Dr. Ball, of this town, in your issue of April 29, 1871, anticipates me by mentioning that the hypodermic use of pepsine is now undergoing a trial at my Hospital for Diseases of the Skin. However, he is quite right about the solution being thick and troublesome, and I would be glad to have a good formula for injecting purposes. The liquor pepsinæ made by Hamilton, Long, and Co., of Dublin, seems to be a clear fluid, but is rather thick, from the glycerine, I imagine, that is contained in it. This preparation is the most concentrated and effectual solution of pepsine; one drachm will, with fifteen drops of dilute hydrochloric acid and one ounce of water, dissolve 700 grains of fibrine at a temperature of 100° Fahr.

If pepsine will perform this before our eyes, why should not its injection do so likewise, to be especially useful for its solvent properties on enlarged glands, tumours, etc.? Nor do I believe that the presence of hydrochloric acid in the fluid is necessary. The acid causes smarting, and some people will not submit to a repetition of the injection. The ordinary hypodermic syringe is the instrument used.

Professor Horsford (see Dr. Dobell's "Reports," vol. ii.) states that the source of free hydrochloric acid in the gastric juice is due to the presence of blood corpuscles, and that they have the property of furnishing acid phosphates in solution under pressure "such as may attend engorgement in the walls of the stomach." The Professor believes that the reaction of acid phosphates on alkaline chlorides sets free hydrochloric acid. He says, "Let us glance at what takes place, as the acid fluid enters the gastric tubules. They are surrounded by a mixture of hydrochloric acid, acid salts, neutral salts, and albuminoid bodies. Dialysis must be repeated, and a stronger acid solution pass into the sacs or cells contained in them. The sacs swell by endosmosis and, corroded by the acid, at length burst, and the liquid contents, together with the disintegrated and partially digested membrane of the sac, pass out into the stomach, to assist the liquefaction of the food."

The lymph glands, especially in strumous people, well observed in children, produce an excessive accumulation of cells upon inflammatory irritation, often caused by exposure to cold. Now, it is not unreasonable to imagine that by injecting pepsine into these cheesy deposits or infiltrations in strumous glands, so common in the neck, or even into small tumours, or probably into even cancerous growths, which structures are so plentifully supplied with bloodvessels, a process of digestion ensues, and the liquefied contents are absorbed. As yet I cannot speak dogmatically on the subject, as my cases are not numerous, and those that have been selected for experiment are chronic, greatly enlarged, hard to the touch, etc. If the pain of the puncture be complained of, the ether spray can be used to deaden the sensibility, and if much bleeding ensues, styptic colloid effectually stops it. We must, of course, be careful to avoid all bloodvessels. I look on the remedy and method of treatment proposed in a favourable light, as I have for some years tried various medicines in the class of complaints proposed to be treated by local use of pepsine—as iodine, painted on the part and injected into the enlargements, blisters, ointments, ice, pressure with shot, and blister near the swollen gland, as recommended by Mr. Jordan, etc. After all, constant poulticing and incision is as successful. To avoid a mark a leech is sometimes applied, and through its bite a fine puncture made. This plan is useful when the gland has suppurated.

(e) "Krankheiten der Bronchien und des Lungen-Parenchyms: Handbuch der speciallen Pathologie." Virchow.

It is considered by pathologists to be a fact that we can have no inflammation without bloodvessels, hyperæmia and active congestion of the vessels by detention of the blood in the part forming, according to some, the first stage. If the process proceeds still further, there is an exudation which contains a large proportion of fibrine—a substance especially acted on by pepsine. This fibrinous exudation has a great tendency to become organised, or it may, after some time, undergo cheesy degeneration, soften and suppurate, more especially when the tissues are not able to assimilate and incorporate the increased amount of fibrine. No doubt certain diatheses, as struma, for instance, modify these conditions of tissue when attacked by inflammation.

With regard to pepsine, Dr. Garrod observes that the beneficial action of pepsine is very difficult to explain, seeing that the ordinary dose of the drug is able to cause the solution of only a small quantity of nitrogenised matter out of the body. According to Carpenter the action of pepsine is merely catalytic.

Pepsine is soluble in water to a certain extent, more so when pure and unadulterated with starch. A temperature of 120° Fahr. destroys its solvent powers; probably lactic acid would be better than hydrochloric. The pepsina porci introduced by Dr. L. Beale is a much better preparation, but more expensive.

As I cannot speak as yet with any degree of certainty on the local use of pepsine in the diseases indicated, I merely put together the above suggestions for the purpose of inducing others to try this remedy, when, if successful, I have no doubt that they will publish the results obtained.

Belfast.

EXTERNAL EXAMINATION A PREVENTIVE OF PUERPERAL FEVER.

By. T. HALBERTSMA,

Professor of Gynæcology at the University of Utrecht.

Though in obstetrics internal manipulations have of late been gradually superseded by external ones—after the method of Braxton Hicks and of Kresseller, for instance—yet in managing natural labour with the aid which is most required, external examination has remained a mere accessory. Not a labour takes place in which internal examination does not constantly recur.

It has now been proved, however, that internal examination may generate infection. I therefore beg leave to suggest that, in cases where—as so often in lying-in Hospitals—there is danger of infection from the accoucheur, the external examination should be the rule, the internal one the exception. By external examination alone we can, in most cases, ascertain the position of the child, whether it has sunk deep into the pelvis, and by auscultation whether there is danger for the child. If the head is sunk deep, and the pulsation of the fœtal heart normal, we have reason to anticipate a favourable issue, and for the time should do nothing but leave Nature to her own course. We shall, in this way, not be able so well to ascertain whether the delivery is proceeding; we shall be still less able than by internal investigation to predict in some measure how long the labour will last; yet the nature of the pains, the flow of the liquor amnii, are some indications. The desire to ascertain how it is proceeding is not to be thought of if there be any risk of infection. In two cases I have refrained from internal examination. To suppress curiosity was the greatest difficulty to be overcome. The placenta was removed by external pressure after the so-called method of Credé.

It may be objected that it will be difficult, even when we know the head is sunk deep, to diagnosticate a first or second position, or four for those who distinguish four positions. Besides that, the first and second position can often be diagnosticated by external investigation only; at all events, this knowledge will be dispensed with if infection can be avoided.

I know not whether this method of guiding the labour was formerly practised, neither can I, having hitherto given it but few trials, say more in its favour or against it. I merely recommend it to be tried, and the results to be communicated to this periodical. The risk of infection will always be diminished by it.

It cannot be denied that the number of victims of puerperal fever may decrease by this method of treatment. This method may likewise throw some light on the question as to whether the infection proceeds from the genital organs only, as has been maintained.

Utrecht.

TWO CASES OF HYDROPHOBIA.

By SAMUEL DREW, M.D.

Case 1.—I was called, at 6.30 a.m., on June 17, 1870, to A. B., described to me as being "out of his mind." I found him tossing restlessly in bed, which he would have quitted, but was prevented by two neighbours, who were attending on him. He made frequent efforts to vomit, and occasionally hawked up with difficulty small quantities of a viscid fluid, the appearance of which seemed to much disgust him. Pulse 120; skin wet with perspiration; countenance very anxious and terror-stricken. Complaint was made of acute pain extending from the left hand to the shoulder, and sometimes to the left temple. He was evidently very ill, but knew everything passing around him. His hearing was preternaturally acute, as he heard conversation going on in another room, which was totally inaudible to all other persons near him. No cause for his illness could be assigned by himself or his friends. He had been unwell and much depressed for a day or two, but had continued to work as usual. At two o'clock that morning he awoke his wife, complaining that he was very ill. She offered him some tea, which he flung from him, and threatened to kill her if she offered him drink again. She was terrified by his threats. He had persisted in swallowing nothing. He requested to speak with me alone, and then told me that the devil had appeared to him in the night, and ordered him to kill his wife and children; that he had got his razor to do this, but had delayed doing it. He still felt urged to kill them, and wished me to know, so as to guard against his doing so. There was no trembling of the hands, and I was assured that he was a sober man usually, and was not suspected of drunkenness. The bedroom being very hot and close, I requested that a window might be opened, but was told that it was purposely closed, as, if the draught blew on him, it caused convulsions. This led me to suspect that the case was one of hydrophobia, and I asked if he had ever been wounded in any way, or ever been bitten by a dog. He replied, "Never, never"; repeating it frequently. On examining the painful limb, I found on the back of the hand two scars, from which the pain appeared to dart up the arm. When questioned, he reluctantly admitted that many months before he had been bitten by a strange dog, which he met when walking one evening, and which bit his hand and ran off. He appeared not to attach much importance to my question, and I (to him) laid no stress on it, although I no longer felt any doubt as to his malady. With much difficulty he swallowed some opium as a pill, refusing any drink with it. On my urging him to drink some water, he said that he did not like the look of it, but would try. By a strong effort he poured a teaspoonful into his mouth, but was unable to swallow it, spasm of the glottis ensuing and nearly strangling him. I now left him. On visiting again, about noon, I found he had become very violent, showering execration and abuse on all around him. As soon as he saw me he shouted, "I've been bitten by a mad dog, and shall die; you knew it all the time, and so did I. I knew all about it." I remained with him but a short time; but, after fetching from my own house (at some distance) a syringe to inject morphia hypodermically, returned about three o'clock, and found he had just died. From a person who was with him when bitten, I ascertained that eight months had passed between the time of the bite and that of death; and also that the bite was a severe one, and inflicted in a very suspicious way. I should also add that A. B. was one of a family tainted with insanity, his father having been many years insane.

Duration of Cause of Death.—Bite of rabid dog, eight months; hydrophobia, first stage, forty-four hours; second stage, thirteen hours.

Case 2.—C. D., aged nearly 4 years, was brought to me in October last, having been recently bitten on the face and neck by a dog. In reply to my questions, the child's mother told me that the dog was known, and was thought to be free from disease. The wounds were, therefore, treated simply, and very soon healed, being only slight. On November 7 I was requested to visit a child which had been unwell about two days, and which obstinately refused to eat or drink. I found the child, which I did not at first recognise, suffering from acute pain in the face and head, sleeplessness, and vomiting; it clung almost convulsively to its mother, burying its face in her dress. On getting the child to turn towards me, I was startled by its horror-struck aspect, so much resembling the look of the former patient, A. B., that I at once said to the mother, "Has this child ever been bitten by a dog?" I was then informed that it was the same child I had before seen, and that a mistake had been made as to the dog which was supposed to have inflicted the bite. The child had been really bitten by a strange dog, which, after making an attack on the child, had immediately run off and could not be traced. On asking the child to drink a little water it seemed terrified, and again hid its face in its mother's dress, exclaiming, "It will choke me! It will choke me!" Nothing would induce it to drink. The vomiting was gradually replaced by hawking and spitting, and towards evening the child lay exhausted, in a half-unconscious state, with frothy saliva constantly draining from the mouth, and with occasional attacks of eclampsia, induced by any sudden motion or sound. In one of these attacks it died in course of the night.

Duration of Causes of Death.—Bite of rabid dog, four weeks; hydrophobia, sixty-seven hours; eclampsia (occasional), twelve hours.

I would remark that in both these cases acute pain was experienced in the part originally injured.

Chapeltown, Sheffield.

OPERATION FOR CLOSURE OF A LARGE FISSURE IN THE UPPER EYELID.

By Surgeon PARTRIDGE,

Bombay Army Presidency Surgeon, Third District, etc.

The following operation has proved, in my hands, quite successful. As it is, as far as I am aware, new, I venture to describe it:—

A man came lately under my care with a large fissure of the upper eyelid of the right eye. He stated that he had been bitten by a negro, fifteen years ago. The wound had healed, but a portion of the cartilage had been removed, and an unsightly gap remained. Nothing had been done to remedy the deformity. On examining the parts with a view to operation, I saw at once that the ordinary operation of paring the edges and bringing the sides of the gap together by suture would, if union resulted (and this was doubtful, on account of the tension), leave an edge with a central depression. I accordingly perforated the eyelid with a finely-pointed knife, and made an incision parallel with the margin of the fissure. I next drew down the released portion of skin, until it was in a line with the edge of the lid. The raw edges of the fissure were then brought together by means of a single horsehair ligature. This step, of course, somewhat threw the strip of skin into folds; but, by a little careful adjusting, it was made to form again a sufficiently straight line. The eye was then closed; a piece of thin guttapercha, covered by a pad of cotton-wool and a bandage, was applied for three days, when all dressing and the ligature were taken away, and styptic colloid substituted. In a day or two more there was scarcely a trace of any operation, and the object aimed at—viz., a margin without a depression—attained. The appearance of the eye, with the exception of there being no eyelashes at the seat of injury, is now nearly as perfect as the other.

The Mayors of Strasburg and Metz.—It is a remarkable circumstance that both these cities had Medical men as their last mayors—viz., M. Küss, of Strasburg, whose death, supposed in a great measure to be due to his distress of mind, created so wide a feeling of sympathy; and M. Maréchal, of Metz, who also died shortly after the surrender of the town, universally deplored by his fellow-citizens.

Raw Beef in Anæmia.—According to Dr. Baley, of Albany, no remedy so speedily relieves this condition in young girls verging on womanhood. When they will not take it raw giving it them very underdone has proved of good service. If in tardy menstruation it be used as diet, and the meals taken regularly, together with plenty of exercise in the open air, far more good will be done than by the administration of ferruginous medicines.—*Med. Record*, May 15.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

THROMBOSIS OF RIGHT ILIAC VEIN—EMBOLISM OF PULMONARY ARTERY—SUDDEN DEATH.

(Under the care of Dr. RAMSKILL.)

[Reported by Mr. Stephen Mackenzie, Resident Medical Officer.]

Joseph A., aged 35, bricklayer, admitted March 25, 1871. When seen on the evening of admission, he stated that about a month previously he had erysipelas, but of what part of body was not ascertained. A few days prior to his admission, his face became puffy, his hands swollen, and his urine was the colour of porter. He now had slight general anasarca, his face was pale, and his breathing somewhat quick. The whole of the right leg was swollen, and pitted deeply on pressure. The left leg was slightly œdematous. His breath smelt offensively, and he said he had "diseased bone in his nose." His urine was smoky. Amongst other medicines, he was ordered to take pulv. jalapæ co. ʒss. the first thing in the morning.

On the morning following his admission, at about half-past seven, when out on the night-stool, he suddenly complained of pain and tightness across the chest. He was assisted into bed, when he vomited. This did not alarm the nurse, as she says she "has often seen patients as bad after taking jalap." His breathing, however, became excessively difficult, and the pain across his chest more intense. He asked for "the Doctor" to be sent for. By the time Mr. Mackenzie arrived, life was practically extinct, and the patient only gasped twice in his presence. His face and lips were pale, and he was bathed in sweat. The time from his seizure to his death was little more than ten minutes.

The autopsy was made on the following day, by Dr. Sutton, and his report is condensed below.

The body well-developed and fairly nourished; the right leg œdematous and larger than the left; the left leg very slightly œdematous. At the root of the right lung was a solid mass, about an inch square, and over it was a little recent pleurisy and a few ecchymoses. This solid mass was of a blackish-red colour, and sank in water; it was soft, circumscribed, and easily broken down. The remaining parts of the lung-substance were congested, and in some situations œdematous. The pulmonary artery, where given off from the right ventricle, contained a partly decolorised clot, and in both lungs the branches of this artery were completely plugged by clots extending down into their minute ramifications. The clots were decolorised, and of a pale greyish appearance on one side, and dark or ruddy red on the other side. Evidently the red corpuscles had gravitated, leaving the coagulated fibrine white in places. In no spot was the clot completely decolorised. The heart and liver were normal, the spleen soft, and the kidneys presented rather an anomalous appearance, making it difficult to say whether there was or was not acute nephritis. The right iliac vein was completely plugged with a semi-adherent and partially decolorised clot. The left iliac vein was free. The aorta did not contain any large clot.

UNIVERSITY COLLEGE HOSPITAL.

FRACTURE OF NASAL BONES AND INJURY TO BRAIN FROM THE KICK OF A HORSE—RECOVERY.

(Under the care of Mr. ERICHSEN.)

James T., an ostler, aged 51, was admitted on April 20, 1871, with the following history:—The man was in the habit of drinking freely, although rarely seen actually drunk. On the morning of the accident he entered the stable behind a big horse, and the animal unexpectedly kicked out, struck him in the face, and knocked him backwards, his head coming sharply against the brick floor of the stable. The man being insensible, he was taken at once to the nearest Hospital, but was refused admittance. On his continuing insensible, however, and beginning to struggle, he was brought on to University College Hospital at noon.

When admitted, he had rallied somewhat, and the following note was taken by Mr. Curtis, the ward clerk:—"The patient is not totally insensible. When shouted at loudly he opens his eyes, but does not speak. He lies on his back or side, breathing noisily, but not stertorously. There is a small contused wound on the bridge of the nose close to the right eye, and another on the chin. The right side of the face is much swollen, and there is ecchymosis of the right eyelid, which extends under the conjunctiva. There are no signs of any blow having been given on the left side of the face, yet there is ecchymosis of the left eyelid. The wound on the nose is found, on further examination, to perforate the cavity, smashing the nasal bone into small fragments. There is constant oozing of blood from the nostrils. On the back of the head is a large contusion on the right side of the occiput. His pulse is 60, moderately full and slow; pupils contracted and equal, and there is no paralysis of face or limbs." The bleeding from the nose lasted until late in the afternoon, and towards evening he vomited some blood. Soon after admission the man was convulsed during ten minutes, the face and arms twitching, and the pupils widely dilated and insensible to light; and shortly afterwards he became excessively violent, rolling about in bed, and striking out wildly with his arms and legs, so that it was necessary to put upon him a strait-jacket, and to tie down his legs. These restraints were removed in two hours, as the struggling passed off, and an ice-bag was applied to the head. As he refused to take five grains of calomel, a drop of croton oil was administered, and for the rest of the day he was moderately quiet, although only partially conscious and very restless. He continued in a fairly quiet, though restless condition, for the next two days, a second dose of calomel effectually purging him; but towards the evening of the third day (April 21) he began to be again very restless, constantly tossing his head about, shifting the ice-bag, pulling off the dressing from the wound in the face, and continually trying to get out of bed, talking wildly and incoherently all the time. At night this restlessness increased. He did not sleep, but made a great noise, and got out of bed to get his trousers, threatening the nurse with violence when restrained from wandering about the ward. The House-Surgeon then again put on the strait-jacket, and so kept him in bed. But, although so prevented from getting about, the same noisy violence continued, with some heat of head, flushed face, and hard pulse of 75 to 88, until four o'clock next afternoon, when twelve ounces of blood were taken from the arm. After this he was much quieter and went to sleep, and slept off and on through the following day with intervals of rational quiet. For the next few days he remained in about the same state, talking volubly, but rationally and quietly, although he did not know where he was, and was constantly endeavouring to find his clothes to set about his stable work. There was no heat of skin, and the pulse was 60, and soft. After this his symptoms changed somewhat. On May 2 the following note was made:—"When asked where the accident occurred, the patient replies 'Wickfield, near Windsor,' and has maintained this for two or three days. He states sometimes that a blow on the arm was done by the horse, but the wound on the nose was caused by some man letting something fall on his face. At other times he states that he received the wounds in a drunken row or a fight. He sometime reads, or appears to read, the paper, saying, however, that he merely looks at a little bit here and there, and he does not remember what he reads. On reading aloud about the war in France, he did not seem to know anything about it." At any time a leading question or two would elicit a contradictory account of the accident. He would constantly ask to go out, or to go to work, and was very anxious to be shaved. On May 8, as he seemed more rational and in good general health, he was allowed to dress and walk about the ward.

By May 11 he appeared to have quite regained his senses. He told his dresser all about the accident, where and how it happened, and so on, but he was in a state of confused uncertainty as to how he had passed the subsequent period, although he could remember having given many false accounts of his accident.

On May 15 he left the Hospital, well.

THE MIDDLESEX HOSPITAL.

MEDULLARY CANCER OF THE BREAST—AMPUTATION OF THE BREAST—RECOVERY.

(Under the care of Mr. NUNN.)

Mary Jane M., a married woman, aged 30, was admitted into Regent Ward, under Mr. Nunn's care, on March 21, 1871, suffering from a large tumour of the breast. She was a stout, healthy-looking woman, with a plentiful development of adipose tissue, and complained of little more than the size of the tumour, although at times it was the seat of some darting pain. The left breast was very weighty and much enlarged—the size of a large melon. The whole gland seemed to be converted into a firm tumour, over which the skin, œdematous and tightly stretched, could not be pinched up. There seemed, however, to be no adhesion of the breast to the muscle beneath, and, in spite of an enlarged and somewhat indurated gland in the axilla, the general appearance of the tumour was suggestive of cystic rather than of cancerous disease. Thus, in the centre of the mass the skin was bulging, thinned, discoloured, and gave one the impression of a largish cyst near the surface; the nipple was not notably retracted, although, from the swelling of the surrounding skin, it was depressed below the surface; and the plump condition of the woman favoured the idea of the non-cancerous nature of the case.

Her general health had always been good. Two and a half years previously she had received a blow on the left breast, which she remembered, but which had caused her little pain either at the time or soon afterwards; but ten months ago she noticed a small tumour, the size of a walnut, situated at the inner side of the left nipple, unattended by pain or discharge. This swelling increased steadily in size, and within two months had gained the dimensions of a hen's egg, and two months later was as big as an orange. During the last four months it had grown very rapidly, involving the whole breast, and causing a sinking of the nipple, and at the same time the woman had noticed a "kernel in the armpit."

On March 22, chloroform was given, and Mr. Nunn excised the whole breast with the nipple and much surrounding skin. The growth was freely supplied by large bloodvessels, and the free hæmorrhage occasioned some trouble. All the vessels were tied, a galvanic cautery-wire proving useless for the arrest of the bleeding, and some thickened and adherent underlying muscle was also removed. The woman made a good recovery from the operation.

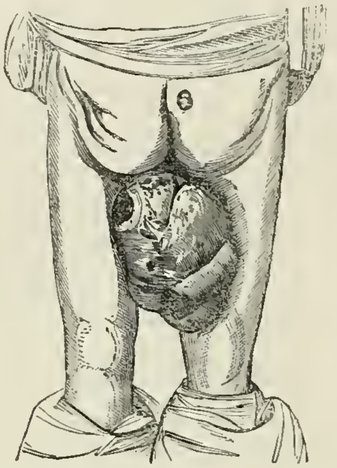
On making a section through the breast after removal, a large cavity was found to occupy the central portion, and to extend towards the discoloured bulging point on the surface. This cavity was converted into a cyst by the condensed tumour-substance about it, but had no distinct lining membrane. It contained some ragged, villous-like, chocolate-coloured projections from its walls, which proved to be *débris* of old-blood clot, and much grumous brownish fluid. There were no other cavities in the tumour, but here and there an appearance as of a thin-walled cyst filled with new growth; but these were probably merely old blood extravasations. For the rest the tumour was of fleshy consistence, of pink-white colour, save where mottled with various lines by altered blood, and yielded an abundant thick milky juice on scraping. Examined microscopically, the structure was found to be that of true cancer anatomically defined, but with a very scanty development of fibrous stroma. The cells which made up the great mass of the growth were of very various sizes and shapes, but generally resembled squamous epithelium. Each contained one or more large oval nuclei, with bright nucleoli, and there was no visible intercellular material. The fibroid stroma was in the form of slender bands of homogeneous-looking substance, which traversed the growth irregularly, and mapped it out into largish loculi. The specimen was, therefore, one of true cancer of the breast, but softer than usual, and it was specially interesting from the many points of resemblance which it bore to the cystic sarcoma commonly met with in this organ, and from which it could be hardly distinguished without a careful microscopic examination.

YORK COUNTY HOSPITAL.

REMARKABLE TUMOUR OF THIGH.

(Under the care of Mr. HUSBAND.)

G. E., aged 55, a labourer, from Rosedale, near York, was admitted into the County Hospital, October 13, 1870, with a large pendulous tumour, hanging from the upper part of right thigh. The patient says that he first noticed it as a small hard lump, the size of a marble, about nine years ago, and since that time it has gradually increased in size. About a week ago it burst behind, and discharged a quantity of whitish matter. Had never had any pain in the tumour itself till it burst; but during the last week has suffered some, and his appetite has failed him somewhat. On examination, there is a large pendulous tumour hanging down between the thighs, and reaching to the knees. It springs from the upper and back part of the right thigh, a little below the anus, being there attached by small pedicle three inches in diameter. The greatest length of tumour is eleven inches, and greatest circumference twenty; its probable weight seven pounds. The integument of the thigh is continuous over it, and is scarcely anywhere adherent.



In the skin over the neck coarse, large, tortuous veins, and in the neck itself vessels, can be felt pulsating. The tumour throughout appears to be composed of masses, except at the upper and posterior part, where it is soft and semi-fluctuating; and it was in this position the skin gave way, and where there now is a superficial ulcer, but presenting no special characters. The masses appear for the most part to be quite distinct from each other, vary in size, and some are harder than others. There is one in particular in the anterior part of the tumour; it is quite as hard as scirrhus, and presents the following characters: It is about the size of a hen's egg, of irregular shape, quite loose, and the fingers can be passed almost completely round it; on very firm pressure it can be indented, and sharp angles can be broken off. It gives one the idea of a chalky mass.

On October 20, Mr. Husband removed the tumour, first dissecting back some skin, and passing a ligature round the neck. The man recovered without a bad symptom, and left the Hospital cured.

On section, the tumour was found to be a fatty one, the hard masses consisting of condensed adipose tissue, surrounded and intersected with cretaceous laminæ. In some places the chalky deposit was as hard as, and appeared to be, bone; but, on microscopic examination, no true osseous structure could be discovered.

INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR—RESULT GOOD.

(Under the care of Mr. HUSBAND.)

A railway porter, a strong and healthy-looking man, aged 28, was admitted, on the evening of February 1, with the above injury. He gave the following history of his accident:—He was on a ladder, a few feet only from the ground, engaged loading a railway-waggon, when he slipped and, falling, alighted on his feet. Finding he could not move his left leg, he was brought at once to the Hospital. On examination, the following symptoms presented themselves:—(*a*). From one-half to three-quarters of an inch shortening, which, by extension, when the patient was fully under chloroform, could be removed.(a) (*b*). Well-marked eversion of the leg. (*c*). Only partial loss of power over the limb. (*d*). A sense of fulness in the natural hollow behind the great trochanter, which became more marked on manipulation. (*e*). Occasional crepitation could be elicited. The case was treated at first with the long splint, and after with a weight attached to the foot. On leaving the Hospital, some three months after his admission, there still remained slight shortening of the limb—about three-eighths of an inch. The patient could walk well, and seemed to have any amount of power over his hip-joint. Some stiffness remaining in his knee was his only cause for anxiety.

SCIRRHUS OF THE RECTUM.

(Under the care of Mr. HUSBAND.)

C. B., aged 21, a painter by trade, was admitted into the York County Hospital, April 27. He gave the following history:—First felt a twitching pain in his bowel last Christmas, but did not take much notice of it, thinking it would leave him in course of time. He also suffered slightly from constipation, and before he could evacuate any fæcal matter had to strain considerably, when blood in addition to fæces passed. The evacuations were made up of small pieces the size of filberts. Since this time has always passed more or less blood with his motions; about a month ago blood and corruption daily escaped from him in large quantities. His mother died of the bowel complaint; she lost blood and screamed terribly whenever at stool in her latter days. He looks cachectic, wasted, and weak. He can scarcely walk. On examination there is nothing visible externally, but on introducing the finger into the rectum, large, hard, and firmly fixed nodulated masses of indurated tissue are felt. They commence about two inches from the external sphincter, and the tip of the finger can with difficulty be just got through them. The examination causes great pain. As there was an acknowledged and well-marked history of syphilis, iodide of potassium was administered freely.

May 10.—Never has any action of the bowels without some purgative drug, and when under the influence of the medicine fluid fæcal matter and congealed blood are constantly running from him. Suffers great pain along the course of the right sciatic nerve as well as in the calf of the same leg; cannot lie on his right side at all.

24th. — Since admission, the hard masses have greatly increased and become absolutely immovable. They now extend as low down as almost immediately within the anus, and the finger can by no means be got through them. Is weaker and thinner, in spite of a liberal diet. As no hopes could be given him of recovery he left the Hospital to live at home.

(a) The measurements were accurately observed, Hutchinson's measuring-rule being employed.

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Medical Times and Gazette.

SATURDAY, JUNE 10, 1871.

DR. SANDERSON ON THE PROCESS OF INFLAMMATION.

Last week we considered the initiatory steps in the inflammatory process following on the application of an irritant to a transparent tissue. These were the gradual changes in the blood-stream terminating in stasis, the migration of leucocytes from the interior of the vessel to the extravascular tissues, and the soaking of these tissues by an excessive discharge of liquor sanguinis. From this point we recommence our account, and must now endeavour to obtain a proper understanding of what takes place beyond the vessels' walls, which on all hands is conceded to be intimately connected with, if not actually and entirely dependent on, the leakage of liquor sanguinis.

The changes which inaugurate inflammatory action in a tissue itself are not by any means always identical; they may be best studied in a tissue supplied with blood from vessels at a distance—what are commonly called non-vascular tissues; and of these, for various reasons, none are better adapted for observation than the transparent tissue of the cornea. But it is also true that certain of the phenomena of inflammation in such a tissue are liable to a double interpretation, and have given rise to no little controversy between Cohnheim and Stricker, with their respective followers. The living cornea in its normal condition is perfectly transparent, each of its elements refracting light in exactly the same measure as the others. After death, however, the relative transparency of its different constituents is altered, and so they become visible: its epithelial layers are seen distinct from its substance, and its substance is seen to be no longer homogeneous, but to contain a vast number of anastomosing channels, containing stellate masses of protoplasm. Irritation applied to the living cornea, according to Stricker, induces changes in these masses; their stellate projections are retracted, and in their interiors new bodies resembling leucocytes are abundantly formed, by their formation clouding the cornea and giving rise to the tangible signs, well known to all, of corneal inflammation. This view, therefore, implies the recognition of interstitial changes in the cornea itself, as the result of the stimulus applied to it—in other words, that the normal corneal tissues are the immediate parents of some, at least, of the leucocytes which obscure or obliterate its transparency. But, on the other hand, it has been proved by Cohnheim that many of these leucocytes are emigrants from the marginal vessels; indeed, this observer would make emigration the sole source of these extravascular new productions. But, in the face of all the positively ascertained facts, this view can hardly be maintained. That a certain number of the accumulated leucocytes are emigrants from bloodvessels Cohnheim has conclusively shown, and in no way more satisfactorily than by the introduction of aniline or other pigment into the blood. Particles of this colouring agent are ingested by the white blood-corpuscles, which, reaching the margin of the cornea, pierce the walls of their containing vessels in such multitudes as to cause a distinct coloration of that portion of the irritated cornea nearest the nutrient vessels.

That, however, the vessels themselves and their contents are not the sole sources of pus corpuscles, is even better shown by the changes observed in inflamed cartilage; for in cartilage we have no permeable channels, as in the cornea, so that the cartilage corpuscles or protoplasmic masses must be the parents of the mass of leucocytes which ultimately usurp their places—that is, the pus must result from local changes, not from migrations from bloodvessels.

With regard to inflammation of vascular tissues, certain very curious facts have been ascertained. Chief among these have been the results of observations made on the irritated tongue of the frog. In its tissues certain fixed bodies of peculiar shape, similar, apparently, in every way to the stationary corpuscles of connective tissue, have been observed for hours. Changes in their shape have been noted, but nothing like fission or any other mode of reproduction. Nevertheless, during the same period migratory corpuscles coming from the bloodvessels have had time to collect in enormous numbers. This would tend to show that in such tissues the earlier products of inflammation are derived directly from the blood rather than from hypernutrition of local protoplasmic masses.

Of all tissues, it might have been supposed that the epithelial would furnish the most striking illustrations of pus as the product of the cells themselves, and yet some very telling facts have been collected by the followers of Cohnheim, which would tend to show that in many, if not in a majority, of instances, the layers of leucocytes so speedily formed on an irritated epithelial surface are migratory bodies coming from the vessels lying just below the surface. Observations made, however, on epithelium at a distance from bloodvessels, as in the cornea, have shown that after irritation the protoplasmic contents of the epithelial cells may give rise to leucocytes, which have even been observed in the act of piercing the wall of the parent body. The observations on glandular inflammation are too vague to be much trusted.

Let it be granted, then, that leucocytes, the products of irritation, have a twofold origin—vascular and extravascular—the essential changes are in all cases identical; not so the apparent results of irritation. Suppose heat be applied in excess to any part, it may produce instant death, or it may only vesicate. This vesication seems to imply instant stasis of the blood in the part to which the irritant is applied, with leaking of liquor sanguinis from the vessels there, and from those in their neighbourhood stimulated to excessive activity. In suppuration, on the other hand, we would seem to have a slower process, but one in which leucocytes are abundantly produced. Their accumulation in one spot, determined in some fashion by their amœboid qualities, coupled with liquefaction of the normal tissue of the part, gives rise to what we call an abscess; but why one irritant should give rise to an abscess and another to a blister, we cannot tell.

Finally, let us inquire into the nature of the stimulus which induces this uncommon nutritive activity in extravascular leucocytes or protoplasmic masses. Is the mere transudation of liquor sanguinis enough, or must we imagine some nerve stimulus, direct or reflex, as necessary? An experiment invented by Stricker satisfies our minds on this point. Having thoroughly inflamed the cornea of one eye in a frog, the other cornea is immediately excised, introduced beneath the membrana nictitans on the inflamed side, and fastened there. In twenty-four hours this cornea is removed, and is then found to present all the signs of corneal inflammation we have already enumerated. But to render the thing still less doubtful, other experiments may be made; thus, to show that this is no mere invasion of the transplanted eye by wandering leucocytes from the inflamed cornea, a frog similarly prepared may be experimented on, but with the excised cornea divided into two portions. One portion having been killed by being introduced into water, the two are inserted into the inflamed eye whilst the other half is still alive. At the proper time, the two are examined—the dead cornea is found to be unaffected, the living cornea is in a state of inflammation. And yet, again, to show that irritation of the cornea is necessary before introducing the excised part, the experiment may be repeated without this antecedent precaution, and the cornea will be removed unchanged beyond what is necessary for an admirable demonstration of its structure. Thus we see that it is the liquor sanguinis which would seem to be the one requisite for inducing excessive nutrition in any part: it by no means follows that nerve force has no influence on inflammation, only that the process may go on without any such force being called into play.

These are the principal facts in this most important contribution to our knowledge of the most important of pathologic processes; but perhaps we had better give Dr. Sanderson's conclusions in his own language:—

"1. In every inflammation which attains its full development the changes which manifest themselves in the inflamed part are of three kinds, distinguished from each other according to the organs which are concerned in their production. They are either (1) effects of disorder of the vascular nerves and centre, (2) effects of alteration of the properties of the living walls of the capillaries, or (3) effects of the stimulation of the living cells by transudation of liquor sanguinis.

"2. Of these three orders of phenomena the second only can be regarded as absolutely essential to the existence of inflammation, which may, therefore, in the strictest sense, be said to have its seat in and about the veins and capillaries, it being there that the earliest and most constant effects of irritation or injury manifest themselves.

"3. The nervous and vascular effects of local irritation cannot be directly described as successive stages of one process; for the determination of blood to the seat of injury, which is the sole result, and, if I may so speak, purpose of the vaso-motor disturbance, has no relation to the local vascular changes, excepting in so far as it tends to make the exudation more abundant. Exudation of liquor sanguinis, although favoured by increased arterial afflux, may occur without it, and, as a rule, continues after the afflux has ceased. The vascular and textural changes, on the contrary, may be regarded as successive stages of one process, for they are connected by a casual relation—the exudation of liquor sanguinis, in which the former ends, being the determining cause of the latter.

"4. The mode in which an injury changes the living substance of the vascular walls, so as to make them permeable to the blood, is unknown. The nature of the change itself is also unknown, the only clue which we have to its character being that afforded by the structural alterations to which it leads in certain organs, and particularly by those which are observed when the process of reparation, attended with the formation of new capillaries, is commencing. From these appearances we are led to infer that the primary change consists in the transition of the material from the formed to the plastic condition; from a state in which it is resistant, because inactive, to one in which it is more living, and, therefore, more labile.

"5. In all living tissues the effect of inflammation manifests itself in a modification of the action and properties of individual cells. In cells which form part of permanent structures the protoplasm increases in quantity and becomes more or less contractile. Subsequently, it is converted entirely or partly into young cells, either by cleavage or by endogenous germination."

MORTALITY OF EUROPEAN TROOPS IN INDIA,

AS INFLUENCED BY THE EARLY AGE OF RECRUITS AND THE LENGTH OF SERVICE IN THAT COUNTRY.

The influence of the proposed short army-service system, according to which soldiers of three years' service may be permitted to volunteer for the reserve, taken in connexion with the early ages at which recruits are enlisted, was made the subject of some very judicious observations by Lord Sandhurst in the House of Lords on Monday night. He warned the Government that the result of such a system, if persevered in, will be, that all soldiers possessing skill and muscle being invited to quit the line, only ignorant striplings and men of bad character will be left behind. As a remedy, he suggested that 18 should be the age for recruiting for tho Militia, and 20 for the Line; and that Militiamen above the age of 20 be invited to volunteer for the Line. The Duke of Cambridge, while expressing his complete concurrence in the principles advanced by Lord Sandhurst, pointed out that his arguments were more applicable to a conscript than to an enlisted army; that in this country men of 20 are generally settled down to some trade or calling, so that it is impossible to get men older than those at present enlisted. We are happy to observe, from Lord Northbrook's remarks during the same debate, that the importance of taking only men of full age for service in India has not escaped the notice of the Horse Guards; and we hope that this attention may in future instances prevent the recurrence of such results as have lately been observed in the case of the 54th Regiment, which, as stated by the Duke of Richmond, quoting from a return laid on the table of the House of Commons, and signed by Sir Richard Airey, being under orders to sail for India in October next, has, in a total strength of 924 men, 472 who are under 20 years of age.

The recently published Report of the Army Medical Department for 1869 contains some most valuable testimony from Sir T. Galbraith Logan, and Inspectors-General Muir and Beatson, on the injurious results of sending immature lads for military service in India. As a few among the many instances of such results, Sir T. Galbraith Logan mentions that the 92nd Highlanders suffered from typhoid fever soon after reaching India, and that Deputy Inspector-General Munro chiefly attributes it to the immature age of the large proportion of the men among whom it prevailed. The great prevalence of malarious fever in the 21st Regiment, at Kurrachee, and the serious mortality in the 62nd Regiment, from cholera, at Lucknow, are attributed to the same cause. Sir T. Galbraith Logan is fully of opinion that soldiers should not embark for service in India under 20 years of age, and that even immature men of that age should be held over for still longer. Inspector-General Dr. Muir, C.B., gives a table showing the very large number of men under 20 in four regiments lately sent out to India, and remarks that, as the Government of India is charged with the maintenance of Indian depôts in England, it surely has a right to demand that no soldier be embarked for service in India who has not completed 20 years of age. Inspector-General Dr. Beatson, C.B., has expressed a similar opinion as the result of his Indian experience, and remarks that at first sight statistics do not appear to bear out the idea that the death-rate is greater among the younger men, as the percentage of deaths in India is considerably increased during each advancing quinquennial period, but that, by carefully comparing the statistics, according to age, among men up to 35 who have been *the same length of time in India*, the fact of the greater mortality among those who arrive in that country as boys would probably be established. It is the length of service in India which, in Dr. Beatson's opinion, goes considerably to swell the mortality with each advancing period in life. So far as we are aware, no statistics of the nature suggested by Dr. Beatson have yet been arranged, but the point raised by him is worthy of the serious attention of the Government of India, particularly in its bearings on the question of the volunteering of soldiers from homeward-bound regiments to others arriving in India to relieve them. Dr. Bryden, in the Report of the Sanitary Commissioner with the Government of India for 1869, contrasting the mortality of married and unmarried soldiers, observes that the gradual increase of mortality with advancing age is shown by both classes; but, in the case of the married soldiers above 30, the increase of mortality during the three years from 1867 till 1869 was very disproportionate, and this he attributes to the deteriorated value of the lives of the old married Indian soldiers, who are in very many cases tied to the country by the fact of their being married. But these are the men who constitute the majority of volunteers from a regiment under orders for home to the one coming out to India. So that in immature lads and old soldiers deteriorated by length of service in India, we may recognise two of the chief elements of the high rate of mortality among European troops serving in that country. The injurious influences of length of service in India also furnish a strong argument against the re-establishment of the local European army.

EUTHANASIA CANNABINA; OR, MEDICO-LEGAL NOTES ON HANGING.

More than a year has elapsed since the *Times*, in describing the execution of a criminal in Maidstone Gaol, observed that "the adjustment of the rope was slow and bungling, and such as to show that Calcraft's age unfitted him for his occupation," and shortly afterwards a paragraph appeared in many of the newspapers, asserting, not only that Calcraft had resigned, but that there were nearly 150 candidates for the vacant office, out of which large number seven had been selected as specially eligible. Although this announcement was obviously premature, there can be no doubt that our veteran executioner must soon, under the pressure of advancing years, withdraw (we trust, with a good-service pension) into dignified retirement; when possibly, in his leisure, he may compile his autobiography, which, if we can judge from a letter of remonstrance which he lately addressed to the landlord of a Taunton tavern in reference to his bill, and which the landlord, in revenge, published, would be written in a most forcible and racy style, and would prove highly attractive to a large class of readers. We have personally no reason to object to Mr. Calcraft, and we do not wish to speak evil of dignitaries. It is to the present system of execution, not to the executioner, that we object. Can we not introduce a better system ?

THE SMALL-POX EPIDEMIC.

A FURTHER decline in the small-pox mortality of the metropolis is announced by the Registrar-General. In the week ending the 3rd inst. the deaths amounted to 229. Of these, 28 belonged to the West districts, 82 to the North, 20 to the Central, 24 to the East, and 75 to the South. The reduction was, then, most considerable in the East—namely from 51 deaths to 24. In the West there was an increase from 21 to 28 deaths, and in the North an increase from 65 to 82. In the North districts there has been considerable weekly fluctuation, the numbers during the last five weeks having been 81, 64, 79, 65, 82. Comparing the small-pox mortality of London during the last four weeks with that during the four weeks previous, we find ground for hope that the epidemic has at last really begun to decline. In the four weeks ending May 6, 1090 deaths were registered, and in the four weeks ending June 3, 985. Making a similar comparison in respect of the five registration districts, we obtain the following numbers :—

	Four weeks ending May 6.	Four weeks ending June 3.
West districts . .	109	88
North ,, . .	299	290
Central ,, . .	83	77
East ,, . .	211	172
South ,, . .	1090	985

So that we may say that the decline has been generally observed throughout London, but that it has been very trifling in the North. Indeed, it is some parts of the North and South which are the chief foci of small-pox at the present time. In the North it is St. Pancras; in the South it is Bermondsey and Battersea. The returns of the Association of Health Officers show that in St. Pancras no abatement at all has yet taken place, while the Registrar-General tells us that 43 of the 82 deaths from small-pox in the North districts belonged to St. Pancras. In Battersea, out of 29 deaths, 16 resulted from the same cause.

THE WEEK.

TOPICS OF THE DAY.

A MEETING of the Committee of the three English Corporations appointed to consider the scheme for a Conjoint Examining Board was held on Monday last at the Royal College of Surgeons. The scheme proposed by the Royal College of Physicians was under discussion. We hear that no definite result has yet been arrived at, and that the Committee will meet again at an early date.

We understand that Mr. Lane has decided not to offer himself, at the approaching election, for re-election into the Council of the College of Surgeons. That he would not again seek the honours and the toils of office was generally surmised when he declined the Vice-presidency. Since we last wrote we have heard that Mr. Barnard Holt has determined to become a candidate. Mr. Holt's well-earned and sustained reputation at the Westminster Hospital gives him a claim on the honours in the gift of his College, whether or not he succeed on the present occasion. For the three vacancies there are likely to be six candidates—Messrs. Cock, Busk, Le Gros Clark, T. Spencer Wells, Critchett, and Barnard Holt. Mr. Cock has certainly been a most valuable Councillor and President of the College, but his opponents may urge that he has already filled with the utmost credit the most honourable office in the Council, and that a retirement to make way for a junior would not, under the circumstances, be ungraceful. Messrs. Busk and Le Gros Clark should, in our opinion, both be again returned. Mr. Busk has not only the claim of being a philosophical anatomist and Surgeon of no mean standing, but he has done such real and useful work whilst on the Council that his loss would be at the present time a very serious one to the College. Of the three new candidates, Mr. Spencer Wells has undoubtedly exceptional claims. Without detracting one iota from the merits of Messrs. Holt and Critchett, we may say that to have made such an operation as that of ovariotomy what it is, and to have saved by it a number of human lives, is a feat of Surgical genius, skill, and perseverance which it does not fall to the lot of many Surgeons to accomplish. It is alone enough to entitle a man to the highest honours and rewards of his Profession. Mr. Critchett is a first-rate oculist, and Mr. Barnard Holt a very ingenious, careful, and painstaking Surgeon. We shall rejoice to see them both filling places in the Council of their College, but we think Mr. Wells has in the present election the more immediate claim.

The mode of election to Medical and Surgical offices in Hospitals is a matter in which reform is greatly needed. The mode of election by the votes of governors is bad in every respect. It does not insure the election of the best or always of a good candidate, it compels Professional men to stoop to all the arts of canvassing and touting for votes, and it inflicts large pecuniary expenditure both on the successful and unsuccessful candidates. If the plan of election by a small committee of Medical and general supporters of the Hospital were substituted these scandals would be avoided, and the governors themselves would be relieved of the unpleasant task of choosing between Professional men of whose merits they are profoundly ignorant, except so far as they may have seen them represented by adulatory testimonials, which, in many cases, are proved by their extravagance to be untrustworthy. We are glad to see, therefore, that at the meeting of the Weekly Board of St. Mary's Hospital, on Friday, the 16th, Colonel Crew will call the attention of the Board to the present system of election of Medical officers, as laid down in the laws of the Hospital, with a view to the alteration of those laws. We trust that Colonel Crew's motion will meet with the support of his colleagues.

The pleadings in the action against Miss Jex Blake for slander fully bore out the theory on which we accounted last week for the nominal damages of one farthing awarded by the jury to Mr. Craig, the pursuer. We said that the verdict was to be accounted for by the lenient view taken by the good folk of Edinburgh of the offence of drunkenness with which Miss Jex Blake had charged Mr. Craig. We said this jocosely, but we are warranted by the Lord Advocate in repeating it in sober earnest. The Lord Advocate argued that it was no disgrace for a Medical student to be intoxicated, and, therefore, it did him no harm to say of him, however falsely, that he was intoxicated. We cannot subscribe to the Lord Advocate's view of the character of Medical students or of the vice of intoxication. Perhaps his intimacy with his own profession in Scotland—where we believe high jinks are not quite obsolete—has led him to form this estimate of the younger members of the Profession of Medicine. We are glad to see that the judge has certified that the pursuer brought the action in vindication of his character, and that, therefore, the verdict carried the expense of the process and trial. Mr. Craig has completely cleared himself of the charge brought against him by Miss Jex Blake, and, in doing so, has attained the object for which he went to law.

The foundation-stone of a new sanatorium has been laid at Weston-super-Mare by the Earl of Carnarvon. The new Hospital is to be called the West of England Sanatorium. The institution was established in 1868 on the cottage Hospital principle. The committee have now obtained a freehold site near the sea, and they propose erecting a building at the cost, including the land, of £11,000, or £120 per bed. The new sanatorium seems to be warmly supported by the Bishop of the diocese and the neighbouring clergy and gentry.

We are informed that the Hospital authorities of St. Mary's Hospital have determined to waive their share of the school fees, and that a part of the money thus saved to the school authorities is to be expended in providing a salary for a Medical tutor, who will give a large part of his time to the instruction of the students in the Hospital wards.

DR. LANKESTER ON THE EXTERMINATION OF SMALL-POX.

Dr. Lankester delivered an address before the Social Science Association on Monday evening, which was referred to the standing Committee for further consideration. The subject was the necessity for immediate legislative action for the suppression of small-pox. The measures which it was proposed to enforce were—the more complete and effective vaccination and revaccination of the population; the removal and isolation of small-pox patients; and the employment of Medical inspectors to superintend this removal and the complete disinfection or destruction of infected clothing or apartments. Most unfortunately there is one thing which legislation cannot effect, and that is the shaking of the population out of their stupid apathy and unconcern. It is of no use to set before them the waste of life and money caused by disease. It is true that a large mortality by some sudden blow is sometimes felt acutely. It seems shocking enough, for example, to hear of 100 lives lost in a colliery explosion, or 500 on board the *Captain*, or of some 2000 or 3000 soldiers in the second siege of Paris. But, at the average rate of 250 per week, we have lost 2000 by small-pox since Lady-day, whilst the expense of funerals, of nursing, of loss of work, and loss of custom amount to an untold sum, to say nothing of the griefs, sufferings, and disfigurement of the survivors and their families. But, in good truth, our enlightened public does not care a bit. Each individual trusts to his own good luck to escape, and is not too deeply moved by other people's misfortunes. As for the hopes that such a pitch of public virtue will be reached that people will denounce their own children or relatives, or allow them to be removed, or that a tailor or milliner would cease to make clothes in the very room where a child may be lying ill with small-pox—we are not Utopians. Severe laws might only lead to more concealment and deceit than are practised at present. The only thing we see possible is to carry out vaccination as efficiently as we can; to multiply facilities for the disinfection of bedding and clothing; and to carry out the provisions of the Sanitary Act for the registration of houses let to more than one family. Meanwhile we must expect a wave of cholera or small-pox from time to time, and must be thankful that things are no worse.

REPORT OF SANITARY COMMISSION.

An important document, embodying the views of the Royal Sanitary Commission, as to the best machinery by which "constant and universal supervision of the essentials of public health"—viz., the food, the water, and the air of the people—by competent persons can be efficiently and economically secured throughout the country, has just been made public. The document, entitled "Memorandum on Medical Officers of Public Health," reiterates, in the first place, the unanimous opinion of the Commission, that "every question affecting public health should be brought into relation with one central office, presided over by a Minister," and goes on to point out that every district, in respect of its health, should be "as closely connected with the said department of health as is every part of the country with the Home Office, through the police and the magistrates, and as are the destitute with the Poor-law Board, through the guardians, etc.," and that every person should "henceforward be entitled, in respect of his health, to such reasonable public protection as he is in respect of his liberty and his property." The Commissioners believe that there should be six permanent departments under the Minister for matters connected with the law of local government, engineering questions, registration and statistics, the relief of the poor, the Medical care of the public health and the poor, and legislation bearing on the Profession of Medicine. A recommendation is also made to bring the naval and military Medical services in direct relation to the Central Health Office.

THE SEWAGE OF DUBLIN.

Many of the Dublin citizens wish to get rid of the excrementitious refuse of their population, without subjecting themselves to the incubus of enormous engineering works, which, after all, are for the purpose of collecting sewage into huge reservoirs, and then letting it into the sea at ebb tide. We learn from a paper circulated by Dr. Charles Frederick Moore, Assistant-Physician to the Cork-street Hospital, that the Corporation of Dublin propose to convey the sewage of their city, "by syphons under the Liffey, through a main, at almost a dead level, for a considerable distance to a pumping-station on the north side of the city, and to construct a sea-wall and main sewer within it, to the North Bull, a large sandy tract eight miles away from the commencement of the sewers. At the Bull, another pumping-station is to be built, and two large reservoirs, in which latter subsidence of the more solid matter, it is hoped, will take place in time to let their contents be emptied on the ebb tide, and to admit of the solid matters, amounting to very many tons daily, being dug out, and then carted away (without nuisance by Act of Parliament), and buried in the sand, which is already saturated with sea-water, and therefore quite ready to decompose the sewage refuse into most poisonous gases. For sixteen hours daily there can be no overflow of the sewage; at all times volumes of sewer-gases will escape into the crowded city from the several sewers."

Now, there is no doubt but that the management of excrementitious matters is the most important item in general sanitary arrangements. Not only do these matters, if ill-managed, taint the air and conduce to a state of *general* unhealthiness, but at certain times they have *special* evils of their own, and are the means of propagating diarrhœa, dysentery, cholera, and, as we believe, the scarlet fever and every other form of zymotic disease.

In the next place we may advert to the various conditions under which the fæcal element in sewage may do mischief, and we may distinguish varieties of mischief—first, from the water-closet or privy, or other primary receptacle; secondly, from the house-drains, if defective or leaky, so as to give exit to sewer-gases and soak into the ground; thirdly, from the street-sewers; and, lastly, from the ultimate destination, be it river, sea, or land.

Now, we believe it to be indisputable that it is at the first of these places—viz., the privy or closet—that fæcal matter is most dangerous. Even in the best of private houses, with elaborate fittings and an ample supply of water, and the use of disinfectants, it is possible that the closet may be the means of diffusing zymotic disease amongst the inmates. But this diffusion is certain in the case of crowded houses, where perhaps "forty souls go to one closet," where the pan and trap are flushed out perhaps once a day, perhaps once a week, and where the fæcal matters of numbers of persons, sick and well, lie stinking, and perhaps are scattered over the seat and floor of the closet and the adjoining yard. Such is the condition of the so-called waterclosets of houses inhabited by the lowest orders in London, that every municipal authority that knows its business sends round a labourer with brush and bucket and carbolic acid at regular intervals to keep the places sweet. It is a delusion to suppose that waterclosets *pure and simple* suffice to remove the fæcal sewage of a crowded, debased population in London. We know not what the Irish at home may be, but in London they are the most unmanageable offenders, and it is quite a myth to suppose that any watercloset system alone can get rid of their sewage.

We believe, in fact, that the watercloset (so-called) in poor houses, usually without water, seldom flushed clean, is a source of danger, and requires manual interference to keep it sweet. But if so, why not adopt a system of altogether removing the fæcal sewage from poor houses by hand labour? As for the rich and cleanly, these have their closets, and pay for the water which is thus used, and for the necessary sewers; but as for the poorest in towns, and for scattered populations, where water is scarce, and where there is no safe method of dealing with the liquid sewage, we believe the dry system to be the best, and that if the excrementitious matter were received into boxes charged with dried earth or ashes and a little carbolic acid, to be removed by carts to barges which should convey it to the fields, health, economy, and agriculture would be alike benefited.

FEVER IN MAURITIUS—CHOLERA IN MADAGASCAR, AND ALONG THE SOUTH-EAST COAST OF AFRICA.

We understand that intermittent and remittent fevers are again becoming frequent among the civil population of Mauritius. We are also informed that cholera prevails to a considerable extent along the east coast of Madagascar, in the islands Mayota and Johanna (members of the Comoro group), at the northern extremity of the Mozambique Channel, and along the east coast of Africa, to the south of Port Mozambique, between the eighteenth and nineteenth degrees of latitude, about the mouths of the Zambesi River. The gradual extension of cholera in a southerly direction from Zanzibar, along the coast-line, towards the Cape Colony, is a subject of extreme importance, and suggests great difficulties in the establishment of the theory, supported by Inspector-General Lawson, of the advance of this disease by "pandemic waves" from south to north, along the belts enclosed by the isoclinal lines of terrestrial magnetic influence.

THE NIGHTINGALE FUND.

The annual report for the year 1870 states that, at the close of 1869, there were nine probationers in residence at St. Thomas's Hospital. During 1870 thirty-five probationers were admitted to the school; three have been dismissed, seven have resigned or been found unsuitable for the work, and sixteen have been recommended to appointments, leaving eighteen still in training at the close of the year. The full number of twenty-three was shortly afterwards completed by further admissions. Mrs. Wardroper, the matron, and Mr. Whitfield, the resident Medical officer, state they believe that the Hospital has afforded the best opportunities to the probationers for obtaining experience and a thorough practical knowledge of the Professional duties required of them. They add that the diaries and Medical annotations of those probationers who had left were most of them very creditable, as well as their records of cases. The receipts for the past year had been £1564 3s. 6d., and the expenditure £1094 0s. 9d. The total amount of invested funds on December 25 last was £51,200.

PRESENTATION OF TESTIMONIAL TO DR. THOMAS KEITH.

(*From a Correspondent.*)

On Thursday, June 1, there met at No. 2, North Charlotte-street, the residence of Dr. Thomas Keith, a committee, including Dr. Christison, Dr. Matthews Duncan, Dr. John Brown, Dr. Maclagan, Dr. Begbie, Dr. Sanders, Dr. Combe, Dr. Morehead, Dr. Strethill Wright, Mr. Annandale, and Dr. Sidey, to present to Mrs. Keith, on behalf of seventy-nine subscribers, a portrait of her husband, by Mr. Reid, and a service of silver plate, as a token of their admiration of her husband. Dr. Christison, who had been requested to make the presentation, expressed in warm terms the pleasure with which he complied with the wishes of the subscribers. There were, he said, several grounds which had led to this expression of admiration—namely, Dr. Keith's great success in treating one of the most terrible diseases which may affect the life of woman, his disinterestedness, his fine character, and his devotion to duty, and their appreciation of the great sacrifices he had made in pursuit of his object. The great operation which Dr. Thomas Keith had so often and so successfully performed, had been, at one time, looked upon as almost certainly fatal, and had only been kept from disuse by one or two bold Surgeons until the time when Dr. Keith and another Surgeon in the south (referring to the labours of Mr. Spencer Wells) had succeeded in establishing it as one of the legitimate operations in Surgery. Professor Christison then referred to the change of opinion which his friend, Mr. Syme, of whom he spoke "as the wisest of his friends," had expressed in regard to this operation. Alluding to the wish which he had expressed, that a mutual friend (who ultimately did recover) should be placed under Dr. Keith's care, Mr. Syme remarked, "You know that hitherto I have regarded this operation like murder, but I consider now that it has been brought by Dr. Keith within the range of legitimate Surgery." Dr. Keith, in replying, stated that he had great satisfaction in feeling that so many of his fellow-workmen had gathered together to assert their approval of his conduct in helping to raise ovariotomy to the ranks of a legitimate and successful operation, and the pleasure which he experienced was enhanced by the fact of the presentation being made by him whom they regarded as the father of the Profession. He referred to the operation in which he was so much interested, remarking that because success had been achieved in a remarkable manner, it was not to be supposed that too much had been made of its dangers in former days. Now was the time, however, to seek carefully for those perils which were still as much hidden as formerly.

We may add that Dr. Matthews Duncan was treasurer, and Dr. Arthur Gamgee secretary to the influential committee which carried out the purpose of the subscribers.

DEATH OF M. LIEGEOIS.

We are sorry to announce the death of this eminent Surgeon, at Paris, on June 2. He was seized with a *foudroyant* stroke of apoplexy as he was sitting after dinner, and died in a few hours. He was only 40 years of age.

FROM ABROAD.—ACTIONS FOR MALPRAXIS—M. OSCAR HEYFELDER ON TENT-HOSPITALS AND EXCISIONS OF BONE.

Another of those iniquitous actions for malpraxis with which the Profession is from time to time annoyed in this country and the United States has recently been brought to a satisfactory conclusion at Philadelphia. As usually happens, a scheming lawyer was at the bottom, hoping, not for success if the case went to trial, but to screw out of the defendant a sum of money as a compromise. As Professor Gross and his son were here defendants, it will be at once seen that a verdict against them or a consent to a compromise was alike improbable. The facts are so transparently worthless for their assumed object that they are hardly worth detail, the object evidently being merely to extort money from persons able to pay it in order to avoid the annoyances which attend all trials, even with the right on one's side. A man lost his leg during the American war, and some time afterwards, having fallen on the stump, an aneurism ensued. Admitted into the Hospital, ligature of the vessel was performed by Professor Gross, nothing remarkable occurring during the operation. Secondary hæmorrhage, however, supervened, and, notwithstanding every care bestowed upon the patient, he died, desiring that his Medical attendants, who had given him their assiduous care gratuitously, should be sued in heavy damages. A benevolent lawyer, in spite of the wishes of the relatives, constituted himself residuary legatee of the proceeds, and endeavoured to extort a sum of money as a condition of not pursuing the suit. This was scornfully refused, and the case going on to trial broke down under the plaintiff's own statement, the legal adventurer receiving a severe rebuke from the judge.

The *Medical Record*, commenting on the case, observes :—

> " The community are beginning to wake up to the fact that the defendant is generally the injured party, and are willing to weigh the evidence of Professional skill in its proper balance. Plaintiffs will also learn that the time has come when the Medical man is not to be tempted into any compromise for the sake of avoiding an annoying suit or saving the time of attendance in court. . . . . A few more such victories will put an end to trumped-up charges of malpraxis. It is seldom, if ever, that the idea of such a suit originates in the brain of the plaintiff. There are always one or two elements which are the means necessary to the end—a pettifogging attorney and an irregular and unprincipled Medical Practitioner. They generally work hand-in-hand to defraud the Surgeon of his means and reputation. The plaintiff is but the tool in their hands, and, stimulated by the chances of large damages, is ever ready and willing to have the facts perverted to suit the emergencies. If every one of these attacks were as defiantly met as in this instance, and if Medical witnesses on the part of the defendant would be as ready and as willing to testify to Professional knowledge, skill, and experience, the results would be as gratifying as triumphant. We believe that one of the reasons why Medical men dread suits for malpractice is, that they do not appreciate the proper relations in which they stand to the community. The law is so framed that every possible protection is afforded them, and no educated Medical man need fear to have his Professional acts criticised in any court of justice. If he can prove that he has been dutiful to his patient, and has conducted the case to the best of his ability, as an educated Medical man, he is sure to have the law on his side; but if from any desire to dodge an investigation he is coaxed into a compromise, his prudence degenerates into cowardice, and his modesty into an acknowledgment of incapacity."

Dr. Oscar Heyfelder, giving some account of his experience derived from the late war (*Presse Belge*, May 7 and 14), states that, although on a somewhat limited scale, he had the opportunity, which is so rare in war-time, of watching the progress of his cases during several months, aided by intelligent assistants and devoted nurses. He was Medical director of a Hospital of 200 beds, at Neuwied, near Coblenz, from August to February. It was founded by the Princess de Wied, and there was also an ambulance for officers at the château. As their Surgeons had accompanied the Prussian army, Dr. Heyfelder also acted as Consulting Surgeon to numerous provincial Hospitals. The Hospital at Neuwied became truly international, by reas [illegible] eons resorting to it from all countries, which also [illegible] it with donations in money and *matériel* of all kinds. [illegible]nediately after the capitulation of Metz, he was allowed to select from the 16,000 patients exhausted by famine, wounds, and disease, 100 of the worst cases, suffering especially from wounds of the joints and compound fractures. In the park of the Prince de Wied, close to the Rhine, there had been erected three wooden sheds, on the American plan, and sixteen tents. The three sheds, having an agreeable appearance, were raised by brick pillars six feet from the ground. Separated about 100 paces from each other, each shed contained two wards, each holding twelve patients, having a room for the Sisters of Charity intervening. The London German Society also forwarded ten oblong tents, each capable of holding ten patients, and other tents were forwarded from Russia. As a general rule, there were 200 patients distributed over thirteen tents and eight sheds. Abundant ventilation was secured, and, as they ceased to require continuous Surgical attendance, the convalescents were drafted into ambulances in neighbouring convents and châteaux. On the other hand, cases which in these establishments required continuous treatment or operations were sent into the tents. The tents were from time to time changed and replaced, so as not to be continuously occupied.

In consequence of these precautions, and the exceptionally favourable conditions of all kinds under which treatment was pursued, this proved very successful. The number of recoveries was very great; and patients arriving from other places, especially Metz, pale and exhausted, rapidly regained their appetite, sleep, good looks, and cheerfulness—and that in very bad cases. The air never being vitiated, the ordinary consequences of overcrowding—as gangrene, pyæmia, erysipelas, and phlebitis—were not met with. It seems that, whether in imitation of the mountain tribes of the Caucasus (where the practice has prevailed from time immemorial) or not, the Russians have been in the habit during summer of resorting to the tent system for the last forty years. Not only in the great camps near St. Petersburg, Warsaw, etc., are the patients placed in this description of ambulance, but all the civil and military Hospitals possess a similar mode of establishment for the summer months. Of course, in winter the great object in so rigorous a climate is by any means to exclude the cold; and as this has to be effected at the expense of ventilation, the consequence is that not only the vast Hospitals of the town, but the smaller ones, and even private houses, become infected, and erysipelas, gangrene, and pyæmia, typhoid and recurrent fevers are produced. Among the lower classes and the soldiers hemeralopia and scorbutus become prevalent; and although all the usual remedies are resorted to, there is but one means of radical cure, the admission of air. The evacuation of Hospitals, ambulances, etc., is therefore effected as soon as this becomes possible; and to this end every Russian Hospital is in possession of light wooden constructions, or tents are raised in large gardens or plantations, and sufficiently remote from habitations, under the designation of summer Hospitals. Scorbutus and hemeralopia now disappear as if by enchantment, the wounds take on a healthy aspect, and epidemics disappear. The soldiers continue in the tents until the camps are raised; and the civilians remain in them until snow appears, and in the sheds sometimes still longer. In the meantime, the Hospitals which they evacuated have been thoroughly cleaned, scraped, and painted inside, so that at the beginning of winter they are, so to say, new, clean, and healthy.

As has been said, the great amelioration of patients removed from a closed Hospital into tents is very striking, recovering in a few days their colour and flesh. It is true that residence in these tent ambulances occasionally gives rise to chills and inflammations; but M. Heyfelder agrees with M. Ehrmann, Chief Physician at Metz (who has since died in consequence of the labours he there underwent), that it is preferable to suffer occasionally from excess of ventilation, and even to lose a case or two in consequence, than to risk the infection of an entire Hospital. Various modifications in respect to warmth and ventilation had to be resorted to at Neuwied, in order to render it possible to treat the patients in tents and sheds during the winter. Still, although that of 1870-71 was a very severe one, it was found possible to treat the sick and wounded there with advantage. These are M. Heyfelder's general conclusions concerning these Hospitals :—1. Sufficient ventilation is the primary condition for the successful treatment of the wounded, as also of certain diseases, especially typhoid fever and scorbutus. 2. The placing patients, and especially the wounded, in tents and sheds, is the only means of obtaining a sufficient ventilation. 3. Such placing is simple, cheap, and possible in all places and in all seasons. 4. In future, every Hospital should possess wooden sheds or tents for the reception of all or a portion of their patients in summer, especially during the prevalence of epidemics. 5. In time of war, every army corps and every ambulance should be in the possession of a certain number of tents.

The operations most frequently practised at Neuwied were excisions. These were forty in number, without counting the extraction of splinters and sequestra, which occurred about thirty times. Those cases are not termed excisions in which it became necessary, in order to remove a splinter, to excise a superjacent or prominent portion of bone. M. Heyfelder did not perform a single amputation; and unless there is a very precise indication, he has a great repugnance to this operation—a repugnance which has increased with age and experience. On the present occasion he was able to sacrifice abundant time to his patients, carefully dressing them twice a day, observing every precaution and exceeding cleanliness. A plaster apparatus was renewed six or seven times during the convalescence of a patient, and the invention and application of new apparatus were much favoured, by reason of the presence of so many Surgeons from all parts, and by the abundance of means at disposal. It is to conservative Surgery, conducted under such auspicious circumstances, that the success of the cases treated is due. Alluding to excisions made in the continuity and through the whole substance of the bone (an operation quite recently rejected by so great an authority as Stromeyer), M. Heyfelder states that he has performed eighteen, with the best results. They were facilitated by the fact of the periosteum having become detached through inflammation, and by the bone being more easily removed than in recent cases. The limitation of the caries or necrosis was often completed, or at least visible. Whenever possible, the excisions were performed subcutaneously, and preserving the periosteum. To this end he practised one or two longitudinal incisions, and employed the chain-saw with great advantage. Although in the after-treatment of some of the cases, in which the state of the wound or amount of suppuration indicated it, he resorted to permanent immersion of the limb from three to fifteen days, in the generality of cases he was at once able to apply the plaster-of-Paris bandage, or some other form of *amoro-inamovible* apparatus. Some of the most interesting cases are related, but for these we have not space.

PARLIAMENTARY.—METROPOLIS WATER-SUPPLY—ADULTERATION OF FOOD, DRUGS, ETC.—CONTAGIOUS DISEASES (ANIMALS) BILL—LUNATICS (SCOTLAND) BILL—POOR-LAW DISPENSARIES.

ON Thursday, June 1, in the House of Commons,

Mr. Bruce's Metropolis Water Bill was read a second time.

The order for committing the Adulteration of Food, Drugs, etc., Bill was read and discharged, and the Bill withdrawn.

On Friday, June 2,

Mr. Read called attention to the operation of the Contagious Diseases (Animals) Act, and moved for a Select Committee to inquire into the constitution of the Veterinary Department of the Privy Council, on whose actions he passed some severe criticisms, complaining of its cost, of its neglect to give information requested from it, and of its utter uselessness in preventing or checking disease.

Mr. Jacob Bright took advantage of the motion to advocate the importation under inspection of foreign cattle from uninfected districts, and Mr. Beach, on behalf of the farmers, declared that they required no restrictions but what were necessary to exclude disease.

Mr. Forster explained in detail the course taken by the Privy Council to carry out this Act, and vindicated all they had done to check rinderpest and other cattle diseases, pointing out that without the aid of a Professional department the Privy Council could not stir.

At this stage of the debate only twenty-eight members were found to be present, and the House was adjourned.

On Tuesday, in the House of Lords,

The Lunatics (Scotland) Bill passed through Committee.

In the House of Commons, in answer to Dr. Lush,

Mr. Stansfeld said that the time had hardly arrived for finally settling the question of Poor-law Dispensaries. It was much to be doubted whether he should be able to introduce a Bill on the subject during the course of the present session.

HOW TO SPREAD SMALL-POX.—There is a particular shop in the Portobello-road, Notting-hill, where rags, bones, and old clothes are sold, and where articles are "left," to be fetched away again on payment of interest. The proprietor of this establishment, his wife, and child are all suffering either from small-pox or fever, and have been so for the last three weeks. A nurse attends to them and also to the shop, receiving and delivering the rags and wearing apparel from and to the customers, whilst in intervals she waits upon the sick family. All this is patent to the immediate neighbours, and yet nothing is done to stop the spread of disease.

HANGING FROM A HISTORICAL AND PHYSIOLOGICAL POINT OF VIEW.

SEVERAL years have elapsed since Professor Haughton, of Trinity College, Dublin, published his elaborate memoir "On Hanging, considered from a Mechanical and Physiological Point of View," which we noticed shortly after its publication. In this memoir he forcibly points out the advantages of the Irish and the American systems over the English method, which he regards as a relic of a barbarous age, when hanging was really only a humane preparation (by deadening sensation) for the more cruel subsequent processes of drawing and quartering. For information regarding the Irish long-drop and the American systems, both of which have been so formularised by Professor Haughton as to ensure fracture of the second cervical vertebra, and, consequently, instantaneous death, for criminals of different weights, we must refer to his paper.(a) His views regarding the original intention of English hanging are strongly supported by the following extract from a curious little book, entitled "A Memorial for the Learned," by J. D. Gent, London, 1686. Amongst "Notable Events in the Reign of Henry VI." he records that "Soon after the good Duke of Gloucester was secretly murthered, five of his menial servants—viz., Sir Roger Chamberlain, Knt., Middleton, Herbert, Artiz, Esq., and John Needham, Gent., were condemned to be hanged, drawn, and quartered; and hanged they were at Tyburn, let down quick, stript naked, marked with a knife to be quartered; and then the Marquess of Suffolk brought their pardon, and delivered it at the place of execution, and so their lives were saved."—P. 77.(b)

Further evidence, showing the clumsy and imperfect mode of hanging practised in England and Scotland, is afforded by the number of authenticated cases that have been recorded of resuscitation. The consideration of these cases naturally leads to the question—When the criminal has once been hanged, has he, if he survives the operation, borne his allotted punishment, or is the operation to be repeated till death ensues? In olden times there was a general belief in the more merciful view of the case. In the celebrated old poem "The Vision of William concerning Piers the Plowman," written by Langlands, which first appeared about A.D. 1362, the following passage occurs:—

> It is nought vsed in erthe to hangen a feloun
> ter than ones, though he were a tretour;
> d jif the kynge of that kyngedome come in that tyme,
> re the feloun thole sholde deth, or otherwyse,
> La e wolde he yeue hym lyfe, if he loked on hym;"

i.e., "It is not usual in the world to hang a felon oftener than once, even though a traitor; and if the king of that kingdom were to come at the time where the felon should [was adjudged to] suffer death or otherwise, then the law would compel to grant him his life if he looked upon him."(c)

Four centuries later, Blackstone, in his celebrated "Commentaries," holds a very different opinion. "It is clear," he observes, "that if, upon judgment to be hanged by the neck till he is dead, the criminal be not thoroughly killed, the officer of the sheriff must hang him again."

The opinion expressed in "Piers Plowman's Vision" was probably based on the fact that a Royal pardon or commutation of the sentence was usually granted in English cases where the operation of hanging had been unsuccessfully performed. In Scotland, however, if we can take the *Newgate Calendar* as an authority, the law is different. "By the Scottish law, every person on whom the judgment of the court has been executed has no more to suffer, but must be for ever discharged; and the executed person is dead at law, so that his marriage is dissolved. This was exactly the case with Margaret Dickinson (who was executed for child murder at Edinburgh, January 9, 1728, and came to life again as she was being conveyed in a cart to her native place for interment, and sat up in her coffin), for the king's advocate could not pursue her any further, but filed a bill in the High Court of Justitiary against the sheriff for not seeing the judgment executed. Her husband, being a good-natured man, was publicly married to her within a few days after the affair happened."—(The *Newgate Calendar and Malefactors' Bloody Repository*, vol. ii., p. 233.) We may add that after this escape she had several children and lived for twenty-five years, without, so far as is known, a speck upon her character. We are acquainted with several well authenticated cases in which, previous to the composition of the "Vision of Piers Plowman," reprieves were granted to criminals who had survived the operation of hanging. The following is the form in which a pardon in a case of this nature was granted by Henry III., in the forty-eight year of his reign (1264), to a woman who was hanged for harbouring thieves:—

(a) *Philosophical Magazine.* 1868.

(b) For our knowledge of this, and of several of the other cases quoted in this paper, we are indebted to the index to *Notes and Queries.*

(c) This quotation, as we learn from a private communication from the Rev. W. W. Skeat, does not occur in all the versions of the poem. It is to be found in Text B, Passus xviii., l. 377. He has a suspicion that the phrase "*ofter than ones*" may be merely ironical, and has no bearing on the question.

"Rex omnibus, etc., salutem. Quia Inetta de Balsham pro receptaculo latronum et imposito nuper per considerationem curie nostre suspendio adjudicata et ab horâ nonâ diei lune usque post ortum solis diei Martis sequen. suspensa, viva evasit sicut ex testimonii fide dignorum accipimus. Nos divinæ charitatis intuitu, pardonavimus eidem Inetta sectam pacis nostre que ad nos pertinet pro receptaculo predicto et firmam pacem nostrum ei inde concedimus. In cujus, etc. Teste Rege apud Cantuar., xvi°. die Augusti."

This remarkable document is taken from the Patent Rolls of the above-mentioned year.

Two nearly similar cases are recorded as having occurred in the following century, and, by a strange coincidence, they both happened at Leicester. In 1313, Matthew, of Enderby, a thief, was convicted, and sentenced to be hanged. "He was led to the gallows by the frank pledges of Birstall and Belgrave, and by them suspended; but, on his body being taken down and carried to the cemetery of St. John's Hospital for interment, he revived, and was subsequently exiled."—(Thompson's "History of Leicester," p. 110.) In 1363, as is related by Henry of Knighton, in his "Chronicle of English History," "Walter Wynkeburn having been hanged at Leicester, after having been taken down from the gallows as a dead man, was being carried to the cemetery to be buried, but began to revive in the cart. To this man King Edward granted pardon in Leicester Abbey, and gave him a charter of pardon, thus saying in my hearing:—'Deus tibi dedit vitam, et nos dabimus tibi cartam.'"—Col. 2627.

The two succeeding centuries (the fifteenth and sixteenth) present no case of historic interest; but early in the seventeenth century we meet with the first authentic account of a preconcerted plan to cheat the hangman. A man named Gordon was condemned to death for highway robbery, and, with a view of escaping the final penalty of the law, engaged the kindly services of a young Surgeon, who introduced a small tube through an opening which he had made through the windpipe. After being duly hanged, Gordon's body was given to his friends. His surgical friend at once bled him, and the highwayman sighed deeply, but subsequently fainted and died. Details of this case may be found in the "Memoirs of the Royal Academy of Surgery in France," edited by Professor Erichsen for the Sydenham Society. It is of special interest, as it probably affords the clue to the leading incidents in Scott's "Fair Maid of Perth," Hook's "Maxwell," and a story in *Blackwood's Magazine* for 1827, entitled "Le Revenant."

In a little book, published about twenty years ago, entitled, "Notes and Narratives of a Six Years' Mission, principally through the Dens of London," by R. W. Vanderkiste, the case is recorded of a woman who was hanged at Newgate, and who lived many years afterwards. "The person, by some means, contrived to introduce a silver tube into the gullet. She was delivered to her friends for burial immediately after execution, and hurried home, where, after considerable difficulty, she was restored to life."—P. 7. If there is any truth in this statement, the tube must have been inserted into the windpipe (not the gullet), and it is impossible that this could have been done without Surgical aid. The case requires further corroboration before it can be accepted as authentic.

The case of resuscitation after hanging that has excited more general attention than any other is unquestionably that of Anne Greene, of Oxford, which occurred in the middle of the seventeenth century. A full account of this case may be found in a rare pamphlet in the British Museum Library, entitled "A Wonder of Wonders: being a faithful narrative of one Anne Greene, servant to Sir Thomas Reed, in Oxfordshire, who, being got with child by a gentleman, was hanged, and came to life again; the whole witnessed by Dr. Petty (the Physician who cured her), and licensed according to order," published at Oxford, January 13, 1651. It is likewise noticed in Dr. Plot's "Natural History of Oxfordshire," p. 197; Derham's "Physico-Theology," third edition, 1714, p. 157; in vol. lxx. of the *Gentleman's Magazine;* and in Charles Knight's "Book of Table-talk," 1836, vol. i., pp. 236-241. Protesting her innocence of the murder of her child, for which she had been condemned, she entreated her "dear cousin"—a young man standing at the foot of the ladder—that he would use all possible means to despatch her out of her pain. "Accordingly," says the writer of the pamphlet, "upon being turned off the ladder, the kinsman took hold of her feet, and hung with all the weight and force of his body. Moreover, a soldier standing by gave her four or five blows on the breast with the butt-end of his musket, and, having hung for half an hour, she was cut down, being quite dead, and put into the chirurgeon's chest, who had begged her for an anatomy." Dr. Derham tells the story somewhat differently. He states that "after she was in her coffin, being observed to breathe, a lusty fellow stamped with all his force on her breast and stomach, to put her out of her pain. But by the assistance of Dr. Peity [Petty], Dr. Willis, Dr. Bathurst, and Dr. Clark, she was again brought to life."—("Physico-Theology," thirteenth edition, p. 156.) The sheriff tried to insist on rehanging her, but the Puritan troops then stationed in Oxford saw "the special finger of God" in her escape, and protected her from further violence. Her innocence was universally recognised, and no special pardon seems to have been deemed necessary.

Dr. Plot, in his "Natural History of Staffordshire," p. 292, again notices this case, and suggests that probably she could not be hanged so as to cause death, in consequence of ossification of the upper part of her windpipe, which was so rigid that it could not be compressed by the weight of her body; and he quotes the case of a Swiss, who, according to the Rev. Mr. Obadiah Walker, Master of University College, "was attempted to be hanged no less than thirteen times, yet lived, notwithstanding, by the benefit of his windpipe, that, after his death, was found to have been turned into a bone."

The last-named writer gives two other cases of resuscitation —those, namely, of the servant of Mrs. Cope, of Oxford, who was hanged in that city in 1658, and kept suspended an unusually long time, and yet revived; and of Margery Mansole, of Arley, regarding whom he gives no particulars.

In the year 1696 an ingenious attempt to escape the last penalty of the law was made by Richard Johnson, who was hanged, on October 3, at Shrewsbury. He had succeeded in obtaining a promise that his body should be laid in the coffin without being undressed. After hanging for half an hour, he showed such distinct signs of life, that the hangman proceeded to see what was wrong with him; and on examination it was found that the criminal had wreathed cords around and under his body, connected with a pair of hooks at his neck, by which he was supported so as to evade the pressure of the noose, the whole apparatus being concealed under a flowing periwig and between two shirts. He was at once taken down, and, the ropes and hooks being removed, he was effectually hanged.(d)

The next case that we shall notice occurred in Cork, in the year 1766, and, if the concluding sentence of the paragraph be true, hanging in Ireland, whatever Dr. Haughton may say to the contrary, must have been a form of punishment that gave its victims a fair chance for their lives. "Patrick Redmond, tailor, was executed at Gallows-green, on September 10, 1766, for robbing the dwelling-house of John Griffin. Glover, the player, took an active part in this man's recovery. After he had hung nine minutes, and was cut down, he was perfectly restored to life by constant friction and fumigation. He afterwards made his escape from the room in which his friends had concealed him, got drunk, went to the playhouse-door (on the night of his execution) to return to Glover thanks, and put the whole audience in terror and consternation. He was the third tailor that made his escape from the gallows [at Cork] since the year 1755."—The *Cork Remembrancer*, by Edwards, p. 214. We ought, perhaps, to notice that the story of Patrick Redmond is told in a different and more probable way in the *Gentleman's Magazine* for February, 1767. It is there stated that he hung for upwards of twenty-eight minutes, and after five or six hours was restored to life by means of an incision being made in his windpipe. "The poor fellow," says the sympathising editor, "has since received his pardon, and a genteel collection has been made for him." Happy were the highwaymen and burglars of those Arcadian days!

There is something essentially Irish in the details of this brief narrative, in the zeal with which Glover, the player, set to work to frustrate the sentence of the law on a common burglar, in whom he does not appear to have any personal interest; in Redmond at once proceeding to get drunk, with the view, as we may suppose, of showing how little moral benefit he had derived from his punishment; and then, under the genial influence of whisky, proceeding to thank his benefactor, utterly regardless of the personal risk he was running by thus publicly showing himself; and, lastly, in the astounding effect which his presence excited in the terrified audience.

(d) The *Gentleman's Magazine*, April, 1853.

Finally, if our readers require a still more remarkable illustration of how capital punishment was conducted only a century ago in Ireland, they will find in Sir Jonah Barrington's "Personal Sketches of his Own Times" the history of Mr. Lanagan, who, after being hanged and quartered at Dublin, entered the monastery of La Trappe.

An improved system of hanging, such as one of the forms of long-drop advocated by Dr. Haughton, or that of Dr. Barker, of Melbourne, which we shall shortly describe, would not only render resuscitation impossible (which, after all, is a matter of little practical importance, in consequence of its extreme rarity), but would effectually prevent the occurrence of those convulsions too often presented on the English scaffold, which are exceedingly painful to witness, even if they are not indications of the persistent sensibility and consciousness of the criminal.(e) It would, moreover, have the additional advantage of being applicable to cases in which, for various reasons, the present English system fails. We refer to such cases as that of the Swiss (already alluded to) who was unsuccessfully hanged thirteen times; that of a young man who, not a great many years ago, was allowed, through the carelessness or ignorance of the gaol Surgeon, to be hanged, although he had an opening in his windpipe, consequent on the operation of tracheotomy having been some years previously performed on him; and that of Rutherford, who only a few months ago escaped the gallows simply because, in consequence of a hard cicatrix in his neck, resulting from a severe burn, the Surgeon of the gaol felt that it would be almost impossible to hang him successfully by the ordinary method.

In hanging, as practised in this country, death, as Dr. A. S. Taylor tells us, "commonly results from asphyxia (apnœa), but sometimes from apoplexy caused by pressure on the jugular vein, being preceded by convulsions, often lasting for many minutes, but in all probability not accompanied by more than momentary pain. Occasionally there is found displacement or fracture of the first or second of the vertebræ, with compression of the spinal marrow. This cause of death is only likely to be observed in corpulent or heavy persons, when a long fall is allowed by the cord, and is seldom met with in judicial executions."

Dr. Taylor's views(f) regarding the ordinary cause of death by hanging as practised in Great Britain are completely borne out by the evidence of Dr. Barker, the Medical Officer to the Melbourne Gaol. It is needless to say that executions are far more common at the antipodes than at home. Hearing that this gentleman had initiated a new and comparatively painless modification of the ordinary procedure, we ventured to apply to him for further information. In reply to our inquiries, he tells us that since he first saw an execution, thirty-seven years ago, he has striven to make the punishment as merciful as possible. He made no less than fifty post-mortem examinations of criminals hanged according to the old orthodox method, and in not a single case was there dislocation or fracture of the vertebræ, death being caused by congestion of the brain, with strangulation. We must allow him to describe in his own words the nature of the system which he has introduced, and the manner in which he discovered it:—

"It was by chance that I was able to suggest the present method, merely through the bungling of the hangman allowing the knot to slip and come on the spine. I have the knot put about two inches from the spine, so that when it is tightened by the weight of the body the knot comes on the vertebræ; by the fall the body has an impetus forwards, the resistance being at the beam to which the rope is fastened; the knot acts as a fulcrum to push the head forwards. By this arrangement, in all cases where the knot has been so situated, I have found there was a dislocation between the second and third cervical vertebræ, with fracture of the third, and pressure on the spinal cord. I have always found laceration of the sterno-cleido-mastoid muscles, the muscles attached to the larynx, laceration of the larynx, and generally fracture of the hyoid bone, death in this case resulting from the injury to the spinal cord. Death is so sudden and complete, that in one case a lock of hair which a man held in his hand at the time of the drop was found in his hand when he was cut down at the end of the hour; in two or three other cases pocket-handkerchiefs have been similarly retained and found in the criminals' hands when taken down. I have seen no movement of the upper extremities, but occasionally a little convulsive or perhaps reflex action of the lower. I have often thought of sending home an account of my method to the Humane Society, but have always put it off, expecting to have more leisure, but if you would publish it, my work would be accomplished without further delay."

It is full time that our present barbarous and unnecessarily cruel system of execution should be modified; and we have described three modes by which we may secure the instantaneous death of the criminal—namely, the Irish long-drop, the American system (which also requires a long-drop), and Dr. Barker's method, which requires a comparatively short drop of three or four feet. Under either of the long-drop systems a criminal weighing only eight stone would require, according to Haughton's formula, a fall of no less than twenty feet, unless he were weighted; and we can readily conceive that this jockey-like process of bringing him up to a definite weight would be repugnant to the feelings of the public at large, and might be strongly objected to by the unfortunate person whose interests were specially concerned. As a drop of twenty feet is not always conveniently attainable in a gaol, Dr. Barker's system seems the most generally applicable. This, however, is a point on which we do not venture to give a decided opinion; and we would suggest that a scientific committee, consisting of a few anatomists and physiologists, in whose opinion the public would have confidence, should at once be appointed by the Crown, to decide upon the respective merits of the different plans.

THE ORIGIN AND THE FUTURE OF MANKIND IN A BUDDHISTIC POINT OF VIEW.

At the present time, when the antiquity of man is a subject that is exciting so much attention in both scientific and theological circles, it may not be uninteresting to lay before our readers the doctrines maintained in the *Bauddha* scriptures. These sacred writings are divided into the *Puranas* or Exoteric Works, of which Mr. Hodgson gives the titles of seventy, and the *Tantras* or Esoteric Works, of which he enumerates seventy-four. From his study of this elaborate theological library he has compiled a sort of catechism of the Buddhist creed. For the answer to the first question—How and when was the world created?—we must refer our readers to No. 9 of the *Phœnix*, a very ably-conducted journal devoted to the literature, geography, ethnology, religious and natural history of China, Japan, and Eastern Asia generally. To the second question—What was the origin of mankind?—we append the answer:—

"It is written in the narrative portion of our *Tantras*, that originally the earth was uninhabited. In those times the inhabitants of *Abhâswarâ Bhuvarra* (which is one of the Bhuvarras of Brahma) used frequently to visit the earth, and thence speedily to return to *Abhâswarâ*. It happened, at length, that when a few of these beings—who, though half males and half females, had never yet, from the purity of their minds, conceived the sexual desire, or even noticed their distinction of sex—came, as usual, to the earth, Adi-Buddha suddenly created in them so violent a longing to eat, that they ate some of the earth, which had the taste of almonds, and by eating it they lost their power of flying back to their *Bhuvarra*, and so they remained on the earth. They were now constrained to eat the fruits of the earth for sustenance; and from eating these fruits they conceived the sexual desire, and began to associate together; and from that time and in that manner the origin of mankind commenced from the union of the sexes.

"When the beings above mentioned came last from *Abhâswarâ*, Maha Samvat was their leader, and he was the first king of the whole earth.

"In another *Tantra* it is written that Adi-Buddha is the immediate creator of all things in heaven and earth.

"With respect to time, we conceive the Satya-yuga to be the beginning of time, and the Kali-yuga the end of it; and the duration of the four *yugas*, the particulars of which are found in the Brahminical scriptures, have no place in ours, in which it is merely written that these *are* four *yugas*, and that in the first, men lived 80,000 years; in the second, 10,000; in the third, 1000; and the fourth is divided into four periods, in the first of which men will live 100 years; in the second, fifty; in the third, twenty-five; and in the fourth, when the close of the Kali-yuga is approaching, seven years only; and their stature will be only the height of the thumb; and then all things will be destroyed, and Adi-Buddha alone remain; and this period of four *yugas* is a *Pralaya*. Adi-Buddha will then again create the four *yugas*, and all things else to live in their duration, which, when completed, all things will be again destroyed, and thus there will be seventy-one *pralayas* or completions of the four *yugas*, when *Maha Pralaya* will arrive. How many revolutions of the four *yugas*—*i.e.*, how many *pralayas*—have now passed, and how many remain to revolve, is nowhere written."

(e) In the case of Walter Miller, who was lately hanged for the Chelsea murder, the drop was only two and a half feet, and the result was that "there was more muscular action and writhing than usual."

(f) It should be stated that Dr. Taylor published these opinions before the appearance of Professor Haughton's memoir, and obviously in ignorance of the long-drop system, which seems to have been adopted for some time in Ireland.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending April 29.	May 6.	May 13.	May 20.	May 27.	June 3.	June 3. Sent to Hospital.
WEST—							
Chelsea	9	4	16	7	12	?	—
St. George, Hanover-sq. .	23	14	11	9	15	17	13
St. James, Westminster .	2	8	8	4	3	8	6
Paddington	12	20	24	15	?	?	—
NORTH—							
St. Pancras	89*	104	101	117	116	113	?
Islington	59	64	59	42	50	36	23
Hackney	30	?	18	28	17	?	—
CENTRAL—							
City of London . .	13	5	13	11	8	17	5
St. Giles-in-the-Fields .	14	5	5	?	?	?	—
Holborn	9	5	13	10	5	8	6
St. Luke's	25	12	13	17	12	13	8
EAST—							
Whitechapel . . .	23	7	4	23	13	?	—
Poplar	?	?	?	11	14	?	—
SOUTH—							
St. Mary, Newington .	47	28	28	29	30	35	33
St. Olave, Southwark .	5	3	2	2	5	5	2
St. George-the-Martyr, Southwark . . .	26	?	28	?	?	?	—
Lambeth	32	20	?	26	24	22	29
Clapham	32	29	13	16	6	14	10
Wandsworth	8	4	4	1	5	6	4
Streatham	?	?	?	?	2	?	—
Lewisham	?	?	?	?	?	6	3
Camberwell	?	?	?	45	?	?	—
Greenwich	—	?	?	12	?	2	?
Plumstead	3	?	6	6	5	4	1

* Return imperfect.

DEATH FROM CHLORAL.—The New York *Medical Record*, May 15, reports a case of this, which, as the dose is not given, is of no further interest to our readers than on account of the remarkable verdict, of which it speaks, however, in strong approval. It seems the person sent to the chemist who had formerly supplied it a bottle labelled "hydrate chloral" for a new supply, which was furnished. Of this he took too large a dose, and died, the chloral, in fact, having been originally ordered for another person. The jury found that the death had been caused unintentionally, and added, "we strongly condemn the practice of druggists dispensing dangerous medicine without an order from a Physician for each prescription of its renewal."

FOREIGN CORRESPONDENCE.

HOLLAND.

(*From our own Correspondent.*)

ROTTERDAM, June 6.

SMALL-POX IN HOLLAND.

THE following are the official monthly returns for April:—

Towns.	Population Jan. 1, 1871.	Deaths from all causes, with still-born, in 10,000 inhabitants.	Deaths from small-pox.	Deaths from scarlet fever.	Deaths from measles.	Deaths from angina diphtheritica.
Amsterdam .	281805	23·1	297	1	15	1
Rotterdam .	123097	63·6	402	2	—	—
The Hague .	93083	34·1	138	—	1	5
Utrecht . .	60587	52·9	117	1	—	2

The small-pox epidemic is diminishing in Rotterdam, The Hague, and Utrecht, but is increasing in Amsterdam.

PROVINCIAL CORRESPONDENCE.

IRELAND.

DUBLIN, June 6.

THE annual election of officers for the ensuing year took place at the Royal College of Surgeons, Ireland, on Monday, the 5th inst., when the following were chosen:—*President:* James H. Wharton. *Vice-President:* Frederick Kirkpatrick. *Secretary:* William Colles. *Council:* William Hargrave, Robert Adams, William Colles, Hans Irvine, Rawdon Macnamara, George H. Porter, Hamilton Labatt, Benjamin M'Dowell, Edward Ledwich, William Jameson, Alexander Carte, George W. Hatchell, Albert J. Walsh, William A. Elliott, Archibald H. Jacob, John Morgan, Edward Hamilton, John Denham, and Robert M'Donnell. There was a sharp contest for the Vice-Chair, and the attendance of Fellows voting was very large.

The twenty-ninth annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held on the afternoon of the same day, in the Library of the College of Surgeons, Stephen's-green. The chair was taken by Albert J. Walsh, Esq., ex-President of the College. The meeting was numerously attended by both town and country members.

From statements made by the Chairman, it would appear that the Society is in a prosperous condition, the capital already invested amounting to upwards of £14,000, the annual income increasing, and during the past year £150 having been received from auxiliary branches recently established in Bengal, Madras, and Bombay.

A very important letter was read from "Nemo," proposing to give to the Society a donation of £1000, provided that twenty Medical men residing in Dublin will give during the next six months £100 each, or forty will give £50 each.

Dr. McClintock, the Honorary Secretary, then read the report, from which it appeared that the number of applicants for relief in the year amounted to ninety-one. Of these twelve were new, fifteen were Medical men, seventy-two were widows, and four were orphans. Nine of the applications were disallowed, and eighty-two were approved, making the total amount of grants for the year £971.

On the morning of the 5th, Dr. Jameson, Chairman of the Irish Medical Association, entertained the members at breakfast at the Royal Arcade Hotel.

Later in the day, the eighteenth annual meeting of the Association was held at the College of Surgeons. The chair was occupied by the President, Dr. Jameson. The country members were largely represented on the occasion.

After an able address from the Chairman, the report was read by Dr. E. J. Quinan, Honorary Secretary, in which allusion was made to the efforts of the Council of the Association in connexion with the College of Surgeons to have the "Medical Acts Amendment Bill" amended or opposed. It was stated that steps had been taken, which, it was hoped, would prove successful, to establish a Poor-law and Dispensary Medical Officers' Widows' Fund. Reference was also made to the Council's action in the case of an alleged breach of the Medical Act, committed by a gentleman practising in Dublin, visiting and prescribing for patients, receiving fees, and giving Medical certificates, without being possessed of any legal qualification whatever. The matter is now in the hands of the Branch Medical Council for Ireland.

A resolution of the Council to the following effect was quoted—namely, "That the Medical officers of each union in Ireland be requested to form themselves into union branch associations, and that each association so formed be affiliated to the Irish Medical Association on payment of one guinea on January 1 in each year."

The report concluded with an expression of deep regret at the sudden death of the late Dr. Charles Armstrong, so long the able and efficient secretary of the Cork Protective Society.

The following resolutions were subsequently moved and adopted:—

"1. That, should the Government re-introduce the Rating and Local Government Bill, a clause providing a Board for the Control of Public Health in each of the divisions of the United Kingdom, instead of one central board in London, would be just and desirable.

"2. That, in the opinion of this meeting, the variable, and in most cases the wholly inadequate amount of remuneration given by the Government to Medical men, when called upon to give skilled Professional evidence, especially in the minor courts of law, is unjust and derogatory to the Profession, and that the Council of the College should be requested to co-operate with the Council of this Association with the view of providing some remedy for this crying evil.

"3. That it was unjust that the Medical officers of this country, where the Vaccination Act had been so successfully carried out, should receive only 1s. per successful case of vaccination, while in England and Scotland vaccination was paid for at the rate of 1s. 6d. and 2s. 6d. per case."

After which, a vote of thanks to the Chairman having been passed, the meeting separated.

The first annual meeting of the Irish Poor-law Medical Officers' Association was held on the afternoon of Monday, the 5th inst., in the small concert-room of the Rotunda, Dublin. Dr. Hanrahan, of the Queen's County, presided. After the reading of the report, by Dr. D. T. Maunsell, Hon. Sec., a vote of thanks was passed to Sir Dominic Corrigan, Bart., M.P., for his eminent services in connexion with the Lunacy Regulation Bill. The following resolutions were also adopted:—"1. That it would be for the public good, as well as in accordance with the recommendations of the Royal Commission, and but just to the Irish Poor-law Medical Service, that the officers of that Service should be appointed sanitary officers, as is the law passed in 1866, in times of the prevalence of epidemic disease, and that such officers should be remunerated accordingly." "2. That we are of opinion that the whole of the salaries of Poor-law Medical Officers should be paid by the State, as disease is not a local, but a national calamity." The usual votes of thanks were then passed, and the proceedings terminated.

GENERAL CORRESPONDENCE.

SMALL-POX IN UTERO.

Letter from Mr. W. Sedgwick.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the report of a "Supposed Case of Small-pox in Utero," published in your journal of last week, a question of much interest at the present time has been asked respecting the communicability of the disease to the fœtus in utero without the mother showing any sign of it. The fact that such cases can occur has been long known, and special attention was directed to the subject by Jenner himself, in a paper published in the first volume of the Medico-Chirurgical *Transactions*—"Two Cases of Small-pox Infection communicated to the Fœtus in Utero under peculiar circumstances; with additional Remarks." In one of these cases the woman became the medium for transmitting the disease to her fœtus without herself suffering from it. In the other case, a woman exposed to the contagion of small-pox, who had been vaccinated five weeks before the conclusion of her pregnancy, was delivered of a female child, having at the time of its birth many eruptions (of small-pox) on it; these eruptions subsequently "increased to some thousands, perfectly distinct, and their character well-marked." In addition to these cases, Jenner cited one observed by Dr. Mead, in which "a certain woman, who had formerly had the small-pox, and was now near her reckoning, attended her husband in the distemper. She went her full time, and was delivered of a dead child. It may be needless to observe that she did not catch it on this occasion; but the dead body of the infant was a horrid sight, being covered all over with the pustules—a remarkable sign that it died of the disease before it came into the world." Amongst others who have published similar evidence on this subject is the late Mr. William Forbes (*Edinburgh Medical and Surgical Journal*, 1807, vol. iii., p. 308), who observed a case at Camberwell, in which a woman, who had in her infancy the small-pox severely, the marks of which were very conspicuous, nursed during the latter part of her fifth pregnancy one of her children who had confluent small-pox. Three days after birth, this last child had an eruption which proved to be small-pox; showing, as Mr. Forbes justly remarked, that "the fœtus in utero is liable to the small-pox from the influence of surrounding infection, although the mother have not the disease." The late Dr. Elliotson, in a clinical lecture delivered at St. Thomas's Hospital, December 16, 1831, referred to such communication of disease to the fœtus in utero, by a mother who was unaffected by the morbid poison, as "a certain fact"; and there is, moreover, trustworthy evidence in favour of other contagious diseases, such as scarlatina, being in like manner conveyed to a fœtus by a mother who has exhibited no appearance of the disease. It is probable that in consequence of the widespread influence of vaccination, such cases are now of more unfrequent occurrence than they were in Jenner's time; which is quite consistent with the fact that the immunity conferred by a previous attack of small-pox or by vaccination is limited, as a rule, to the mother, and is not inherited (except to a very limited extent) by her offspring. For it is only during infancy that there is usually an exemption from the disease (apart from its communication to the fœtus in utero through the medium of its mother), which suggests the idea that infants under the age of one year may, owing to the inheritance of an acquired peculiarity from the mother, be able to resist the morbid influence during this early period of their independent existence, and that the subsequent need of revaccination later in life is due to the impression produced by early vaccination having been to a great extent effaced during the ever-recurring renewal of the system. I am, &c., William Sedgwick.

12, Park-place, Upper Baker-street, June 6.

Letter from Dr. George F. Elliott.

[To the Editor of the Medical Times and Gazette.]

Sir,—With reference to the "Supposed Case of Small-pox in Utero," mentioned in the last number of your paper, it may be interesting to call to mind the celebrated Dr. Mead's case. We have there what seems to be reliable evidence that the fœtus may contract small-pox during intra-uterine life, notwithstanding the mother's protection from the disease. In the present case it would be very desirable to know if the mother had been well vaccinated. Failing this, it seems scarcely possible to conceive that she could have escaped small-pox; but supposing her to have been well vaccinated, it is probable, I think, that this may have sufficed for her protection, just as in Dr. Mead's case the mother owed her immunity to a previous attack of small-pox. If the explanation I have suggested be correct, a stronger proof could scarcely be found—if any were needed—of the great protective power of vaccination.

Hull, June 5. I am, &c., Geo. F. Elliott, M.D.

MARRIAGE AND PHTHISIS.

Letter from Dr. Francis R. Hogg.

[To the Editor of the Medical Times and Gazette.]

Sir,—Turning away from sickening details of slaughter and carnage, how refreshing it is in the records of the late war to read of the homely, domestic character of the Prussians—the thoughts of these grim warriors ever reverting to the wife and children at the far distant fireside, and the family photographs constantly consulted and caressed; but of 1300 English soldiers' wives, seventy-five women appear to have married twice (in four instances before reaching the age of 20), and four have married three times. Unfortunately, of the total number, 247 had phthisical histories, and in thirteen instances both parents were consumptive, the husbands being mostly healthy; no extraordinary hardships had been undergone. The following is the Medical history, so far, of these thirteen, told as briefly as possible:—

(A) Somerset.—Commenced to menstruate at 13; married at

24; suffered from typhus; and in a bad labour gave birth to a weakly child.

(B) Hampshire.—Menstruated at 17; married at 18; suffered severely from scarlet-fever.

(C) Hampshire.—Menstruated at 12; married at 19; children suffer from convulsions.

(D) Hampshire.—Menstruated at 19; married at 23; suffers from hæmoptysis and bronchitis; her children from convulsions.

(E) Middlesex.—A fifteenth child; menstruated at 18; married at 24; had one still-born child only.

(F) Middlesex.—Menstruated at 10; married at 20; has suffered from typhus and variola, from hæmorrhage in last week of seven months' pregnancy, and from prolapsus uteri; menstruates during lactation; her children suffer from convulsions.

(G) Scotland.—Menstruated at 17; married at 25 a phthisical husband, and at 44 a healthy one; had one child only, delivered by forceps; ceased to menstruate at 48.

(H) Scotland.—Menstruated at 14; married at 17; has suffered from menorrhagia, typhus, and scarlet fever, from hæmorrhage during pregnancy, and milk fever after.

(I) Cork.—Menstruated at 15; married at 22; had scarlet fever badly; bore one child, who died of convulsions.

(J) Cork.—Menstruated at 13; married at 28; had a severe attack of variola and phlegmasia dolens.

(K) Norfolk.—Menstruated at 11; married at 24; no children; one abortion; health ruined by measles, hæmoptysis, and typhus fever.

(L) Cheshire.—Menstruated at 19; married at 20; again at 30; aborted twice; bore one child footling, who survived five days; suffers from bronchitis and hepatitis.

(M) Wales.—Menstruated at 12; had variola at 13; married at 21; and had two children. In her second pregnancy she was frightened by a deaf and dumb boy; her child was born deaf and dumb; she kept at the breast three and a half years, and has had no children since; during lactation she menstruated regularly.

Most of these women were very good-looking; but, with all deference to Mr. Mill, the best wives are those whose thoughts oscillate between the co-operative stores, the sewing-machine, and Robb's biscuits. I am, &c.,

Woolwich, May 12. Francis R. Hogg, M.D.

ARSENICAL WALL-PAPERS.

Letter from Dr. David B. Dalzell.

[To the Editor of the Medical Times and Gazette.]

Sir,—Several years ago, public attention was called to the danger of green paperhangings. For a time, people took fright, and arsenical wall-papers became unfashionable. Within the last few months I have met with so many cases of injury to health from this cause—and in some cases very serious injury—that I feel it incumbent on me to call the attention of the Medical Profession to this unsuspected—but, as I believe, by no means uncommon—source of disease.

If I may trespass so far on your columns, I will give one case very briefly as an illustration. I had lately a case of scarlet-fever, which I treated in the method so successfully employed by Dr. Budd, of Bristol—isolating the patient and employing general inunction with camphorated oil, followed by hot soaping and tepid bath next morning. Neither the husband nor child of the lady took the fever.

When the disease was declared, the husband went into a small bedroom. The very first night, while sleeping in it, he felt much discomfort, his sleep being unrefreshing and disturbed by frightful dreams, and he rose in the morning languid and weak, with much nausea and dull headache. Towards evening the symptoms abated considerably. The second night, and day following, there was a repetition of the same symptoms—with the morning exacerbation and evening abatement. He now changed his room, and from that hour his symptoms steadily and gradually disappeared. A servant occupied the "haunted chamber," and immediately became affected in the same way as her master; and on mentioning this to a fellow-servant, the latter at once replied, "Oh! you need'nt try to sleep in that room; I never could take any breakfast when I slept there!" She was not in the secret, but evidently believed there was something not "canny" about the room.

On being allowed to inspect the apartment, I very speedily gave judgment as to the cause of the mysterious visitation on the sleepers therein. "The green of the period" was palpably visible, although by no means abundant; and on testing the paper the large quantity of arsenic evidently present fully justified the judgment I had given. I must not enlarge, or I could fill a few of your columns with histories of cases quite as clear and to the point as that which I have now briefly given. Can no "movement" be got up to render the manufacture of these papers charged with poison an illegal thing?

I am, &c., David B. Dalzell, M.D.

Malvern, June 7.

NEW MIDWIFERY GLOVES.

Letter from Mr. James Robert Liston.

[To the Editor of the Medical Times and Gazette.]

Sir,—It was my intention last week to have forwarded you a specimen portion of a newly-invented glove; but on Saturday last I was thrown from my horse, and have only now sufficiently recovered to send it you with this note. The want of such a contrivance, I think, has long been felt by many in the Medical Profession, and on numerous occasions I should have found such a thing invaluable. The great difficulty in making this protective covering for the hand was to construct it in such a manner as to preserve to that portion of the hand used in delicate manipulations the extreme sense of touch oftentimes so necessary in Medical and Surgical operations. This difficulty, you will see, is removed, and, in addition, the glove forms an air and waterproof covering, allowing perfect freedom of motion, and may be used in midwifery practice, skin diseases, diseases of women, and post-mortem operations. The combined portion, if moistened with water when on the finger, will leave the sense of touch perfectly unimpaired, and the smallest uneven surface may be appreciated as with the uncovered finger. I need scarcely draw your attention to the numerous risks that Practitioners run in the discharge of daily duties that require a protective covering for the hand. The whole of the glove is similar and as perfect as the portion I send you, and in use only requires to be moistened with water; oil or fatty matters are injurious to the substance of the glove, and in any case may be dispensed with.

I am, &c., James Robert Liston, M.R.C.S.E.

Kirkby Stephen, Westmoreland, May 20.

⁂ The glove is made of indiarubber, something like the ordinary indiarubber fingerstalls, except over the pulpy portion of the finger-point, where a piece of exceedingly thin skin is interposed instead of the rubber.

SIC VOS NON VOBIS.

Letter from Dr. R. H. Bakewell.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send you by book-post a copy of the Parliamentary paper just published, containing my reports on Dr. Beauperthuy's treatment. I also beg to call your attention to another Blue-book in which some of my work appears, and, as I venture to think, without a due acknowledgment of its origin. In the report of the Army Medical Department for 1869, just out, there is a report on yellow fever at Trinidad, illustrated by two very elaborate meteorological diagrams, which were calculated from the rough notes at the observatory, tabulated and drawn by me, and lent by me to Staff Surgeon Johnstone, then at Trinidad. When I lent these diagrams, which I had made with the object of illustrating my own report on yellow fever, I concluded that, as a matter of course, my name, which was in the usual way signed to each one, would be printed with them. Instead of this I find them in the "Army Medical Report," inserted in Dr. Johnstone's paper, without any name attached to them. On searching through Dr. Johnstone's report, just at the close I find the following observation:—"For the use of both these diagrams I am indebted to the courtesy of Dr. R. H. Bakewell, the officer of public health of this colony." As this scanty acknowledgment does not state that I am the author of the diagrams, and as I never before saw such diagrams printed without the name of the author affixed, I shall feel obliged if you will insert this note.

Dr. Johnstone gave me some numerical returns of cases in the military Hospital. When my report is published he will find that I have acknowledged his courtesy in a very different manner. I am, &c.,

R. H. Bakewell, M.D.,
Medical Officer of Health for the Colony of
Trinidad (on leave).

Waverley-villas, Hendon, June 7.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 23.

MR. CURLING, F.R.C.S., President, in the Chair.

A PAPER, by Dr. CHARLES ELAM, was read on

PARTIAL ACUTE IDIOPATHIC CEREBRITIS,

This paper was intended as a continuation of one read during the last session of the Society on General Acute Cerebritis, showing some remarkable points of contrast between the two affections, which are so closely allied pathologically. and yet differ so completely in a clinical aspect, the most noteworthy feature of difference being the far greater severity of the symptoms in the local and limited form of the disease than those of the universal inflammation. The author referred briefly to the description given of general cerebritis, and showed that, although the anatomical characters of the cases were in some respects different, yet they were all true cases of inflammation of brain-substance, uncomplicated with meningitis, the differences arising from the varying periods at which death occurred. The annexed table indicates the chief differences between the general and the partial form of cerebritis, clinically considered. Among special symptoms, it was noticed that in general cerebritis the pulse was unaffected at the commencement; whilst in partial cerebritis it began with extreme depression, followed by great rapidity and subsequent irregularity. The tongue is much less affected in the general than in the partial form, and the organic complications are much more aggravated and numerous in the latter. The most striking feature in the history of partial cerebritis is the occurrence of remissions in the course of the disease, often so marked as to simulate restoration to health. This was illustrated by some cases both of constitutional origin and arising from external violence. In two of these, where the patients had been for some time apparently moribund, there was so entire a remission of all the symptoms that for some hours nothing could be detected indicative of any disease whatever. One was a case of fracture of the skull, where there was a fissure extending from the middle of the left parietal bone down to the foramen magnum. This kind of remission, combined with the previous history, was shown to be characteristic of this disease, and to distinguish it from all others. The diagnosis of this disease is not difficult. It differs from the various forms of "softening" clinically, as thus: 1. From the apoplectic form, in the absence of aphasia and paralysis, as well as other general features of progress. 2. From the convulsive form, in the absence of epileptiform attacks at the beginning, and the greater constancy and duration of the convulsions when established later on in the affection. In this disease, also, convulsion lasts to the end; whilst in softening death is generally "tranquil and peaceful." 3. From the delirious form, by the mode of invasion, which is never by delirium; and by the less marked character of this symptom throughout. The pathological features also differ materially from white softening; the colour alone is a sufficient distinction from the "red" and "yellow" forms. Besides many other important differences, the section is distinctive, being depressed in partial cerebritis; very often elevated, as though swollen, in softening. The general aspect of the disease makes it most liable to be confounded with typhus. From this it is distinguished by the mode of invasion, and the marked preponderance of active brain symptoms. The etiology of this disease is closely allied to constitutional cachexiæ, chiefly of a tubercular nature, and to hereditary predisposition. The prognosis is very unfavourable; but there are considerations, both of a clinical and pathological nature, that lead to the conclusion that it is not always fatal. In treatment, although little can be done of a curative nature, there is a fact which is occasionally of the highest importance to remember. For business or family reasons it is often especially desirable to obtain a few hours of clear intelligence. This occurs in the remissions already referred to; and the practical point in question is this—that this remission may be often insured in the early and middle stages of the disease by the exhibition of a smart purgative, as a drop of croton oil, with or without a few grains of calomel. It has little influence on the general progress or ultimate issue of the disease; but the effect for the time is frequently marked and unquestionable.

Tabular View of the Contrasts between General and Partial Acute Idiopathic Cerebritis.

GENERAL CEREBRITIS.	PARTIAL CEREBRITIS.
1. *Complications.*	
Described as inflammation of the brain-substance alone, the meninges being unaffected.	Never confined to the brain-substance alone. Meningitis, local or general, always present.
2. *Extent.*	
Extending through the whole substance of the encephalon, except the meninges.	Partial; generally a small patch, limited to a portion of one side; usually superficial.
3. *Period of Life.*	
Occurs usually between the ages of 8 and 30, never after 35.	Rarely, if ever, occurs before the age of 40.
4. *Mode of Invasion.*	
By vomiting.	By fainting, or a very slight apoplectiform seizure.
5. *Termination.*	
Always in death.	Very fatal, but perhaps not so uniformly so as the "general" form.
6. *General Symptoms: Duration and Progress.*	
Symptoms comparatively mild, and wanting in general significance. Progress uniform and uninterrupted from commencement to death, which occurs between the second and twelfth day.	Symptoms most varied and severe. Progress never uniform, but broken by remissions, sometimes so complete as to simulate perfect restoration to health. Duration from three to six weeks.
7. *Prodromata.*	
None.	Always present; sometimes of a somatic, sometimes of a psychical order, or both.
8. *Paralysis.*	
Generally none.	Some marked weakness, but variable and dubious.
9. *Convulsions.*	
None, until very near the close.	Always present at some, and generally at an early, period of the disease; persistent to the end.
10. *Coma.*	
Only occurring at the close of life.	Occurs early, sometimes a the earliest symptom; depart and recurs irregularly.
11. *Delirium.*	
Mild and inconstant.	More irritable and violent in character; often muttering; not constant.

Dr. BROADBENT said the Profession would be greatly indebted to Dr. Elam if he succeeded in educing order out of the chaos of acute cerebral affections; but although he had at the Fever Hospital the opportunity of seeing many cases, which he watched carefully, he failed to recognise in his experience the description given as that of local acute idiopathic cerebritis. He was the more astonished at this as the features of the disease were so definite and striking, and such as could not fail to make an impression on any observer. He asked Dr. Elam how many cases of the kind he had seen and verified by post-mortem examination. He had met with similar morbid appearances only in pyæmic affections of the brain. In the case described at length he noted that, in addition to the local lesion, there was evidence of extensive and advanced meningitis, to which he should have attached more importance than to the limited affection of brain-substance, since this condition was often found to give rise to all the symptoms of acute cerebral mischief, and death. He noted, also, that aphasia and paralysis were given as effects attending hæmorrhage, embolism, etc., characterising these lesions and distinguishing them from local acute idiopthic cerebritis, whereas these symptoms were indicative, not of the nature, but of the seat of the mischief, and would be produced by local cerebritis, as well as by hæmorrhage, if it involved certain portions of the hemisphere.

Dr. SUTTON asked Dr. Elam if he had made post-mortem examinations in all his cases of supposed idiopathic cerebritis, and if he examined the internal ears of the patients mentioned in his paper. Dr. Sutton remarked that pathologists generally considered that cerebritis was dependent on some injury to the head, or to disease of the cranial bones, to disease of the ear, or to some pre-existing disease situated either in the brain or in other parts of the body, and that it was not an idiopathic affection.

Dr. Elam replied that he claimed no consideration for these cases, except such as arose from the fact that they were drawn from the life, and from death. Cases of a similar nature, about twelve or upwards, had been noted, in all of which remarkable intermissions had been observed; but in none to quite the same extent. In relating the cases, the absolute phenomena had been stated, and afterwards contrasted with those that were found described in our systematic treatises on affections of the brain. Hence arose the diagnostic marks that had been quoted as distinguishing between the affection under consideration and the various forms of softening of the cerebral substance heretofore described. In reply to another question, Dr. Elam stated that he had not been in the habit of investigating the internal ear in these cases.

A case of Bony Anchylosis of the Knee-joint treated by subcutaneous section of the bone, by Louis Stromeyer Little, F.R.C.S., Assistant-Surgeon to the London Hospital, was communicated by the President, in which the author gives an account of a case of bony anchylosis of the knee-joint in a child aged 14, in whom the limb was fixed at a right angle. The anchylosis was divided subcutaneously by means of a carpenter's chisel, and by an extending apparatus the limb was straightened so as to allow of locomotion three weeks after the operation. The author discusses the plan of dividing the long bones by means of a saw for the cure of deformity, and concludes that for bony anchylosis of the knee-joint subcutaneous osteotomy by means of a saw is impracticable. The case is believed to be the first instance where subcutaneous osteotomy has been performed in this country for the relief of bony anchylosis of a large joint.

Mr. Carr Jackson expressed the opinion that excision of the knee-joint would be impracticable in a case of complete bony fusion.

The President: That is to say, in a case where there was no joint to excise.

Mr. Carr Jackson: Precisely.

Mr. Savory said that the success of the very interesting operation which had been described was no doubt due to the fact that, after the limb had been straightened, the knee-joint again became firmly anchylosed. Anything like useful motion of the joint in such cases was out of the question, and, had the tibia remained movable on the femur, it would only have allowed the recurrence of distortion, and the limb would have become proportionately useless. That threefold deformity, the result of long-continued disease of the knee-joint—extreme flexion, partial dislocation backward, and rotation outward of the leg upon the thigh—was one of which the permanent remedy was almost beyond the reach of any form of apparatus, and in many of these cases excision had been resorted to as the sole available means, for by this operation the limb is not only straightened, but the tibia is rendered immovable by becoming one with the femur.

The President, having assisted at the operation performed by Mr. Little, was able to bear testimony to the fidelity of the description of it in the paper, and to its success in restoring a useful limb. Had Mr. William Adams been present, the President would have inquired whether he had heard of Mr. Little's operation on the knee before performing, a year afterwards, a similar operation on the hip-joint.

Mr. Carr Jackson said he thought he might venture to say that Mr. Adams was acquainted with Mr. Little's operation.

The President thought, then, that the success of Mr. Little's case must have given Mr. Adams great encouragement and confidence in undertaking his operation. As Mr. Little was in a distant country, and as he (the President) had communicated the paper to the Society, he felt called on to support and vindicate Mr. Little's claim to originality in performing a subcutaneous operation on a completely anchylosed joint, for rectifying the position of the limb.

An anonymous donor has contributed £1000 to the National Orthopædic Hospital, Great Portland-street.

There are now regular courses of lectures by Turkish Professors, at the University of Constantinople, on natural philosophy, natural history, etc., which, it is expressly advertised, are in a plain style.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 16, 1871.

J. Cooper Forster, F.R.S., Vice-President, in the Chair.

(Concluded from page 647.)

Dr. Edwards-Crisp exhibited some Casts illustrative of Diseases of the Eye in the Lower Animals. Cataract, he said, was not very common in monkeys, but was prevalent among lemurs and bears. Among marsupials it was still more frequent. Birds often suffered from opacity of the cornea, as did reptiles; but cataract did not occur in these. It was common in dogs and horses.

Dr. Payne exhibited an Enlarged Spleen and Lymphatic Glands from a case of Hodgkin's disease. The case had presented during life the usual symptoms of this disease, such as progressive anæmia and splenic enlargement, but there was no lymphatic tumour visible externally. Death took place after marked febrile symptoms. After death the spleen was found to be very large, and contained the usual "lymphadenoid" growths; many lymphatic glands, especially those of the thorax, were enlarged, and chiefly converted into a hard, glistening, yellow material, such as is commonly seen in these cases; but some parts of them contained crumbling, caseous masses, and thus resembled what are commonly called scrofulous glands. The chief interest of the case, however, lay in the fact that the lungs, pleuræ, and membranes of the brain were affected with acute tuberculosis, being studded with grey miliary tubercle. This disease was evidently acute, and subsequent to the glandular affection, thus confirming, to a certain extent, the views of those who believe that miliary tubercle depends upon the previous existence in the body of caseous masses. It also supplied a transition between the peculiar enlargements of glands first distinguished by Dr. Hodgkin and the so-called scrofulous affections.

Dr. Payne also exhibited a Tumour, removed by Mr. Spencer Smith, from the breast of a female whose family history was cancerous. It was composed of a hard central mass, surrounded by cystic cavities, and showed a remarkable combination of structures. The hard central mass was not distinguishable from scirrhous cancer, while the surrounding cysts contained a highly vascular villous growth, precisely resembling the "villous cancer" of Rokitansky, described by that pathologist as usually, though not always, occurring on the inner surfaces of hollow organs.

Dr. Crucknell exhibited a curious Malformation of the Gall-bladder, from a man who had been a patient in the Great Northern Hospital. There were two openings in the bladder, so placed that the whole of the bile must pass through it.

Dr. Murchison exhibited the Kidneys of a patient who had died of Acute Uræmia. The youth, aged 18, had suffered from no bad symptoms until his fatal illness. Ten days before admission he had sudden pains in the back; five days after he was drowsy, but did not take to bed; and in five days more he was taken to the Hospital, when he looked stupid, and his tongue was dry and brown. His pulse was not quick, his temperature was 96°. There was no dropsy or anæmia; his urine was limpid, specific gravity 1007, and contained a small trace of albumen. Purgatives, with digitalis and potass, were given at first with good effect, but he gradually got worse, and ultimately died from convulsions and coma. His blood was dark. His kidneys weighed $1\frac{1}{4}$ oz. and $\frac{3}{4}$ oz. respectively. The appearance was not that of an ordinary granular kidney, but was rather lobular. Perhaps some of the vessels were obstructed. The tubes had not been examined.

Mr. Wyatt exhibited a specimen of Perforating Ulcer of the Stomach, causing speedy death from hæmorrhage; an Amputated Hypospadian Penis; and several specimens of Gunshot Injury from Paris. He said that excision of joints near which a bullet had entered entirely failed, owing to the extensive splintering produced by the chassepôt. There were also preparations showing the possibility of securing a bleeding vessel in a suppurating wound, and certain injuries to the sciatic nerve found in connexion with acute purulent œdema of the limb.

Mr. A. H. Smee, in a recent report presented to the Gresham Assurance Company, on the causes of death in 1000 cases where claims have been made on the Society, states "that diseases of the digestive organs greatly exceed, in England, the relative number found in other countries."

OBITUARY.

DR. JAMES WATSON.

Another eminent member of the Medical Profession has passed away from our midst. On Saturday, a large circle of private friends and the Fellows of the Faculty of Physicians and Surgeons paid their last tribute of respect to the remains of Dr. James Watson. Dr. Watson was born in Glasgow in 1787, where he was educated, first at the Grammar School and then at the University. He passed through a full curriculum of the arts classes, in which he greatly distinguished himself. His original intention was to study for the Church, and he joined the divinity classes, but soon after changed his intention and took to Medicine. In 1810 he was admitted a Fellow of the Faculty of Physicians and Surgeons. He rapidly acquired a very extensive practice, and for fifty years was one of the most prominent and distinguished Practitioners in Glasgow. At an early period he was appointed one of the Surgeons of the Royal Infirmary, but he soon abandoned the Surgical department of the Profession, and devoted himself to the more congenial practice of Medicine. In 1842 he was appointed one of the Physicians of the Infirmary, and he was also Physician to the Fever Hospital in Clyde-street. He was three times elected President of the Faculty of Physicians and Surgeons, and for many years he was the "Father of the Faculty"—a title due to him not only in virtue of his seniority, but on account of the paternal interest he long evinced in the well-being of the Corporation. So highly did the Faculty appreciate his many and valuable services, that they have hung his portrait in the Faculty Hall, and founded a prize in his honour, which bears his name. At the passing of the Medical Act, in 1858, he was appointed representative of the Faculty in the General Council of the United Kingdom, an office which he held till failing health obliged him to retire. In the early and difficult deliberations of that Council his great practical experience and sound judgment were much appreciated. He took a very deep interest in elevating the standard of preliminary education for Medical students. About ten years ago he gave up the active duties of the Profession, and has since passed his days in honourable retirement, spending much of his time in reading and writing. His friends, on calling frequently, found the old man enjoying himself with the classical studies of his youth. Dr. Watson's wife predeceased him about ten years. He leaves one son (Dr. Eben. Watson, the well-known Surgeon and Professor of Physiology in Anderson's University) and four daughters. Dr. Watson was a man of excellent talent, great mental and bodily activity, and considerable versatility of attainment. His life was mainly devoted to the active duties of his Profession, which he pursued with devoted ardour and success. He was for many years an elder of the Church of Scotland, and, since the disruption, of the Free Church. He was a man of deep and unaffected piety; and those who knew him best were aware now thoroughly his whole life was governed by Christian principles. He died peacefully on May 30, in the presence of all his children. Dr. Watson contributed several papers of value to the Medical periodicals. He was an esteemed clinical teacher, and an excellent practical Physician.

SAMUEL MORTON HEWITT, L.R.C.S.I., &c.

It is with deep regret that we have to record the death of the above talented Physician at the early age of 25 years, which melancholy event occurred at his residence in York-street, Dublin, on the 4th inst. Mr. Hewitt was originally intended for commercial pursuits, but with remarkable energy and perseverance educated himself for the Medical Profession, in which, there is no doubt, had his life been spared, he would have attained a high position. As Physician to the City of Dublin Hospital, and demonstrator of anatomy in the School of the Royal College of Surgeons, in which appointment he succeeded his brother, Mr. David Hewitt, some eighteen months ago, he had given evidence of the possession of qualities which are always certain to command success.

It is now little more than a month since Mr. Hewitt read a most able paper, at a meeting of the Medical Society of the College of Physicians, on the present state of therapeutics.

It is to be feared that overwork in the Hospital, the classroom, and the study contributed largely to the fatal termination of an attack of typhus fever, to which he succumbed on the morning of the fifteenth day.

DR. DAVID WILLIAMS.

The subject of this notice sprang from a respectable family in Carmarthenshire, became a Member of the College of Surgeons in 1809, then entered the navy, where he remained nine years, chiefly on the Mediterranean station. On his retirement from the navy he graduated at Glasgow, and practised as a Physician at Liverpool, and was connected with the Liverpool Dispensary. He was the author of several valuable papers which appeared in the Medical periodicals, and was much esteemed and highly thought of by an extensive circle of friends in Liverpool. He retired from practice in 1851, and went to live on his property at Curborough, near Lichfield. He subsequently retired to Cheltenham, where he died on the 24th inst.

NEW INVENTIONS.

FLUID MEAT.

(*Prepared by Mr. S. Darby*, 140, *Leadenhall-street.*)

We have inspected several preparations by Mr. S. Darby, of Leadenhall-street, which may be worth the notice of our readers. We believe it was Dr. Marcet who started the idea of acting upon meat with pepsine, so that when introduced into the stomach it might have already passed through the chief process of digestion, and have been rendered soluble by the action of pepsine with acid. Mr. Darby lays no claim to the original idea, but deserves the credit of patiently working it out, and bringing the result before the public in an available form. His preparation, called "Fluid Meat," is a concentrated semi-fluid mass, consisting of the finest parts of the meat (including, of course, the fibrine in a soluble form) with the natural juices. In what respects, it may be asked, does it differ from Liebig's extract, or from various other concentrated preparations of meat? The answer is, that in addition to the soluble and crystallisable matters contained in the juice or extract of flesh, it gives the fibre itself in a state of solution. Hence it is not only the fillip or stimulant which juice of meat is, but it contains a certain quantity of substantial food to nourish the substance of the tissues as well as to assist in their work. The cases in which it is believed that the "fluid meat" will be useful are, in the first place, those of extreme dyspepsia, with inveterate vomiting, whether arising from hysteria, pregnancy, ulcer, or other diseases of the stomach, etc., in which it is desirable that the stomach shall be used as an organ of absorption and be spared the trouble of solution. To these may be added cases of debility and anæmia, in which the Practitioner who has nearly got to the end of his quiver will be glad to hear of any new remedy. Moreover, we learn that there is a class of patients, or rather of impatients, who have discovered the convenience of these already digested viands, and these are the stockbrokers, and other busy City men, who cannot allow their stomachs to use one atom of the nervous force which the brain is using in moneymaking, and who find the "fluid meat" pass into their circulation without the flatulence and stomach-trouble which would attend the effort to eat ordinary meat or soup, and find it infinitely more "staying" or satisfying than Liebig's extract. We understand that considerable difficulties have had to be overcome in these preparations, more especially to prevent the bitterness which we are told is always created when fibrine is thoroughly dissolved in pepsine with hydrochloric acid. This seems to be very effectually accomplished by the addition of a small quantity of pancreas to the meat before solution. This is a curious fact. The acid is afterwards converted into common salt, which has its well-known taste. The "fluid meat" is easily combined, if desired, with gelatinous and other soup elements and flavourings.

We believe that Mr. Darby's process is intended for the germ of an effort to utilise the meat fibre now wasted on a large scale in the preparation of Liebig's essence.

TRANSPARENT ELASTIC TISSUE.

(*Elastic Tissue Company*, 39, *Leather-lane, E.C.*)

This is described by the manufacturers as "transparent elastic tissue, a perfect substitute for oiled silk, guttapercha, etc., for Surgical purposes," and the description is hardly just, inasmuch as the elastic tissue seems preferable to either. Oiled silk is apt not to lie evenly, and guttapercha is brittle and harsh; but this transparent tissue is softer than the finest cambric, pliable, free from weight, and easily adapted to every surface, and, thin as it is, it is strong enough. It may answer, in the first place, as the oiled silk does—to maintain the moisture of water dressings, and to place on the outside of poultices and fomentations to hinder the wet from reaching the patient's clothes; and, if need be, it can be washed, and used more than once. But, in the next place, there are other purposes for which we should like to try it, such as to make finger-stalls for cut fingers, and to serve as sticking-plaster; this might be found very convenient. Again, we should like to try it instead of paper to cover books, and protect them from soiling by the fingers. The same Company make a capital "*impermeable cotton-wool*," in sheets. Now, of all remedies for local pain, mere wadding is one of the simplest and most effective. There is many a neuralgia and local rheumatism which is cured by merely covering the skin from the air, and for this purpose nothing can be more handy than the impermeable cotton-wool before us.

TENAX.

(*Southall, Son, and Dymond, Manufacturing Pharmaceutical Chemists, Birmingham.*)

This is described as an "absorbent and antiseptic" preparation, specially prepared for Surgical purposes, and to supersede lint for dressings. It seems to be a finely-carded hemp or tow, perfumed with tar, agreeable in smell, and crisp to the touch, and capable of forming a good compress for ulcers, compound fractures, and other conditions attended with profuse suppuration.

NEW BOOKS, WITH SHORT CRITIQUES.

Light Science for Leisure Hours; a Series of Familiar Essays on Scientific Subjects, Natural Phenomena, etc. By Richard A. Proctor, B.A. Camb., etc. London: Longmans. 1871. Pp. 316.

⁂ This work is a reprint of various essays which have appeared in *Frazer's Magazine*, *Nature*, the *Daily News*, *Chambers's Journal*, and other periodicals, and which we believe deserve to be preserved permanently. Popular scientific articles are apt to be flimsy, shallow and, egotistical—sometimes even funny: there are none of these defects in the work before us. The subjects are chiefly the latest researches in astronomy, geology, and physical geography, and anyone who desires the latest accessible information on the aurora borealis, the magnetism of the earth, the nature of the sun, the Gulf stream, floods, tornadoes, and earthquakes, may turn to Mr. Proctor's pages with benefit. He has taken the trouble to slay the slain Starkian dogma of the influence of marriage on longevity, and has a paper on dust as a vehicle of disease, anent which it may be worth his while to know that during the last cholera epidemic the streets of well-regulated parishes in London were watered with solution of carbolic acid, in order to prevent the dangers arising from dust infected with organic and disease-bearing germs.

Anno Domini 2071. Translated from the Dutch original, with Preface and additional Explanatory Notes, by Dr. Alex. V. W. Bikkers. William Tegg.

⁂ This *brochure* is an admirable adaptation for the English reader of a work which has attracted great attention in Holland. It gives a humorous, graphic, and striking description of what might be expected to be seen in the year 2071. The author is supposed to have foreshadowed the events and changes described whilst sleeping in his arm-chair. The little book will well repay half an hour's perusal, and is well calculated for a railway companion.

The "Ossuaire" under St. Laurent.—In the *Gazette Médicale* for May 13, M. Pratt gives a detailed account of the appearances of the skeletons found in the curious *ossuaire* found in the vaults of the Lady Chapel of the church of St. Laurent, and, in illustration of the fact that bodies in the time of tumults in Paris have often been deposited under churches and other places, adds—"Even quite recently—since March, 1871—the gates of Paris being closed by those who have seized power, the *Pompes Funèbres* have been obliged to deposit a certain number of the bodies in churches to await quieter times and a more easy circulation, for it is a very remarkable circumstance that, during revolutionary storms, the very dead themselves are deprived of the liberty of ingress and egress, to the great inconvenience of the living."

MEDICAL NEWS.

Royal College of Surgeons.—The following Members of the College, having undergone the necessary examinations for the Fellowship on the 25th, 26th, and 27th ult., were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a meeting of the Council on the 8th inst., were enrolled Fellows of the College, viz. :—

Godall, William Preston, L.S.A., Newhall-street, Birmingham, Diploma of Membership dated June 15, 1855, of King's College.
Roberts, Charles, L.S.A., York, April 18, 1859, of St. George's Hospital.
Bartleett, Thomas Hiron, M.B. Lond. and L.S.A., Old Square, Birmingham, February 3, 1860, of the Birmingham School.
Welch, Francis Henry, L.S.A., H.M. 22nd Regt., Charles Fort, Kinsale, May 8, 1860, of the London Hospital.
Bloxam, John Astley, L.S.A., St. Bartholomew's Hospital, November 15, 1864, of St. Bartholomew's Hospital.
Square, William, L.R.C.P. Lond., Portland-square, Plymouth, April 24, 1866, of St. Bartholomew's Hospital.
Churchill, Frederick, M.B. and C.M. Edin., Great George-street, Westminster, July 23, 1867, of the Edinburgh and St. Thomas's Hospitals.
Lucas, Richard Clement, L.R.C.P. Lond., Hungerford, Berks, January 21, 1868, of Guy's Hospital.
Ashby, Alfred, L.S.A., Staines, Middlesex, July 21, 1869, of Guy's Hospital.
Tait, Robert Lawson, L.R.C.P. Edin., Waterloo-street, Birmingham, January 25, 1870, of the Edinburgh and Birmingham Hospitals.
Cooke, Thomas, M.D. Paris, Herne-hill, January 26, 1871, of the Paris Hospitals.

Seven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their Hospital studies for one year.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 1, 1871:—

Corrie, Alfred Thomas, Plymouth.
Hodges, Frank Henry, Birmingham.
Langdale, Henry Marmaduke, East Hoatley, Sussex.
Magrath, John, Forest-row, East Grinstead.
Maisey, Frederick Thomas, Cheltenham.
Passmore, Frederic George, Brighton.

The following gentlemen also on the same day passed their first Professional examination:—

Austin, Corneley, University College.
Bland, George, St. Bartholomew's Hospital.
Jackson, Francis Edward, St. Bartholomew's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Donovan, Denis Dempsey, L.R.C.S. Edin., L.R.C.P. Edin., L.A.H. Dub.—Medical Officer to the Sub-District of the Cork Dispensary.

Gribbin, E. D., L.R.C.P. Edin., L.F.P.S., and L.S.A.—Physician to the City of Glasgow Friendly Society for the Belfast and Ballymacarret Districts, Antrim and Down.

Harrison, Mr. George.—Medical Officer to St. Anne's Royal Schools, *vice* Mr. George Rice Ord, resigned.

Hoysted, John, M.D., M.R.C.S.E., L.M.—Resident Assistant Medical Officer at the Littlemore Pauper Lunatic Asylum, *vice* Dr. Skelton, resigned.

Leigh, John Thomas, L.R.C.S., L.M. Edin., and L.S.A.—Resident Medical Officer to the North Staffordshire Infirmary.

Meadows, Dr.—Consulting Physician-Accoucheur to the St. John's-wood and Portland-town Provident Dispensary.

Smith, Dr. H. L.—Medical Attendant *pro tem*, to the Royal Irish Constabulary at Ballacella, Durrow, and Cullshill, Queen's County.

Walsh, Patrick Charles, L.R.C.P. Edin., M.R.C.S. Eng.—Medical Officer, Public Vaccinator, Registrar of Births, &c., for the Gurteen Dispensary District of the Boyle Union.

BIRTHS.

Hayward.—On May 24, at Overton, Hants, the wife of Sidney Hayward M.D., of a son, who survived only two days.

Smith.—On May 31, the wife of Cohen Smith, M.D., of the Madras Medical Service, of a son.

Smith.—On June 1, at Ivy House, Cheshunt, Herts, the wife of Abbotts Smith, M.D., M.R.C.P. Lond., of Prince's-street, Hanover-square, of a son.

Rickard.—On April 24, at Masulipatam, India, the wife of F. M. Rickard, Assistant-Surgeon of H.M.'s Indian Army, of a daughter.

Walker.—On May 11, at Kirkham, Lancashire, the wife of John Davidsen Walker, L.R.C.P. Edin., of a daughter.

MARRIAGES.

Dunlop—Brown.—On June 1, at the English Presbyterian Church, St. John's-wood, William Carstares Dunlop, youngest son of the late John Dunlop, Esq., of Gairbraid, Lanarkshire, to Lucy Helen Dunmore, eldest daughter of the late William Craufurd Brown, M.D., H.M.I.A.

Grant—Smith.—On June 1, at 17, Dick-place, Edinburgh, Robert Donald Grant, eldest son of the late William Grant, Esq., of Thornhill, Forres, Morayshire, N.B., to Eliza Johanna, eldest daughter of John Stuart Smith, M.D., Staff Surgeon-Major (retired).

Harrington—Salmon.—On June 1, at Christ Church, Kensington, E. R. Harrington, eldest son of E. H. Harrington, barrister, Halifax, Nova Scotia, to Harriett Agnes Salmon, of 4, Kensington-gate, Hyde-park, eldest daughter of the late W. A. Salmon, M.D., of Wedmore, Somerset.

Sadler—Whiting.—On June 1, at All Saints, Braishfield, Hants, Samuel William Ralph Champernowne Sadler, Captain Royal Wilts Militia (late Lieutenant 23rd Royal Welsh Fusiliers) eldest son of Samuel Champernowne Sadler, F.R.C.S., of Purton Court, and J.P. for the County of Wilts, to Constance Fanny, eldest daughter of the late Thos. Slade Whiting, Esq., of Codford St. Peter, Wilts, and stepdaughter of the Rev. John Durrant, M.A., Vicar of Braishfield, Hants.

Scobell—Rendle.—On June 6, at St. James-the-Less, Plymouth, Thomas Edward Scobell, M.R.C.S., Ridgway, Devon, second son of the late Rev. J. S. Scobell, Vicar of St. Kew, Cornwall, to Elizabeth Rendle, youngest daughter of Edmund Rendle, M.D., Plymouth.

Tuxford—Wren.—On June 5, at Church Langton, Leicestershire, Arthur Tuxford, M.D., Boston, Lincolnshire, to Henrietta Bertha, niece of Joseph Wren, J.P., Boston.

DEATHS.

Baillie, Netta Julia, younger daughter of Neil Benjamin Baillie, Esq., Bengal Medical Service, at Eastbourne, Sussex, on May 31, aged 2 years and 5 months.

Daunt, William, M.D., half-pay, 6th Inniskilling Dragoons, at his residence, 8, Hanover-street, Bath, on June 5, in his 84th year.

England, William, M.D., of Henley-road, Ipswich, at Lowestoft, on June 1, in the 73rd year of his age.

Hennen, John, M.D., at Beechholm, Tunbridge Wells, on June 3, aged 71.

Lucas, T. Prestwood, M.D., at Brecon, South Wales, on May 29, aged 69.

Martin, Mary Ann, relict of the late George Martin, Esq., formerly Surgeon 55th Foot, and of Clare, Suffolk, at 4, Pembroke-road, Kensington, on June 6.

Murchison, Simon, Surgeon, at Bicester, after two days' serious illness, on June 2, in his 60th year.

Nazer, Henry Leopold, M.R.C.S., L.S.A., late of 10, Albany-villas, Cliftonville, Brighton, at 30, St. George's-square, on June 6, aged 53.

Stevens, Sarah Jane, eldest child of Robert Ingram Stevens, Surgeon, at Hoddesdon, Herts, on June 4, aged 16.

Stewart, Ella, widow of the late Dr. John Grant Stewart, C.B., Inspector-General of Naval Hospitals and Fleets, at View Mount, Inverness, on June 4.

Watson, James, M.D., at 5, Burnbank-gardens, Glasgow, on May 30, aged 83.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham and Midland Free Hospital for Sick Children.—Two Extra Acting Physicians and an Ophthalmic Surgeon. Applications and testimonials to the Secretary, at the Out-patient Department, Steelhouse-lane, addressed to the Medical Committee, on or before June 22.

Brighton and Hove Dispensary, Queen's-road, Brighton.—Resident House-Surgeon; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Chairman of the Committee of Management, on or before June 23. Election on July 4.

Devon County Lunatic Asylum.—Assistant Medical Officer. Applications and testimonials to Mr. T. E. Drake, Solicitor, Exeter, the Clerk to the Committee, on or before June 20.

Eton Union, Bucks.—Medical Officer and Public Vaccinator for the Stoke District. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. R. H. Barrett, Clerk, on or before June 12. Election on the 13th.

Huddersfield Infirmary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians, and be duly registered. Applications and testimonials to John Marsden, Esq., Hon. Sec., on or before July 28.

Leeds Public Dispensary.—Resident Medical Officer; must be duly qualified. Applications and testimonials to Mr. John Horsfall, 31, Albion-street, on or before June 14.

Leicester Infirmary and Fever House.—House-Surgeon and Apothecary; must have both Medical and Surgical qualifications. Applications and testimonials to Mr. T. A. Weekes, Secretary, on or before June 5. Election on June 13.

Liverpool Dispensaries.—Assistant Resident House-Surgeon; must be duly qualified, and unmarried. Applications and testimonials to the Secretary, on or before June 29. The attendance of candidates will be required on the following day at 2 o'clock p.m.

London School of Dental Surgery, 32, Soho-square.—Lecturer on Mechanical Dentistry; must be L.D.S.R.C.S. Eng. Applications and testimonials to the Honorary Secretary on or before June 15.

Lunesdale Union.—Medical Officers wanted for five districts of this Union. Candidates must have the qualifications prescribed by the General Orders of the Poor-law Board. Further information may be obtained of Mr. John Hoggarth, Clerk, 87, Church-street, Lancaster, to whom applications and testimonials are to be sent on or before June 12. Election on June 13.

Macclesfield Dispensary.—House-Surgeon; must have both Medical and Surgical qualifications. Applications and testimonials to the Secretary, on or before June 10. Election on the 15th.

Metropolitan Free Hospital, Devonshire-square, City.—Assistant-Physician; must be a Member of the Royal College of Physicians, England, or pledged to become such within twelve months, if elected. Applications and testimonials to Mr. Geo. Croxton, Secretary, on or before June 13.

Somerset County Asylum, Wells.—Assistant Medical Officer; must be duly qualified and registered. Applications and testimonials to the Medical Superintendent.

Worcester General Infirmary.—Dispenser; must have had considerable experience. Applications and testimonials to Mr. A. P. Watkins, Secretary, 50, Foregate-street, Worcester, on or before June 17.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Bicester Union.—The Bicester District is vacant; area, 15,767; population, 5523; salary, £70 per annum. Also the Workhouse; salary £40 per annum.

APPOINTMENTS.

Braintree Union.—Henry R. G. Rust, M.R.C.S. Eng., L.S.A., to the Finchingfield District.

Chorlton Union.—Henry William Webster, L.R.C.P. Edin., M.R.C.S. Eng., as Assistant Resident Medical Officer at the Workhouse.

Dore Union.—David Evans, L.R.C.P. Edin., L.R.C.S. Edin., to the Madley District.

Langport Union.—Charles Bradley, F.R.C.S. Eng., L.S.A., to the Workhouse.

Sudbury Union.—John J. Ellis, L.R.C.S. Edin., to the First District.

Thornbury Union.—Nynian H. Lower, M.R.C.S. Eng., L.S.A., to the Almondsbury District.

To-day, Friday, June 9, at 3 p.m., Professor Huxley will distribute the prizes at Charing-cross Hospital, when it is expected that he will deliver an address.

Dr. Guy's third lecture "On War in its Sanitary Aspects, with special reference to the period for 1793 to 1815," will be delivered on Tuesday, the 13th, and not Wednesday, the 14th, as previously stated.

Professor Birkett, F.R.C.S., brought his course of lectures at the Royal College of Surgeons to a close this day (Friday), and in the ensuing week Mr. J. W. Hulke, F.R.S., will commence his course of lectures.

Dr. Sandford has been elected Surgeon to the Royal Asylum of St. Anne's Society.

Mr. P. L. Burchill, M.B., F.R.C.S., has been elected Surgeon-Accoucheur to the City of London Lying-in Hospital, City-road.

Mr. E. J. H. Booth, having resigned as House-Surgeon to the Huddersfield Infirmary, preparatory to commencing practice at Mirfield, has been presented with a large Bible and a complimentary letter.

Her Royal Highness the Princess of Wales has sent a donation of twenty-five guineas to the National Hospital for Consumption, Ventnor.

The Hospital for Sick Children, Dyke-road, Brighton, will be publicly opened on the 28th inst.

The widow of Mr. Charles Maclaren has bequeathed £2500 to found a scholarship connected with the University of Edinburgh, and £200 to the Royal Infirmary.

The St. Pancras Board of Guardians have conferred the appointment of midwife on Mrs. Jones, widow of the late lamented Dr. W. T. Jones, who was for many years in active practice in the neighbourhood of Kentish Town.

By order of the Admiralty, Dr. James Salmon, R.N., Inspector-General at Haslar, has had his tenure of office extended for one year from the expiration of his present appointment, as a mark of approval of his services.

Messrs. Henry Graves and Co., of Pall-mall, have presented the West London Hospital with twenty-three engravings for the three new wards to be opened at the end of this month.

The first Surgeon of the *City of Durham* steamer, Inman line, has been drowned at Halifax, Nova Scotia, by the upsetting of a boat in which he and the captain had gone out fishing.

At a public meeting at the County Hall, Carlisle, the Bishop of the diocese in the chair, it was resolved to carry out a recommendation of the Committee to considerably enlarge the Cumberland Infirmary, and subscriptions towards that object were announced amounting to nearly £2000, besides numerous promises.

Dr. Tony Moilin, Delegate of the Commune to the 6th Arrondissement, was condemned to death by the court-martial sitting at the Luxembourg. He desired to marry his mistress, who is *enceinte*, before he died. The president of the court-martial consented. The marriage was witnessed by the officers of the Luxembourg. At two o'clock the ceremony was over, at five the doctor was dead.

A large deputation attended at the Paddington vestry, on Tuesday, to present a petition against the proposal to place a disinfecting apparatus on the Kensal-green-lane Wharf.

The Lambeth police magistrate, last Saturday, fined Sarah Richardson and Walter Proben £3 each and costs, for exposing a young girl, named Lucy Pinfold, suffering from small-pox, in the open streets.

The authorities in the Isle of Man are about to submit to the insular Parliament a Bill making vaccination compulsory within the island.

The Medical Officer for Bermondsey reported to the vestry, on Monday, that the small-pox mortality in the parish had increased. In the previous week there had been no fewer than twelve deaths from the disease.

Vaccination.—The Prussian Government has tried, in consequence of scarcity of lymph, its application mixed with glycerine, and the result has been so successful as to lead to a public recommendation of the mixture to official vaccinating Surgeons.

Vaccination in the Lancaster Union.—Of 2120 children born in the two years ended June 30, 1870, 158 died before successful vaccination, 52 ceased to reside in the union, 1897 were successfully vaccinated, and the remaining 13 are still unvaccinated on account of unfitness. Very few other unions could give such a satisfactory account of the working of the Vaccination Act.

The Irish Medical Association.—This Association held its annual meeting on Monday last, in the College of Surgeons, under the presidency of Dr. Jameson. Representatives from various districts of the country attended. A report was presented, which directed attention to the claims of Medical officers to retiring allowances, to fees for extra duties imposed upon them by the Legislature, and other questions affecting their interests. Meetings of the Poor-law Medical Officers (a new Association) and of the Irish Medical Benevolent Fund were also held.

Royal Institution of Great Britain. — At the general monthly meeting held on Monday, June 5, 1871, Sir Frederick Pollock, Bart., M.A., Vice-President, in the chair, Silas Kemball Cook, Esq., Miss Elinor Martin, Charles Bland Radcliffe, M.D., and Mrs. Radcliffe, were elected Members of the Royal Institution. The special thanks of the Members were returned for the following donation to "The Fund for the Promotion of Experimental Researches":—Sir Henry Holland, Bart. (thirteenth annual donation), £40.

Medical Faculty of Strasburg.—This Faculty has been the first portion of the University to manifest the desire of renewing its activity under its new masters. Under the guidance of Professor Schützenberger, several of the teachers have announced the commencement of their lectures in the usual manner. Among these are Drs. Stöber, Professor of Ophthalmology; Wieger, Professor of Pathology; Hirz, Professor of Clinical Medicine; Boeckel, Professor of Surgery; and two *Privatdocenten*. This is regarded as a happy omen to be highly encouraged; and the question as to whether the lectures are to be delivered in the German rather than the French language is postponed.—*Deutsche Klinik*, May 13.

Composition and Quality of the Metropolitan Waters in May, 1871.—The following are Dr. Letheby's returns to the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	20·13	0·131	0·136	0·004	15·0	4·3
West Middlesex	18·87	0·021	0·136	0·000	14·2	3·6
Southwark & Vauxhall	19·57	0·124	0·118	0·003	14·6	4·1
Chelsea	19·13	0·141	0·117	0·004	14·4	4·0
Lambeth	19·57	0·136	0·146	0·004	14·6	4·0
Other Companies.						
Kent	26·83	0·014	0·238	0·000	20·0	5·5
New River	19·13	0·049	0·136	0·000	14·8	3·3
East London	18·47	0·086	0·125	0·001	13·2	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was somewhat turbid—viz., in those of the Lambeth and the Southwark and Vauxhall Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 103,593,573 gallons; and the number of houses supplied was 485,734. This is at the rate of 31·8 gals. per head of the population daily.

Hy. Letheby, M.B.

A New Succour to the Wounded.—In a letter addressed by M. Socin, Professor of Surgery, of Bâle, he announces that an international society for the supply of artificial limbs to the wounded of both armies has been formed. All the expense these persons will be put to will be that of their journey to Bâle, where they will be kept for two or three weeks in a Hospital organised by the society, in order that the well-fitting of the limbs supplied may be assured.—*Lyon Médical*, May 28.

An application was made on Monday to the Court of Queen's Bench, on the part of a Mr. Whiskin, a chemist and druggist at Welchpool, whose name had been removed by the Pharmaceutical Society from the register, to compel them to restore his name. His name was on the register last year, but, on the ground of some alleged mis-statement on his part, his name was omitted this year, and the result was that he was being sued in the Welchpool County Court for penalties for selling drugs without being registered. He now contended that, under the Act, he had, upon certain conditions, a vested right to be registered, so that the Society had no right to remove him from the register. He appealed to the Council of the Society, but in vain. An affidavit made by the applicant stated that the agent of the Society at Welchpool, himself a chemist and druggist, had really objected to the applicant because he had removed to a shop opposite to his own, and this was suggested as the real cause and reason of the removal of the applicant's name. The Court granted a rule *nisi* for a mandamus to the Society to compel them to restore the applicant's name to the register.

The skeleton of the little hippopotamus which was recently born and died in the Zoological Society's Gardens, has been placed in the Museum of the Royal College of Surgeons, as likewise several beautiful preparations of the internal organs. Professor Flower, F.R.S., the Curator of the Hunterian Museum, will shortly communicate to the Zoological Society a memoir upon the anatomy of the hippopotamus, based on his examination of this specimen.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

We are obliged to defer till next week our notice of Professor Guy's Lectures at the College of Physicians.

M.B. Lond., Brecon.—We shall be very glad to receive your memoir.

Compulsory Vaccination.—Dr. E. Haughton is thanked for his letter. We agree with him that there are more than the two classes in the world of which he speaks.

Vectis.—A new edition of the book is nearly ready, and will probably be published next week.

Aberdonensis.—The apparently unmeaning term Baijan or Bejan applied to the freshmen of your University is a corruption of the old French name *Béc jaune*, or yellow beak, applied to the same class as being birds yet unfledged. The whole Scotch University system is closely allied to that of Paris, the older ones being modelled on the type of the Sorbonne, and the younger ones being fashioned as those of more ancient date. The division into Nations in voting for your Lord Rector is also copied from the same ancient institutions.

Constant Subscriber, Yorkshire.—1. A registered Member of the Royal College of Surgeons of England can recover in the county court for attendance and medicine supplied in a Surgical case. He cannot recover such charges in a Medical case. He would be entitled by law to midwifery fees. 2. If a person engages a qualified Practitioner to attend her in her confinement, and subsequently employs another Practitioner, the first gentleman engaged, if due and proper notice had not been given him, can recover his fee. There are several cases on record in which the fee has been so recovered. 3. In such a case, though it is a great hardship to the Medical Practitioner, he has no remedy.

Dr. Gibbon and Dr. Stallard.

The Holborn and Clerkenwell papers have lately contained an account of a dispute which certainly will not tend to elevate the Profession in the eyes of the public. It appears that a complaint was made against Dr. Gibbon, the Medical Officer of Health of the Holborn District, by Mr. Birch, to the effect that Dr. Gibbon had failed in his duty in not sending a child affected with small-pox to the Small-pox Hospital. Dr. Gibbon defended himself by saying that the child was, in his opinion, not in a fit state to be sent. Thereupon Dr. Stallard, in his place as guardian, at a meeting of the Holborn Vestry, attacked Dr. Gibbon's defence, which he pronounced unsatisfactory. We would ask whether Dr. Stallard thinks it right to criticise before a non-professional audience the Professional opinion given by a brother Physician?

Where is Heifer Vaccine to be Obtained?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I wish to obtain a tube or a point of vaccine from a healthy heifer. I applied to the Hospital staff, and was referred to the Privy Council; the

Privy Council neither had any nor could they refer me to any reliable source of supply or information except Dr. Marson. Dr. Marson could not help me, so that I am at a standstill. Can you assist me by advising me where to apply? I am, &c., R. C. C.

Guy's Hospital, June 3.

An Apothecary's Bill in Charles II.'s Time.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The accompanying rather curious Professional document seems worth preserving, as affording insight into some points of Medical practice in the reign of Charles II. It was given to me, in copy, not long since, by the finder, a gentleman engaged in the arrangement of a collection, in which it has probably lain undisturbed since originally put aside, and it exists, therefore, only in manuscript. The appended P.S. is by the copyist. In addition to the Materia Medica "of the period," it illustrates, by its several items, the lucrative side of an Apothecary's Profession—e.g., a "Cordial julep, at 6s. 8d."—this being equal to exactly five times that amount in our time. The original spelling is preserved. I am, &c.,

Clifton, June 6. S. Martyn, M.D., F.R.C.P.

[copy.]

Endorsed—"*Lady Middleton's Doctor's Bill,*" 1662.

Dr.: The Right Worshippful ye Lady Middleton.

1662.		£	s.	d.
May 2	—Imprimis, Hartshorn and marigold	0	0	6
3	—A diascordium	0	2	0
	A syrop of gilliflowers	0	0	6
	A powder of Jollop	0	3	0
10	—A Quicksilver	0	0	4
24	—An oil of Ben.	0	1	6
	A Salt Peter	0	0	3
June 2	—A succory water	0	0	8
5	—A galangall and diascordium	0	5	0
	Oil of Nutmegs...	0	2	6
July 8	—A compound Water of Snailes	0	2	0
10	—A glyster...	0	3	0
	An ivory pipe, trimmed	0	2	6
11	—A purging potion	0	2	6
	A cordial Julep...	0	6	8
14	—A plaister for ye navell	0	3	0
	Ye cordiall Julep again	0	6	8
15	—Item	0	6	8
	Item	0	6	8
	Item	0	6	8
16	—Ye cordiall emulsion	0	4	0
21	—A dose of the purging wine	0	2	6
	A cordiall pills	0	2	6
22	—A cordiall Bolus	0	2	6
	A dose of Purging pills	0	2	6
	A stomach plaister for yr Ladyshipp	0	5	0
28	—A manna	0	1	6
30	—A manna and Sal prunell, for Whey	0	4	6
	A Rhubarb and Blackberry Water...	0	0	10
	A hart-horn	0	2	6
	An Elixir	0	2	6
	A vomit for ye footman	0	2	6
	A cordial water for ye child	0	3	0
	A syrop of Red Poppies	0	0	6
Aug. 18	—A clyster Pipe for Mrs. Bridgewater	0	3	6
	A vomit for her...	0	2	6
20	—A cordial Tablet	0	2	0
	A digestive Powder	0	4	0
	A Bear's Grease	0	0	6
27	—A purge for Mrs. Bridgewater	0	3	0
Sep. 11	—A Venice Treacle	0	8	0
20	—A Hyssop Water	0	1	0
	A Syrop of Violets	0	1	0
22	—A box of Powder	0	2	6
	A Poppy-Mint and Dragon Waters	0	2	0
	Totall	£6	9	5

Item—A pewter still and bed-pan.

P.S.—That this, a private Professional man's bill of charges, should be found amongst a public collection of MSS., is readily accounted for by the fact that one of Lady Middleton's immediate successors—perhaps the very child here alluded to—in after life committed, or, what would be the same thing, was attainted of, high treason by Charles's Government, and, as invariably happened, a messenger suddenly arrived at the house, and seized all papers indiscriminately as evidence. They were never returned to the family.

Army Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—May I ask you to raise your voice against the absurd scheme which, it is said, is again about being brought to the front by the military Medical authorities, and thrust upon the members of your Profession serving in the army, in direct opposition to the wishes of more than five-sixths of the department! Surely the galaxy of talent which for years has been resting at Whitehall-yard must be able to bring forth something more than a *monstrum nulla virtute redemptum a vitiis!* Assistant-Surgeons pining for promotion want something more than a name—they want a *bonâ fide*, not a sham advancement. Doing away with the title of Assistant-Surgeon will not bring them one bit nearer that "grand position" which a recent and evidently inspired writer in your contemporary, the *Lancet*, foreshadows for them. If such an abortion is ever consummated, a glaring injustice will be done to regimental officers, who will be illegally and unjustly deprived of their regimental commissions, in which they have sunk so much—in many cases hundreds of pounds. Even leaving out the question of individual pecuniary loss, would not such a change have a ruinous effect on the department? Many of the cadets who now join the Medical branch of the army, do so as much for the prospective social advantages of a regimental connexion as for the miserable ten shillings a day, which is scarcely enough to keep soul and body together and put respectable clothes on one's back, leaving out altogether the chance of being prematurely diseased by a tropical residence. Regimental *esprit* will make a man go anywhere; when that is taken away, who will enter the service to ruin their constitution by foreign service, and be left to starve afterwards, when no longer of any use to H.M.S.?

The regimental Medical officers have always stuck up for the rights of their department in the service; they have borne all the opprobrium for having done so, and now they, and the department as a whole, are to be turned upside-down, to please a few dreamers at Netley, whose idea of a united corps, *à la* Royal Engineers, is about as practical as it is nonsensical. If ever it happens that their ideas are put into actual practice, they will have the supreme pleasure of knowing that their names will be handed down to military Medical posterity as the originators of the plan which severed the bonds of good-fellowship connecting the Surgeons with their corps. *Solitudinem faciunt, pacem appellant!* well may we exclaim of them.

I have heard many of my brother officers say that, if they had known such a scheme was to have taken place, they would never have joined the service, but taken their chance of getting something more than £200 a year, after being knocked about like a shuttlecock for the best five years of their existence, all for the large increase of half-a-crown a day.

I am, &c., One of the Many who condemn it.

Army Medical Unification.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—May I ask if you have received any further information as to the truth of a statement made by a correspondent in the *Medical Times and Gazette* for March 18, to the effect that Government actually intended to bring out at once, unmodified, the self-same warrant for the unification of the Army Medical Department which they apparently so nearly brought out last year. It seems to me that, if that warrant comes out unchanged, Army Medical Officers will be among the most homeless of men. A man will never be able to make a home of a regiment to which he is only attached. No one will regard him as belonging to the regiment. He will be an honorary member only of the mess, and in all matters connected with social entertainments, etc., will be regarded as an outsider. He will be different from all the other staff, and will occupy a most extraordinary position among a set of men, and yet not of them. However, bad as the appointment of an attached man may be, if these appointments were made absolutely for fixed periods it would be a certain advantage. But if this is the intention of the authorities, why not leave matters as they are, and gazette men to regiments in the good old way? What possible advantage is there in attaching for a fixed period instead of gazetting? However, perhaps, when once the old regimental system is abolished we shall not even have the poor satisfaction of being attached to one regiment for a term of years, and then a nice life we shall have of it! Why, Sir, such a thing as a settled home will be unknown to most of us. We shall be nomads on the face of the earth—to-day doing duty with cavalry, to-morrow with infantry, the day after with artillery, kicked about from post to pillar; one week at one station, the next week at another; liable any minute to be sent, at a few hours' notice, to the East or West Indies, New Zealand, or the Cape. And even if, as a rule, men were attached for definite periods to regiments, do you suppose the authorities would scruple to break the rule if it suited their convenience? However, whether for good or for evil, I much fear the regimental system is doomed. Nowadays it seems only necessary to agitate against any institution for a certain time, and down it goes. The age is destructive, not constructive, and feeling this I have once or twice tried to draw attention to the advantages of a station system with appointments for fixed periods. Surgeons being attached to stations somewhat in the same way that chaplains are, as a means of giving some kind of fixity of tenure in exchange for that assured to regimental Medical officers by the regimental system, the fixity of tenure assured to us by a station system would not be so secure as that guaranteed to us by the regimental system, because, although we might be appointed to stations for fixed terms of years as a rule, I believe the authorities would break the rule. Still, it seems to me that some rule would be better than no rule at all, and I look on a station system as preferable to an *attached* regimental system. If fall the old regimental system must, surely it is wise to consider what we are to replace it with, and I can think of nothing better than a station system with appointments for fixed periods. If nothing will satisfy people but abolishing the real regimental system, pray don't replace it with a bastard regimental system, such as the attaching of men would be. Surely regimental Medical men have no wish when they are turned out of their regiments to become wandering Arabs; and if they don't I should very much like to see some suggestions as to how this is to be prevented. If Surgeons were engaged for special foreign service, and the home separated completely from the foreign, this would at any rate limit to a certain degree the extent of sea and land over which one might be travelling at a few hours' notice; and it seems to me that sooner or later the home army will be separated from the foreign army or armies. The idea now seems to be, short enlistments for the active army or first line, and considerable reserves, men being merely taught their drill in the line and passed on to the reserve. It is evident that the more service is reduced in the first line or active army as to duration, the more difficult it will be to carry out the foreign reliefs, and I look forward to the day when not only India, but all our other foreign possessions, except perhaps the Mediterranean stations, will be garrisoned by soldiers specially enlisted for the purpose. If that be the future in store for the combatant, what is in store for the non-combatant? And perhaps the question may even be asked, whether, in the event of the regimental Medical system being abolished, it would not pay the country to engage Medical men specially for all our foreign possessions, even in anticipation of the armies garrisoning our foreign possessions becoming local. If such a plan could be adopted, Surgeons would more likely be contented than at present. There would be no grumbling about the foreign service roster. Men would elect for a particular colony or possession, and make up their minds to live there. Some would fancy the East Indies, some Canada, some the Cape, and so on. Probably some stations would require to have higher pay attached to them, and rightly. All men going in for foreign service should have extra pay. India would pay her Medical service, and why should other colonies not pay for theirs? All Medical men electing for foreign service would probably require to be a long-service and pensioned race. The service would require in all or most cases to be made a career in itself to them. If this plan were adopted, it would, as above mentioned, limit the wanderings of the army Medical officers after the break-up of the regimental system. But if these foreign-service Medical officers required by the nature of their service to be a long-service and pensioned race, does the same necessity apply to the home Medical service, supposing that in time it is separated from the foreign? Could they not, as I proposed before, be allowed to retire to the ranks of civil life after leaving that service on temporary pensions, proportional, as to amount and duration, to the number of years actually served? Would it not pay the country to offer every encouragement to the members of the home service to do so? Could not the army Medical service be made a stepping-stone to advancement in civil life to the many, a career to the few? It seems to me that, if such a plan were adopted, and army Medical men allowed to go at any time on pensions sufficiently liberal, though temporary, all necessity for putting old officers on the staff as a means for accelerating promotion would be done away with. It would, I imagine, act something like the purchase system, which used to tap, not only the top, but every rank. I do not like the idea of forcing old efficient Medical officers into retirement against their will at a time of life when they are too old to begin private practice, merely that some others may get their places, unless Government is prepared greatly to increase the present pensions; but unless some plan to accelerate promotion is hit upon, agitation will go on till forced retirements become the order of the day. I feel almost certain that many men would go early on temporary pensions of a moderate amount, and if they did the result would be that the Medical Department would come to be officered partly by a few men in the higher ranks, who had made the army a career, and partly by a number of men in the junior ranks, who entered for short service. There probably would not be many men in the middle periods of service. I think the majority would leave early. Some of those likely to be put on the shelf might think over this, and perhaps someone will write you his views on the subject. Unless something is done grumbling will go on. Promotion in sixteen years would suit many now in the army; and really, when we consider it, sixteen years is a long time for a qualified man to spend in the position of a species of clinical clerk. In time to come, will men be obtained for such situations so easily as at present? Men enter the service under the idea that it will improve. If improvement never comes, will they continue to do so? Do the authorities hope for high-class men? . . . . . Medical distinction of rank somehow seems to me more artificial than military distinctions among the combatants, but as long as they continue to exist, slowness of promotion will lead to discontent; and unless Surgeons-Major want to be put on the shelf, they had better settle on some other plan to quicken it. I am, &c., X. X.

COMMUNICATIONS have been received from—

Dr. F. P. Smith; Mr. F. H. Welch; X. X.; Dr. Cheadle; Mrs. Baines; Dr. E. D. Gribbin; Professor Laycock; Dr. H. Auspitz; Constant Subscriber; Dr. Elliott; Dr. E. Haughton; Mr. J. M. Davenport; Mr. Henry Moody; Dr. Hogg; Dr. Sedgwick; Vectis; Dr. Dalzell; R. C. C.; Dr. Arthur Gamgee; Mr. H. C. Sorby; Mr. C. Brooke; Mr. J. Chatto; Dr. J. D. Walker, Dr. Talfourd Jones; Mr. W. Rigden; Mr. Eben. Watson; Mr. W. B. Owen; Mr. M. Rearden; Mr. Leoni; Mr. G. Smith.

BOOKS RECEIVED—

Remarks on the Necessity for Legislation in reference to Habitual Drunkards, by Dr. F. Needham—Notizie Cliniche sulla Difteria, per Gavino Gulia—Waring's Manual of Practical Therapeutics, 3rd edition—The Chronology of the World, showing the Approaching Termination of the Six Thousand Years of Human History—Bastian on the Modes of Origin of Lowest Organisms, including a Discussion of the Experiments of M. Pasteur—Lumley's Medical Officer's Manual—The Cry of the Children from the Brickyards of England: a statement and appeal, with remedy, by George Smith.

PERIODICALS AND NEWSPAPERS RECEIVED—

Indian Medical Gazette—Monthly Homœopathic Review, June—Birmingham Daily Post—Boston Medical and Surgical Journal—The Weston-super-Mare Gazette—Glasgow Herald—The American Journal of Obstetrics, May—Lancaster Observer—Medical Press and Circular—New York Medical Journal—American Journal of Psychological Medicine.

APPOINTMENTS FOR THE WEEK.

June 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

Royal Institution, 3 p.m. Joseph Norman Lockyer, F.R.S., "On the Instruments used in Modern Astronomy."

12. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

13. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. Paget, "On the Removal of Tumours from Bones." Mr. Spencer Wells, "A Fourth Series of 100 Cases of Ovariotomy."

14. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Epidemiological Society, 8 p.m. Election of Office-bearers. Adjourned Discussion on Inspector-General Lawson's Paper.

15. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

16. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Royal Institution, 9 p.m. (extra evening meeting.) Mr. Wm. Bradford, "On the Esquimaux and Ice of Greenland" (illustrated by drawings and photographs).

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 3, 1871.

BIRTHS.

Births of Boys, 1024; Girls, 968; Total, 1992.
Average of 10 corresponding weeks, 1861-70, 2035·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	771	622	1393
Average of the ten years 1861-70 . . .	650·6	597·2	1247·8
Average corrected to increased population .	...	...	1373
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	10	1	5	3	9	2	2	2	4
North ...	618210	116	2	5	3	3	3	6	3	3
Central ...	383321	11	2	1	1	2	...	1	1	1
East	571158	17	...	6	2	6	2	2	4	3
South	773175	75	11	8	1	8	3	9	3	9
Total	2803989	229	16	25	10	28	10	20	13	20

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·980 in.
Mean temperature	53·9°
Highest point of thermometer	74·6°
Lowest point of thermometer	40·3°
Mean dew-point temperature	46·7°
General direction of wind	N.E. and N.
Whole amount of rain in the week	0·10 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 3, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending June 6.	Deaths Registered during the week ending June 6.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	1992	1393	74·6	40·3	53·9	12·17	0·10	0·25
Portsmouth ...	125464	13·2	74	41	78·4	35·2	56·9	13·83	0·00	0·00
Norwich	81787	10·9	47	27	74·0	41·0	50·9	10·50	0·34	0·86
Bristol	173364	37·0	129	71	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	47	23	77·2	38·1	51·2	12·33	0·00	0·00
Birmingham ...	378574	48·3	250	154	77·4	38·0	54·4	12·44	0·22	0·56
Leicester	101367	31·7	78	28	76·7	39·2	53·1	11·73	0·00	0·00
Nottingham ...	90480	45·3	51	28	78·8	38·4	54·8	12·66	0·06	0·15
Liverpool	526225	103·0	370	277	73·2	41·4	54·4	12·44	0·02	0·05
Manchester ...	379140	84·5	212	143	75·0	37·0	55·5	13·05	0·04	0·10
Salford	123851	23·9	70	81	71·5	36·6	53·6	12·00	0·07	0·18
Bradford	148030	22·5	93	56	75·5	41·6	55·4	13·00	0·00	0·00
Leeds	266108	12·3	265	105	76·0	42·0	54·3	12·94	0·03	0·08
Sheffield	255247	11·2	185	92	77·0	41·0	53·1	11·73	0·02	0·05
Hull	135195	38·0	90	53	70·0	37·0	49·4	9·66	0·07	0·18
Sunderland ...	103037	31·2	65	56	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	125	72	65·0	39·0	48·5	9·16	0·00	0·00
Edinburgh	179944	40·6	162	110	76·0	40·0	56·4	13·55	0·07	0·18
Glasgow	477627	94·3	390	328	70·7	38·0	54·0	12·22	0·20	0·51
Dublin (City, etc.)	322321	33·1	200	164	75·9	38·2	56·4	13·55	0·04	0·10
Total of 20 Towns in United Kingd'm	7336961	34·4	4895	3302	78·8	35·2	53·8	12·11	1·28	3·25

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·98 in. The highest was 30·09 in. on Monday evening, and the lowest was 29·85 in. on Thursday at noon.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

ORIGINAL LECTURES.

LECTURES DELIVERED
IN THE
PHYSIOLOGICAL LABORATORY OF UNIVERSITY COLLEGE.

By J. BURDON-SANDERSON, M.D., F.R.S., F.R.C.P.,
Professor of Practical Physiology.

Lecture VII.—On Vascular Nerves.

We have hitherto regarded the arteries merely as passive elastic tubes, subject, indeed, to variation in diameter, but varying only in consequence of changes in the pressure made by the circulating blood on the internal vascular surface. We have to-day to study them, not only as elastic, but contractile.

The arteries owe their contractility to the unstriped muscular fibres which they contain. These fibres contract under the influence of impressions conveyed to them by the vascular nerves, which nerves, together with the automatic centre from which they radiate, constitute *the vaso-motor nervous system.*

Of the centre which governs arterial contraction we know nothing anatomically. In other words, there is no point in the brain or spinal cord to which the vascular nerves can be traced back. All that we know about it (and we shall see that we really do know a good deal) has been learnt purely and exclusively by experiments. Before describing these experiments, I will enumerate in their natural order the facts which we have learnt by them.

That there is a vaso-motor centre, and that it is situated in the encephalon, we learn by observing—first, that if the spinal cord is divided immediately below the medulla oblongata, all the arteries are dilated; and, secondly, that if we excite certain afferent nervous fibres which lead to the medulla oblongata, we can produce a similar effect, though in considerably less degree. Thus we learn, on the one hand, that the arterial muscles cease to act when the communication between them and the encephalon is severed, even though the rest of the nervous system remains entire; and, on the other, that their action can be modified by exciting a *cranial* nerve—*i.e.*, by an agency which can only reach them through the medulla oblongata.

That the vaso-motor centre is in constant automatic action is shown by the paralysing effect of section, whether of the spinal cord or of any nerve known to contain vascular fibres. If the action of the centre were not constant, division could not produce arterial relaxation. In relation to this constancy of action we use the word *tonus.* Arterial tonus means that degree of contraction of an artery which is constant and normal. It is maintained only so long as the artery is in connexion with the vaso-motor centre.

The channels of communication between the centre and the arteries are partly spinal, partly sympathetic. That they are spinal is shown by the fact that stimulating the spinal cord, in any part of its extent, produces arterial contraction in corresponding regions of the body. That they are also sympathetic is shown by the effect of dividing various nerves belonging to the sympathetic system, in producing vascular paralysis of the parts to which they are respectively distributed. The vascular nerves of the integument of the head were shown by Bernard, long before the general arrangement of the vaso-motor nervous system was known, to be included in the cervical portion of the gangliated cord. More recently we have learnt that the vascular nerves of the extremities, although springing from the sympathetic trunk, ultimately originate from the anterior spinal roots, and that the abdominal viscera receive their supply from the splanchnics.

In the present lecture I will confine myself to the simpler phenomena of vascular contraction and dilatation. I will show that stimulation of a vaso-motor nerve produces contraction of the arteries to which it is distributed; and section, paralysis; that, just as section and stimulation of an ordinary motor nerve paralyses or stimulates its muscle, excitation of the spinal cord produces vascular narrowing, and hereby increased resistance to the circulation of blood, and increased arterial pressure; that, when sensory nerves are excited, two effects are produced of an opposite nature, which mutually modify each other: reflex dilatation of the arteries which supply blood to the region to which the nerve is distributed, but increased arterial tonus in other parts of the body.

It is not at all necessary for me to insist on the importance of this subject. It is clear that many of the most striking phenomena of disease, particularly those of fever, inflammation, and collapse, must find their explanation in disordered vascular innervation. It cannot be doubted that we are in a much better position now to understand these phenomena than we were ten years ago, but, in its application to pathology, the subject is still full of difficulties and perplexities. So much is this the case, that it is expedient rather to warn the student against making practical deductions too hastily than to suggest them to him. You will find that, of late years, a whole series of groundless doctrines about disease and its treatment have been put forward, based on some supposed perversion of the function of the vaso-motor nerves. Let me assure you that, notwithstanding the immense progress which has been made since 1860, our knowledge of the function of these nerves is not yet exact enough to afford a safe ground for pathological speculation. Experimental physiologists must go several steps further before the practical Physician can reap the rich fruits of their labours.

Observation XXIV.—Ludwig and Thiry's Experiment.

In 1863 the lamented v. Bezold published his well-known researches on the nervous system of the heart. Among a number of other less important discoveries, he showed for the first time the nature and extent of the influence exercised by the brain and spinal cord on the circulation of the blood. He found that when in a curarised rabbit or dog the spinal cord is severed from the brain, the arterial pressure sinks very considerably, while at the same time the number and extent of the contractions of the heart are diminished; and that if, on the other hand, the upper end of the divided spinal cord is irritated below the point of section, the arterial pressure rises to its original level, and the heart to its previous activity. As in this experiment the changes of arterial pressure follow the excitation of the spinal cord directly, there is not the slightest doubt that the result is to be attributed in the one case to increased contraction, in the other to relaxation of the muscular fibres in the walls of the great system of tubes in which the blood is contained; but it was not shown by v. Bezold whether the muscular fibres affected were those of the heart or those of the arteries. Bezold, indeed, himself believed that the diminution of arterial pressure after section of the cord was mainly due to relaxation of the heart.

The determination of this question, which evidently is a fundamental one, is the purpose of the experiments which I have now to describe to you. The facts demonstrated are—first, that if, in animals in which the cord has been severed from the medulla oblongata, the state of the arteries is observed before, after, and during electrical excitation of the upper end of the severed cord, it is seen that they contract; and, secondly, that if all of the nervous communications between the cerebro-spinal centres and the heart are divided, and if the effects of stimulating the cord observed before and after this operation are compared, it is seen that there is, *so far as relates to pressure*, no material difference in the effect on the circulation produced in the two cases, and consequently that the whole of it is arterial.

The leading experiment is as follows:—Two centigrammes of curare, dissolved in a cubic centimètre of water, are injected below the skin, and, immediately after, artificial respiration is begun. This dose is sufficient, as was first shown by v. Bezold himself, to paralyse the extremities so completely that neither stimulation of the cord nor of any muscular nerve produces the slightest contraction of voluntary muscles; while, as we shall see on another occasion, it is not sufficient to interfere with the action of the heart. Respiration, of course, ceases, but it is maintained, as I have said, mechanically, the means employed for the purpose being a pair of bellows, the tube of which communicates with a canula adapted to the trachea of the animal. No arrangement of valves is wanted; it is sufficient that there should be an opening in the canula by which air may escape between one inflation and its successor—*i.e*, during the period which corresponds to expiration. During each injection it is obvious that a large proportion discharged by the bellows is lost, but this waste is of no practical importance. As it is necessary, in performing artificial respiration, that the number of injections per minute and the quantity injected at each stroke should be uniform, various contrivances are used in laboratories for the purpose. When a motor which acts with perfect regularity (such as the gas-engine which is used in the Physiological Institution at Leipsic) is at hand, there is, of course, no difficulty. In the absence of a motor of this kind, the bellows must be worked by an assistant, in which case it must be fitted with a graduated check, so that the quantity of air delivered at each stroke may be constant; the rate per minute must be regulated by a metronome.

The membrane between the atlas and the occipital bone having been previously exposed, and one of the carotid arteries connected with the manometer of the kymograph, observations are taken of the arterial pressure, and of the frequency of the pulse. This done, the spinal cord is divided at the atlas. Immediately the rate of pulsation is diminished, say from 140 to 100; and after a few seconds the arterial pressure sinks, say from three or four inches to one or two. Needles are then inserted into the spinal cord, one at the upper edge of the atlas, the other at the lower edge of the axis, both of which are connected with the secondary coil of Dubois' induction apparatus. At once the heart beats more frequently and vigorously, and the mercurial column attains its former level.

Fig. 32.

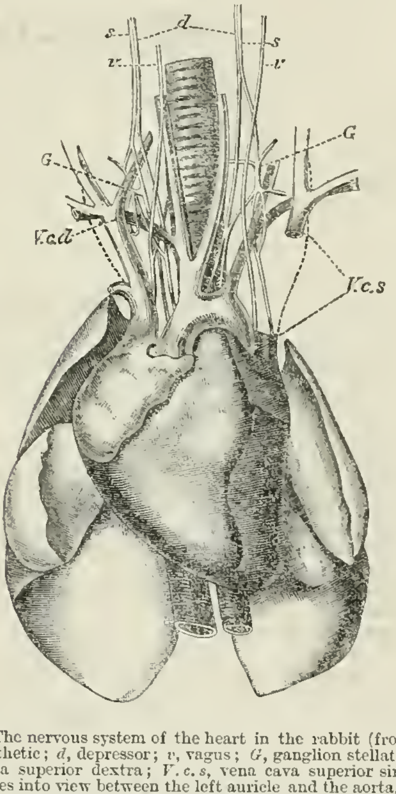

Fig. 32.—The nervous system of the heart in the rabbit (from Ludwig). *s*, sympathetic; *d*, depressor; *v*, vagus; *G*, ganglion stellatum; *V. c. d*, vena cava superior dextra; *V. c. s*, vena cava superior sinistra. This vein comes into view between the left auricle and the aorta. Part of it is removed to show the trunk of the sympathetic, which lies immediately behind it. The dotted lines indicate the position of the phrenic nerves. In the preparation represented, the left subclavian springs abnormally from the anonyma instead of from the aorta.

The next step in the experiment is the destruction of the cerebro-spinal cardiac nerves. These nerves, as you know, reach the heart or leave it either through the vagi or the sympathetic. Their arrangement in rabbits is not materially different from that which exists in man. Their relation to each other in the neighbourhood of the heart must be learnt by dissection. At the upper opening of the thorax they are contained in the space between the two *venæ cavæ sup.* In this region the vagus of the left side passes down in front of the subclavian artery, close to the *ganglion stellatum—i.e.*, the last cervical ganglion of the sympathetic. The right vagus is in corresponding relation to the right subclavian. The sympathetic trunk gives to the heart on either side two branches, of which the upper springs from the cervical ganglion, the lower from the stellate ganglion. On the left side, the two nerves, after meeting in a small ganglion, pass behind the arch of the aorta. On the right side, they unite immediately below the right subclavian artery. Lower down, they are to be found between the trachea and the great vascular trunks, lying in the fatty cellular tissue which exists in that situation, and finally reach the space between the root of the aorta and the pulmonary artery, whence filaments are distributed to the substance of the heart. The destruction of the nerves is best effected with the galvanic cautery, the action of which is more certain and more easily controlled than any other agent which could be employed. It answers the purpose so completely that, on careful subsequent dissection, it is found that every nerve is severed. As soon as the destruction of the nerves is effected, the spinal cord is again excited, great care being taken that the strength of the current shall be the same as in the previous observation. The results always obtained are, that both the arterial pressure and the frequency of the pulse are affected by excitation of the cord, exactly in the same way as when the cardiac nerves were untouched. For the direct observation of the effect of irritating the cervical spinal cord on the arteries, the vessels best fitted are the renals and the *arteria saphena*, which in the rabbit runs comparatively superficially along the internal surface of the thigh. During stimulation of the cord the contraction of the renals is often so marked that the kidney becomes obviously anæmic; in the arteria saphena the blood-stream becomes so small as to be almost invisible. Ludwig and Thiry extended their observations to a large number of arteries in various parts of the body, in all of which the same phenomenon manifested itself with more or less distinctness.

In the frog the effect of exciting the central nervous system on the capillaries may be very readily demonstrated. All that is necessary is to insert two pointed wires (of platinum) in the spinal cord, immediately in front of the scapulæ, at a short distance from each other, having previously arranged the web so as to observe one of its arteries under the microscope. The electrodes are connected with the secondary coil of the induction apparatus, with the intervention of a Dubois' key. It is most convenient to insert the electrodes a little above—*i.e.*, in front of—the scapulæ; for in this situation the cord can be reached more easily than anywhere else. The eye being fixed on the artery, it is seen that, at the moment the secondary circuit is closed with the key, the vessel contracts in the most obvious manner; the narrowing being often sufficient to bring the circulation to a standstill. The contraction seems to begin almost immediately after the current is closed, and diminishes gradually from the moment that it is broken. There are, however, in these and other respects, considerable differences in the results observed in different animals, the conditions of which have not yet been determined.(a)

Observation XXV.—Bernard's Experiment.

The experiments by which we prove that certain nerves known to contain vascular filaments are really vaso-motor are comparatively simple. The most important vaso-motor nerves are the cervical sympathetic trunk and the splanchnic nerves. With reference to each of these, it is possible to show experimentally that section paralyses the arteries to which it is distributed; and that stimulation of the cut end, which is still in connexion with the periphery, determines their contraction. In the case of the cervical sympathetic, the demonstration is extremely simple. In a chloralised rabbit an incision about an inch in length is made, parallel with, and to the left of, the trachea, so as to expose the edge of the sterno-mastoid muscle. The carotid artery is then brought into view, separated from the vagus, and drawn forward from beneath the edges of the muscle with a small hook, when it is seen that two small nerves, both much smaller than the vagus, are drawn forward with it, imbedded in the membranous sheath. (See Fig. 33.)

Of these two nerves, one, which is the smaller of the two, is the depressor—an important cardiac branch of the vagus, of which I shall have to speak in another lecture—the other is the sympathetic. To discriminate between them, all that is necessary is to trace them both upwards. It is then seen that the depressor arises by one root from the vagus trunk, by another from the superior laryngeal; whereas the sympathetic continues its course upwards alongside of the artery. The sympathetic is also distinguishable by its grey colour. A ligature having been placed round the nerve, the ear must be carefully examined before dividing. Straight up the middle line of the ear on its external surface runs the posterior auricular artery, dividing towards the top into three branches, which communicate with each other by anastomotic arches. In contemplating the artery and its branches, you will not fail to notice its rhythmical changes of diameter. At one moment it appears as a red streak of moderate breadth, at the next it contracts to an almost invisible thread, and similar widenings and narrowings follow each other at intervals of from five to ten seconds. In the rabbit these peristaltic waves are to be observed not only in this but in many other arteries, and probably exist throughout the whole system. For the purpose of our experiment it is well to fix the ear in such a position that the artery may be viewed with a horizontal microscope fitted with a two-inch objective and micrometer eye-piece; and careful measurement should be made before and after excitation of the sympathetic.(b) On dividing the nerve it is seen that the artery dilates, the rhythmical movements cease, and the whole vascular network of the ear rapidly becomes injected with blood. If the ears are held one in each hand, it is felt that that of the injured side is sensibly warmer than the other. On exciting the peripheral cut end, the artery contracts and the congestion disappears; so that, instead of being redder and warmer, the difference is rather in the other direction. As this is the first time that we have applied the electric stimulus to a nerve, I must shortly describe the method.

(a) This beautifully simple experiment we owe to Dr. Stricker, with whom I had the pleasure of repeating it here very frequently last summer.

FIG. 33.

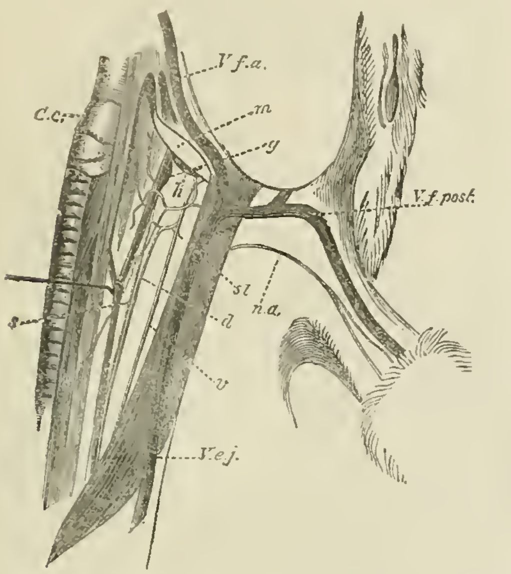

FIG. 33.—Sketch showing the relations of the most important nerves and vessels in the neck of the rabbit. *v*, vagus; *s*, sympathetic; *g*, superior superior cervical ganglion (shaded by mistake); *h*, trunk of the hypoglossal nerve (shaded by mistake), from which the descendens noni springs. After receiving a communicating branch from the cervical plexus, it crosses the sheath of the carotid, and divides into ascending and descending muscular branches. *d*, the depressor, which, in this case, springs entirely from the superior laryngeal, but usually, also, receives a root from the vagus; *n. a*, n. auricularis magnus; *V. e. j*, external jugular, which receives the anterior and posterior facial veins: the latter receives the auricular vein, which serves as a guide in finding the nerve.

The excitor consists of a couple of pointed copper wires, which are fixed parallel to each other in an ivory holder, at a distance of about the tenth of an inch. Of these two wires the ends opposite to the points are severally connected with the opposite poles of the secondary coil of Dubois-Reymond's induction apparatus. In applying the points, all that is necessary is that both of them should be in contact with the nerve, which must be so isolated from surrounding structures that the influence of the current may be limited to the part on which it is intended to act.

OBSERVATION XXVI.—LOVÉN'S EXPERIMENT.

The animal which has been already employed for the experiment on the cervical sympathetic, and is still under the action of chloral, will serve to illustrate the fact which stands next in importance to those relating to the direct effects of section and excitation of a vaso-motor nerve. I refer to the reflex effects of electrical excitation of sensory nerves. When the experiment is made, as it was first made by Lovén, on a curarised animal, two distinct and, indeed, antagonistic modes of action manifest themselves—first, a general action, which gives rise to an increased arterial pressure; and, secondly, a local action, showing itself in vascular congestion of the region to which the irritated sensory nerves are distributed. The increased arterial pressure is due, not to any increase in the vigour with which the heart contracts, but to general narrowing of the arteries, and consequent increased resistance. The local congestion results from what has been called a reflex paralysis—a paralysis *really* quite as complete as that produced by section of the sympathetic, and, in the non-chloralised animal, *apparently* more so; for, in consequence of the general increase of arterial tension, the relaxed arteries give way, and enlarge more than they do when the vaso-motor nerves are divided.

For this experiment, which is as simple as it is conclusive, we take the vessels of the left ear, those of the right having been already paralysed. The ear of the rabbit derives its sensibility from two nerves, both of considerable size. One of these, the posterior auricular, approaches the surface at the back of the neck, very near the middle line, and runs forward, under a thin covering of muscle, to the root of the ear, where it penetrates a process of cartilage, easily felt in passing the finger from the occiput outwards. By making an incision between this process and the occipital spine, the nerve can be very easily found. The other nerve (n. auricularis magnus, see Fig. 32) springs from the anterior branches of the second and third cervical nerves; it becomes superficial at the posterior edge of the sterno-mastoid, and then runs upwards, covered only by integument towards the thin edge of the external ear, where it soon divides into two branches. It is most easily found at the root of the ear, just before it divides. Both of these nerves contain fibres which are in reflex relation with the vaso-motor system; but there is considerable difference between different animals in their distribution, it sometimes happening that physiological evidence of their presence exists in the one, and not in the other. For this reason, we must be prepared, if we do not obtain the desired result by exciting the anterior branch, to proceed at once to the posterior.

The mode of experimentation is the same as that employed just now for exciting the cervical end of the sympathetic. The nerve to be acted upon must be divided, and the central end placed between the two electrodes. From three to five seconds after the closing of the current, the artery will be seen to dilate, and if we then break it, the dilatation will last perhaps for ten seconds, after which it will gradually diminish, the vessel contracting to a size smaller than it had before. If care is taken neither to prolong the excitations unduly nor to use too strong currents, the experiment may be repeated a great number of times, so that all may have the opportunity of seeing the results.

Lovén obtained perfectly similar results in his experiments on the vascular nerves of the lower extremity. It was first ascertained that the arteria saphena receives its vascular supply from the saphenus nerve by preliminary experiments, in which it was found that, by division of that nerve, the artery was paralysed, and that it contracted when the peripheral end was electrically excited. The peronœal nerve, which in the rabbit, as in man, ends in branches distributed to the dorsum of the foot (dorsalis pedis), was selected for excitation on account of the partial correspondence between its distribution and that of the artery, and of the circumstance that it can be excited at such distance both from the artery and its vaso-motor nerve that the result could not possibly be attributed to any direct interference with either. The changes which occurred in the arteria saphena during excitation of the central end of the muscular cutaneous nerve are entirely similar to those we have been observing in the auricularis, both as regards the interval between the commencement of excitation and the dilatation of the artery and its duration.

What is the nature of this reflex paralysis? It signifies that the vaso-motor centre, which, as I have said, is always in a state of activity, has its action suspended—or, as some prefer to call it, inhibited—so far as relates to the vaso-motor nerves of the region over which the effect extends.

As I stated before, when the experiment is made as Lovén himself made it—on an animal paralysed with curare—the effect is more complicated than it is in a chloralised animal, for two kinds of effect are produced. There is, so to speak, a struggle between two opposite conditions—vascular spasm and vascular paralysis—relaxation in the region of the excited sensory nerve, contraction in all other parts of the body, the degree of which can be easily judged of by the inspection of such arteries as can be exposed, just as in Thiry's experiment.

The meaning of this antagonism is, that in the chloralised animal the influence of the cerebral hemispheres is suspended, whereas under curare they are still active. The irritation of those centripetal fibres which are concerned in the sensation of pain exercises an influence on the vaso-motor centre which is opposed to that of the fibres which enter it directly from sensory nerves—in other words, the vaso-motor centre receives impressions, when a sensory nerve is irritated, of two kinds—impressions which are conveyed directly, and others which reach it through the cerebral hemispheres—the former diminishing or inhibiting its action on the vessels, the latter adding to or augmenting that action. In the curarised animal the arteries all over the body contract, because the brain is in action. When the hemispheres are paralysed, no such effect is produced. The facts on which my statement is founded will be considered in next lecture.

(b) The ear may be readily fixed for this purpose with the aid of Czermak's rabbit-holder.

ORIGINAL COMMUNICATIONS.

NOTES ON THE PATHOLOGY OF MALIGNANT NEW GROWTHS.

By HENRY ARNOTT, F.R.C.S.,
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II.

CARCINOMA.

BEGINNING with the most virulent of malignant growths, that variety of cancer familiar to Surgeons under the form of scirrhus of the breast is the first to claim our attention. This is the tumour about which the hottest controversies have been waged by pathologists as to its intimate structure, etiology, and mode of growth, and by Surgeons as to its curability by operation or otherwise. And this warfare has itself sufficiently demonstrated the necessity for the harmonious co-working of these two classes of observers; for it has been a common resource of those Surgeons who maintain the constitutional nature of the disease and the impossibility of its cure, to assert that an alleged cured cancer has been only a chronic mammary or some other simple form of tumour; and the uncertainties hitherto attending the diagnosis of mammary cancer, even with the advantage of a microscopic examination, have rendered this process of begging the question less assailable than it is hoped it may be in future. Since the great debate in the French Academy on the diagnostic characters of the cancer-cell, there has always been a hazy notion afloat in this country that, in spite of the conflicting views expressed on that occasion, there is unquestionably some mark distinguishing the cells of a cancer from those of any other tumour; and many of those who have given up the ancient idea of a "typical caudate form," still believe that there are certain signs—as a large eccentric nucleus, or the presence of "mother" cells containing one or more smaller ones—by which these cells may be distinguished. At the present time, however, the question troubling the pathologist is the source of these cells rather than their peculiar characters, since it is now believed that their distinctive characters are to be sought in their arrangement rather than in the form of the cells themselves. Are they developed from epithelium, connective tissue corpuscles, or wandering white blood-cells? This inquiry has taken the place of the former, since more extended observation has shown that cells microscopically indistinguishable from those of scirrhus may be found in granulations, in certain sarcomata, in glandular growths, and even in healthy parts, as the pelvis of the kidney and the prostate. Nay, so completely has the "cancer-cell" fallen from its former position, that certain modern pathologists affirm that this form of cancer should be called "alveolar fibroma," as best expressing the real nature of its structure.

The microscopic cell of a scirrhous cancer seems to be in its younger stage a spherical mass of protoplasm containing a comparatively large oval nucleus with bright nucleolus, much resembling the cells of the *rete mucosum*, or lower layers of the cuticle; but, like these, as development proceeds, the spherical cells, closely squeezed together and increasing in volume, undergo various modifications of size and shape, according to their rapidity of multiplication and the extent and direction of peripheral pressure. The cell of scirrhus is in all respects identical with that of medullary cancer; and since these two forms of tumour, with their modifications, constitute the most important group of malignant growths, to all of which English Surgeons are in the habit of applying the term cancer, it becomes necessary to use a distinct name for these most cancerous of cancers. The introduction of new names into a sufficiently complex nomenclature is, however, so great an evil, that it is perhaps wise to accept the Greek word *carcinoma*, already widely so employed, as expressing this form of cancer as defined by the microscopist, and to leave the Latin synonym as a more vague and general term representing merely a malignant tumour. In this sense, then, the word "carcinoma" will be employed in these papers; and this brings us to define strictly what structure it is that is so designated.

A carcinoma may be described as *a tumour in which a more or less dense fibroid growth forms a sponge-like or cavernous framework, whose alveoli are filled with loose cells of an epithelial type, grouped together disorderly, bathed in a clear fluid, and having no visible intercellular material.*(a) If it were desired to give a rough illustration of what is here meant, one might imagine a bit of coarse sponge or honeycomb filled with clear syrup, and the cells of the comb packed with soft and yielding masses, with uniform hard centres, such as would be formed by encrusting hempseeds with jelly. If the honeycomb thus prepared were slightly warmed, and then roughly pulled or squeezed, so as to render its spaces less symmetrical and the little bodies irregularly compressed, there would result a very fair representation of a carcinomatous tumour; and on cooling and cutting thin sections of such a model, the network of wax, enclosing in its meshes variously formed bodies with tolerably uniform oval centres, and a quantity of pellucid, viscid fluid, would strongly remind one of what is seen on examining thin sections of carcinoma under the microscope. Bearing this illustration in mind, it is easy to understand the abundant milky juice which exudes from a freshly-cut scirrhus, as also the large number of cells which float out into the surrounding glycerine when a thin slice of fresh carcinoma is mounted for examination; and the scanty cohesion between these cells further explains their fatal tendency to transplantation to distant organs, being easily hurried away in the lymph- or blood-stream which may reach them. There are thus offered for examination two main structures in carcinoma—the fibroid framework or stroma, and the cells which it encloses.

About the nature of the fibroid *stroma*, whether it consists merely of the compressed connective-tissue basis of the diseased organ, or whether it is a genuine new growth, various opinions have been held. It seems a matter of comparatively small moment. My own observations certainly incline me to regard the stroma as without doubt a portion of the new growth. Numerous specimens in which the stroma has coloured far more deeply with carmine than the cells, others in which (as in Fig. 5) it has been formed of delicate spindle cells, and others, again, in which attempts to trace the development of the several elements have seemed to show me the growth of this stroma proceeding *pari passu* with that of the contained cells, have left little doubt in my mind on this point. This stroma differs a good deal in density and in structure in different specimens; and it is in the proportion of the fibrous to the cellular elements that the distinctions between hard and soft carcinoma exist. In its most typical form, as obtained by pencilling out a thin section of scirrhous breast under water, the stroma is seen to have a delicate fibrillated appearance (Fig. 4), in which are a few spindle-shaped corpuscles, specially observable at the junction of the alveoli. The thicker parts of such a section show similar bands half out of focus, and a comparison of many such sections seems to show that this fibroid substance forms a cavernous system throughout the tumour. In other cases the fibrillation is less apparent, and we have then a homogeneous texture, like that forming the tough substance of a chronic inflammatory product, as in the lung of so-called "fibroid phthisis." More rarely this meshwork is made up

FIG. 4.

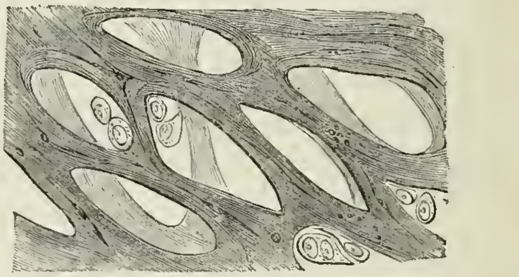

FIG. 4.—The alveolar fibrous stroma of carcinoma, obtained by pencilling out, under water, a very thin section of a scirrhous tumour of the breast. Magnified 220 times.

(a) This definition differs from that of MM. Cornil and Ranvier, in describing the cells as being of an epithelial type, in laying stress upon their disorderly arrangement, and in insisting upon the absence of visible intercellular substance. These modifications are not opposed to the views of Virchow, Lücke, or Rindfleisch; and I venture to think that they are of service in excluding lymphoma, adenoma, and alveolar sarcoma—growths which, from their possessing alveolar stroma, enclosing cell-elements, might be included by any less strictly worded definition.

of beautiful elongated spindle cells. (See Fig. 5.) I hav twice seen this structure, each time in a medullary carcinoma of the breast. As to the form of the alveoli, these may vary as greatly in shape as in size. In the majority of sections from hardened specimens, the spaces will be more or less oval or elongated, and (probably as the result of the action of the hardening reagent) the cells will often retreat slightly from the walls of the alveoli (Fig. 7), rendering the outline of these more clearly discernible. The injections of Thiersch and Billroth have shown this stroma to be abundantly supplied with vessels, and, as might be *à priori* supposed, the delicate vessels in medullary carcinoma, as in other soft new growths, lacking the support offered by the denser fibrous tissues of the firmer varieties, are prone to aneurismal dilatations, and the frequent rupture of these weakened vessels gives rise to the many varieties of colour and consistence which characterise such tumours. The observations of MM. Cornil and Ranvier as to the relation of the minute lymphatics to the alveoli, and the bearing of this point upon the question of extension of the disease, have been already mentioned.

Fig. 5.

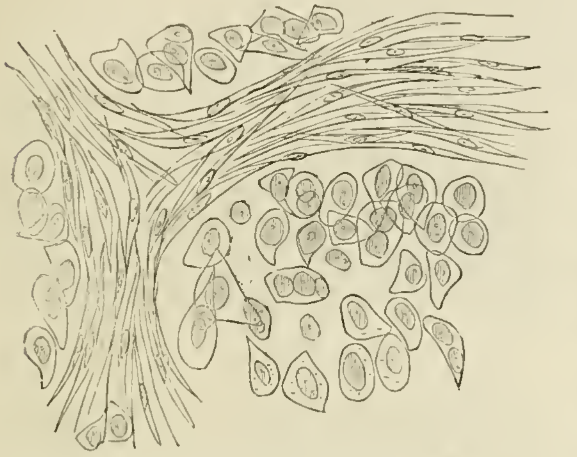

Fig. 5.—Rare form of soft carcinoma, in which the stroma is made up of delicate spindle cells. Magnified 220 times.

The cells of carcinoma are more remarkable for their multiformity of contour and size than for any special peculiarity distinguishing the individual cells. The eagerness with which students look for "mother cells" or multiple nuclei as the cells *par excellence* of cancer soon gives place to the expectation of seeing very few of these—and, indeed, they are comparatively seldom met with, save in the most rapidly-growing softer forms. Perhaps the most constant shape is a slightly compressed oval, five or six times as large as a white blood corpuscle, with a single large oval nucleus, and a bright nucleolus; but in the later stages the cell becomes larger and, in consequence, more irregular in outline (Fig. 6). In the earlier stages of the disease it is common to find the cells small, and of a tolerably uniform oval shape, but arranged in the same way in the meshes of a fibrous stroma. A special attribute of all these cells is a proneness to speedy decay. Hence it is difficult to make a scraping from a divided scirrhous breast which shall not contain many cells more granular than they should be, and some few whose nuclei are obscured by the little bright oily particles which in others so fill the cells as to render its parts wholly undistinguishable.

Fig. 6.

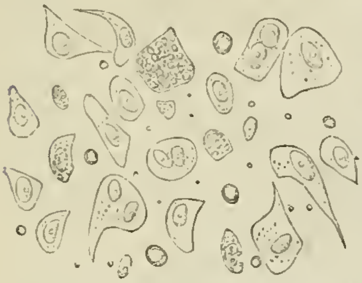

Fig. 6.—Various cell-forms from a carcinomatous tumour. Magnified 220 times.

Having thus briefly described the typical stroma and cells of ordinary carcinoma, it is, perhaps, hardly necessary to state that these are not found in all the perfection of their most typical arrangement in every section of a carcinomatous tumour. Reference has been already made to the fact that the main distinction between hard and soft carcinoma lies in the proportion of the fibrous to the cellular elements. In the softer growths it is sometimes difficult to make out any fibrous stroma at all without careful pencilling, so delicate are the bands, and so wide the meshes. In well-marked scirrhus, on the other hand (as shown in Fig. 7), the alveolar arrangement is particularly conspicuous. But in both of these cases it often happens that, from some defect in the mode of preparation or obscurity caused by excessive staining with carmine, the precise forms of the individual cells are by no means so easy to define as they are shown in these woodcuts. What one often sees is merely a number of dark clusters of cells, of which perchance the nuclei may be tolerably clear, imbedded in a pale, homogeneous, or fibrillated medium; but here much help is obtained by looking round the margin of the section—for even if this be not sufficiently thin (and the edge of the roughest razor-section is generally fine enough for the purpose), the loose cells which float out abundantly into the glycerine in which the section floats are readily discernible, and display perfectly the shapes which are obscured in the denser portions of the specimen.

Fig. 7.

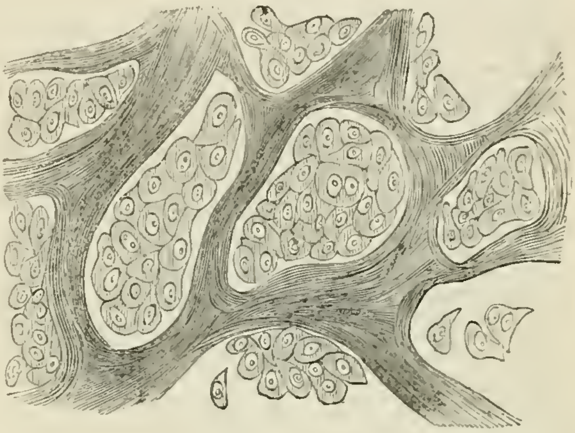

Fig. 7.—Typical mature carcinoma, from a scirrhous breast. Probably by the action of the chromic acid solution employed to harden the specimen, the cells have shrunk away from the alveolar wall to some extent. Magnified 220 times.

Again, in some parts of such a tumour, field after field of the microscope will exhibit only a flat surface of fibrous texture in varying stages of development, and then, perhaps, a few irregular groups of cells will herald the approach of a confused mass of richly cellular structure, which may again as suddenly give place to considerable tracts of connective tissue, or remains of mammary gland, if it be a scirrhus of the breast which is under observation. Moreover, if the section be taken from the extreme margin of the scirrhous nodule some such appearance as is shown in Fig. 8 is seen—namely, a distribu-

Fig. 8.

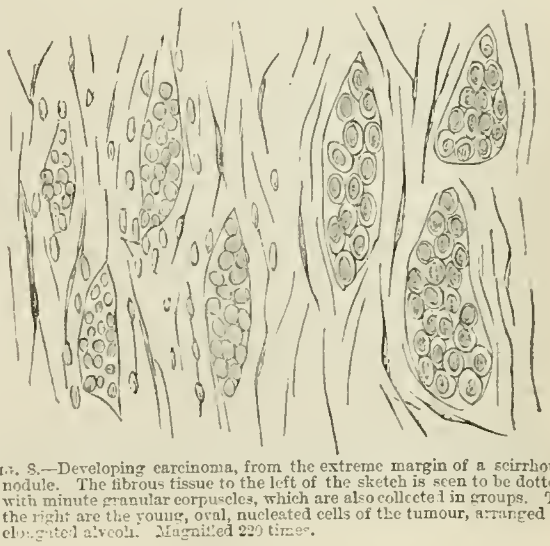

Fig. 8.—Developing carcinoma, from the extreme margin of a scirrhous nodule. The fibrous tissue to the left of the sketch is seen to be dotted with minute granular corpuscles, which are also collected in groups. To the right are the young, oval, nucleated cells of the tumour, arranged in elongated alveoli. Magnified 220 times.

tion through the fibrous tissue of small spherical corpuscles very like leucocytes (the "indifferent granulation material" of Virchow), at first in twos and threes, but soon in larger clusters, until these seem to change into the groups of larger oval nucleated cells, which are not very different from those of mature carcinoma. I say "seem to change" advisedly, for it is very difficult to trace accurately these tissue transformations, and many eminent observers ascribe the origin of the cells of scirrhus to the glandular epithelium, whilst others are equally confident of their development from proliferating connective-tissue elements. It must be remembered, also, that recent observations upon the nature of leucocytes or wandering white blood corpuscles render it possible that these furnish the starting-points for the cells of carcinoma as for those of many other new growths. I am scarcely prepared to discuss here the argument from this last hypothesis which might forcibly suggest itself to those who hold cancer to be a "blood disease." Just as we are beginning to be doubtful about the wisdom of dismissing the terms "effusion" and "deposit," in favour of terms expressing more definitely the idea of local cell-proliferation, so it may be that the recent remarkable experiments of Professor Cohnheim and his followers may bring us again to accept the theory of a "blood disease" as the essential cause of the formation of malignant tumours; but in the present unsettled condition of pathological research, when the discovery of to-day is too apt to be classed with the mistakes of yesterday, we may be fairly excused some reluctance in accepting too unreservedly deductions from experiments made by different observers with conflicting results. Under these circumstances it is prudent to confine ourselves to a statement of what is actually seen in an ordinary specimen of developing carcinoma, and not to trouble ourselves for the present about the true interpretation of these phenomena.

To sum up this hasty review of the microscopic structure of carcinoma, its several stages of development, maturity, and decay may be illustrated by the accompanying diagram.

Fig. 9.

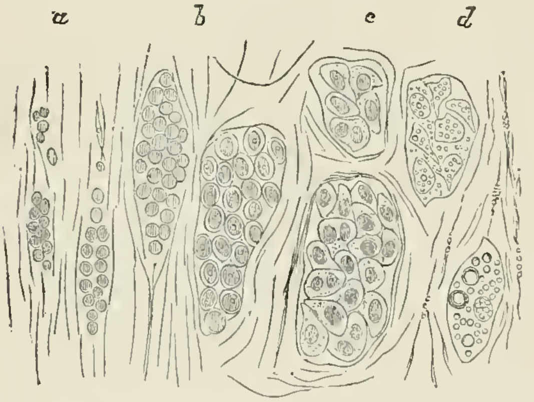

Fig. 9.—Diagram representing the several stages of carcinoma. *a*. Granular corpuscles collecting into groups (connective-tissue proliferation ?). *b*. Young oval nucleated cells clustered together. *c*. Typical mature structure. *d*. Gradual withering by fatty degeneration of cell elements and shrinking of alveoli.

First we have an accumulation of small bodies resembling granulation corpuscles, and which may be leucocytes or (more probably) the product of connective-tissue proliferation (*a*). These gradually form small clusters, and the next appearance is a series of groups of larger oval and nucleated cells (*b*). These, in their turn, give place to well-marked meshes in the fibrous material, filled with irregular densely-packed cells (*c*), the typical structure of carcinoma, and no sooner are these formed than symptoms of decay appear, the cells become gradually obscured by oily accumulation within them, they burst, the oil runs into larger drops; lastly, the connective-tissue corpuscles in the stroma may themselves degenerate; and finally (*d*), we have merely a granular fibroid stroma enclosing spaces filled with oil particles, and in which the arrangement of the remains of the alveoli alone suggest to the observer the carcinoma which has flourished and withered.

I have said that this form of malignant disease is specially typified in ordinary scirrhus of the breast; but the appearances of carcinoma as it affects other tissues, as bone or muscle, undergo certain modifications, and these will be described in the next paper. Those "accidental" conditions of carcinoma to which have been been assigned special names, as colloid, villous, osteoid, melanotic, rodent, etc., will be also there briefly discussed. It would unduly swell the dimensions of these "notes" to enter with any detail into the consideration of the naked-eye characters and clinical features of the various malignant growths. To the Hospital Surgeon the clinical characters of scirrhus are but too well known. The careworn woman who applies with a "lump in the breast," and who displays on uncovering her wasted form the shrivelled hard gland with sunken nipple and puckered skin, and who then complains of the "kernels in the armpit," and of the failure of health and strength, is too familiar an object to need description here, and the many varieties of appearances occasionally met with are amply set forth in such classical works as that of Mr. Paget on Surgical pathology. I am afraid that the description of microscopic structure will sufficiently weary the reader, and I shall risk the charge of incompleteness in dealing with the subject, by dwelling as briefly as possible upon such points as appearances to the naked eye and clinical features of the tumours under consideration.

(*To be continued.*)

ON THE

PROBABLE CAUSE OF THE POST-MORTEM MUSCULAR CONTRACTIONS IN CHOLERA;

AND ON THE PHILOSOPHICAL TREATMENT OF THAT DISEASE.(a)

By JOHN G. FRENCH, F.R.C.S.,
Surgeon to the Infirmary of St. James's, Westminster.

Dr. Marshall Hall, in a valuable paper on the subject of hybernation, published in the *Philosophical Transactions* in 1832, propounded the following aphorism as a law of nature:—"The quantity of the respiration is inversely as the degree of the irritability of the muscular fibre."

The paper in which he advances this doctrine is in the highest degree philosophical and ingenious, and the evidence which he adduces is convincing as to the truth of the law which he declares. The well-known post-mortem contraction of the muscles in some cholera patients do but afford a simple illustration of this natural law, the irritability of the muscular fibre here corresponding with the diminution of the respiration.

Common observation misleads us as to the real condition of hybernation, for even the most eminent physiologists presume torpor and insensibility to be its characteristics. But a more studious inquiry into the subject reveals to us that, while our experience of torpor and insensibility are associated with morbid conditions, hybernation, on the contrary, affords an illustration of that healthful process by which means are adapted to an end, as in all the operations of nature whatever.

In what, then, consists the difference between torpor and insensibility and the characteristics of hybernation? In torpor from the influence of cold we find stiffness, insensibility, and lameness as muscular peculiarities; but in hybernation muscular mobility remains unimpaired. Then, again, in hybernation, what can be a greater mistake than the imputation of insensibility when "the slightest touch applied to the spines of the hedgehog immediately arouses it to draw a deep inspiration, and the least disturbance is felt, and induces motion in the animal."(b)

It is by the study of such subjects as hybernation that we may effect philosophical improvement in Medical practice, and thus bring it into competition with that of Surgery, already rendered philosophical by its great master, John Hunter. For if, in the study of hybernation, we learn the resources adopted by nature to prolong existence without food, when unobtainable by the force of circumstances, so, in the study of disease, we should seek to learn what are nature's methods of sustaining life while reparation is progressing.

No disease affords a richer illustration of these resources than cholera. A knowledge of the expedients which nature actually adopts to sustain life in this disease, under the influence of its mortal poison, indicates, to my mind, the path which should be pursued; and I am convinced, by long experience, that action upon this knowledge leads to the best results in treatment. These expedients may be thus enumerated:—1. Diminution of the heart's action. 2. Diminution of the aëration of the blood. 3. Elimination of the poison. 4. Alteration of the constituents of the blood. 5. Cramps. 6. Veno-contractility. 7. Instinctive sensibility. 8. Diminution of the temperature of the surface.

(a) Read at the Royal Medical and Chirurgical Society, January 24, 1871.
(b) *Opus cit.*

It is true that these symptoms display a dangerous deviation from a state of health, a result to be expected from the presence of a virulent morbid poison; but to hope that any interference with these symptoms would ameliorate the patient's condition, is really, from my point of view, as absurd as to expect that a patient with broken legs should be able to take his usual exercise before the reparation of the injury has been accomplished, although the absurdity is far less obvious.

If, in the accident of broken bones, we deem it necessary to secure such advantages to the patient as easy position, repose, and symmetry of the injured limb, with careful regulation of the diet, it must surely be equally necessary to place the cholera patient under similar advantages; but in order to do so, the physiological condition of this patient must be fully comprehended, and it may be thus explained. The blood, then, contains a mortal poison urgently threatening life. Relief and safety depend on freedom from this poison. The method by which this freedom is accomplished may well fill the mind with admiration and the certain conviction that such a masterpiece of contrivance is to be found in the operations of nature alone; while in the exercise of human ingenuity we too frequently find nothing but blunder. I offer here only a rude sketch of the plan, as a more subtle scrutiny would occupy too much space.

The effect of the poison is, first, to diminish the heart's action, which is necessarily associated with diminution of the aëration of the blood: congestion results, and this is relieved by secretion, which, again, affords both an escape for the poison as well as for such constituents of the blood as might occasion embolism in this abnormal condition of the circulation. The cramps possibly result from the law which assigns increased muscular irritability to diminished respiration, thus affording assistance to a feeble circulation by *vis a tergo*.

Veno-contractility is a term used by Dr. Marshall Hall to express a property which the left ventricle of the heart acquires in hybernation—namely, that of contracting under the stimulus of venous blood—although under ordinary conditions arterial blood alone will excite it to this action. It is possible that veno-contractility in cholera may afford an explanation of that phenomenon, so incomprehensible and even shocking to the mind of Magendie, refuting, as he declared, all that he had taught respecting asphyxia, a condition which he and others have erroneously assumed to exist in cholera.

Of the instinctive sensibility, by which inordinate draughts of cold water are so urgently desired, it may be said the advantage is now generally appreciated; and of the diminution of the temperature of the surface it may also be said that it is a vital phenomenon necessarily associated with the condition of the circulation. It is to be hoped that the reflection that heat more readily radiates to the surface after death than during life may induce Practitioners to desist from useless efforts to warm the surface, especially as they are so harassing to the feelings, and so prejudicial to the recovery, of the patient.

I subjoin a case in illustration of the philosophical treatment above suggested:—

I was called at 5.30 a.m. on Sunday, July 17, 1870, to see Mrs. O., who was supposed to be rapidly dying. The patient was violently attacked with vomiting, purging, and cramps while visiting a daughter the previous evening, and could not be removed to her own dwelling. She was lying upon a sofa; her skin was very cold, but she was unable to bear much covering; her eyes much sunken, and pulse very feeble. Very anxious inquiry was made of me, by several of her relations who surrounded her, if there were any possible chance of her recovery, as her appearance was so altered in a few hours as to be hardly recognisable as the same person she had been the day previously. Her age is 65. I replied that she was in a very serious condition, but that I hoped and expected that in a few days she would be pretty well again; and that I considered her safety depended, mainly, in the strictest attention being paid to the directions I gave for the care and management of her case. Some ice was immediately procured by her son-in-law, and she was to take nothing whatever for the next twenty-four hours but iced water. It was anxiously objected, that she was so cold, and that already she had been able to keep nothing on her stomach for about twelve hours. I assured her anxious attendants that iced water would not only refresh her more than anything else during the whole of the period in question, but that it would not be even safe to give her any other refreshment whatever.

On my second visit, at 9 a.m., I saw her alvine evacuation, which I had directed to be kept for my inspection, and which proved to be what is known as resembling rice water. Having an engagement out of town in the afternoon, I took with me Mr. Edward Samuel Lee, of Savile-row, at 2 p.m., who kindly undertook to visit her again early in the evening, as I could not return until 10 p.m., fearing that the anxiety of the patient's friends might occasion some interference with my instructions during my absence.

10 p.m.—The cramps had subsided; there was still some retching at lengthened intervals; pulse improved; diarrhœa had ceased, and patient felt altogether better, and had had a short but refreshing sleep.

July 18, 10 a.m.—Patient shows considerable improvement in aspect, and in every way; had not micturated since Saturday at 5 p.m.; to have broth if she liked it—a teacupful at a time, and repeated at pleasure. In the evening she took a little tea, and has recently passed a little urine.

Tuesday, 19th.—Has become cheerful, has had a moderate alvine evacuation tinged with green bile. She is to take a few small slices of bread with her broth, and in the evening she is to take some thinly cut bread-and-butter with her tea.

Wednesday, 20th.—Took tea and bread-and-butter for breakfast, gravy soup and bread for dinner, tea and bread-and-butter in the evening, with a return of appetite, and was now quite convalescent, and has remained well.

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CHINESE BLISTERING FLIES.

By F. PORTER SMITH, M.B. Lond., M.R.A.S.

The entomology of China is not peculiarly rich, when we bear in mind its semi-tropical character as a climate. The extreme, or considerable, cold of the country proves fatal to the crowds of insects which infest the house and the field, but of which a mere salvage is saved to renew the sorts. In no country, however, is so much wealth gathered from the labours of insects as in China. The *Coccus lacca*, which produces the gum-lac; the *Coccus pehlah*, which secretes the spermaceti-like wax of Chinese pharmacy; the *Coccus manniparus*, which prepares honey-sugar; the silkworm; the diplolepis-gall produced upon the oak-tree; and the nut-galls (*Wu-pei-tsze*) produced upon the *Rhus semialata*, and *Rhus succedanea*, are instances amongst others of that ingenious turning to account of things which is a strong habit of the utilitarian Chinese.

Insects, a large class, called, in Chinese classifications, *Ch'ung*, and including frogs, mollusks, etc., are consumed by the Chinese as internal remedies.

Centipedes, scorpions, pediculi, and many other larval or imaginal forms of insects, are swallowed in wine as antidotal, derivative, and revulsive remedies. An anomalous creature, called the *Hia-ts'au-tung-ch'ung* ("in summer a plant, in winter an insect"), is a capital sample of a Chinese pet medicine. It is the *Hepialus* moth, with the *Cordyceps Sinensis* (fungus) growing parasitically upon it.

Blistering flies are largely used in China. They are employed as diuretics, and to produce criminal abortion, so that their sale to ordinary persons is scarcely legal, and their use for such a purpose heavily punished by the Manchu Code of China. The *Mylabris cichorii* (*Pan-mau*), the Telini fly of India, is largely used in the country, as in the composition of an eye-powder (*Yé-ming-sha*), commonly believed to be the dung of the bat. This insect is an excellent substitute for the *Cantharis* of European pharmacy. The *Cantharis erythrocephala*, a common European species, is met with in North China, but the *Cantharis vesicatoria* has not been met with.

Species of so-called *Epicauta* are met with in China, and are apparently called *Tsáu-mau*, or Zizyphus bug, from their resemblance to the fruit of that genus of so-called "dates." The genus *Epicauta*, known by their running more to legs and horns, is now generally put with *Lytta* and *Cantharis*.

Another kind of blistering fly, new to European pharmacy, is the *Chú-ki*, or Ailanthus bug. It is called, literally, the "fowl of the *Ailanthus fœtida*," from the noise which it makes in common with other cicadaceous insects of the class *Homoptera*. It is also called *Hung-liang-tsze*, or "red lady-bug," a curious coincidence with the name of a common English insect, the ladybird. Several species or varieties of this insect are described or alluded to in the *Pun-ts'au-kang-muh*, or Chinese Pharmacopœia. The genus called *Huechys*, from the Chinese name for blood, is met with in Java, as well as in North and South China, and other places. The head, thorax, and legs are black; the prothorax is red; the eyes are very prominent; a large red bright spot on each side of the thorax above; the front pair of wings are dark-brown, appearing nearly black when closed on the back of the insect; the hind pair of wings are pale, with brown veins; and the belly of the creature is of a bright vermilion-red colour. Mr. Frederick Smith, of the British Museum, informs me that Burmeister places this insect, which I have called the Red Cicada on page 237 of my work on Chinese Materia Medica, in the order *Cicadina*, family *Stridulantia*. This same gentleman also informs me that Olivier ("Encycl. Method.," v. 756), calls it the *Cicada sanguinolenta*, whilst Amyot and Serville describe it as the *Huechys sanguinea*. This latter name is redundant, as both the genus and species mean bloody. It would be better to call the Chinese species *Huechys vesicatoria*. One Chinese variety is called the "ash-coloured moth." The *chú-ki* is met with in Sechúen, Shansi, Honan, and Hupeh, and frequents the *Ailanthus*, *Broussonetia* (*morus*) *papyrifera*, and several other trees. They are met with in great quantities in autumn, when they make a grinding noise, and are collected by the country people, who sell them, fresh, to the druggists, at a few pence per pound. They are capable of raising a blister, but are much less powerful than the *Mylabris cichorii*, with which they are combined in the treatment of hydrophobia. The legs and wings are removed, and the bodies only used for medicinal purposes. They are recommended, in the *Pun-ts'au*, as a remedy in barrenness, impotency, menstrual disorders, deficient lochia, lumbago, diseases of the eye, etc. The drug is curiously directed to be used as a vaginal suppository in female disorders. It is combined with olibanum, arsenic, sal ammoniac, and rice-paste, as an application to struma of the neck. Their use in hydrophobia, along with the *Mylabris*, to produce strangury, is in accordance with the Chinese theory that the bite of a mad dog impregnates the person, who is not safe until the delivery of a fœtal dog by way of the urinary passages. Hydrophobia is with them the climax of the period of gestation, and they promote parturition by giving the *Huechys* and the *Mylabris* internally; or, rather, they endeavour to induce abortion, as the drug is administered in wine at once in such quantities as to cause violent strangury. Along with the blood and other substances passed by the patient they profess to find a little dog. The Chinese Doctors reason well enough that dog-bitten people die, and may be fairly treated after any extreme fashion. From this it may be gathered that the people die after the remedy even more promptly than after the bite alone. The drug can, therefore, be scarcely recommended for trial in such cases. It is creditable that few remedies are highly vaunted in Chinese Medical works for a malady which is not common in China, where dogs are as plentiful and plaguy as in Constantinople. These blistering cicadas keep very badly, and, therefore, often disappoint the purchaser in China, where drugs are badly treated, like the patients.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

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DISPUTED POINTS IN THE DOCTRINE OF SYPHILIS.

(*Continued from page* 570.)

Having considered the principal facts relating to the kinds of venereal sore commonly encountered, and the relative proportions of these, it will be remembered that the general conclusion we had arrived at with regard to specific infecting sores was, that they might exist either with or without a hard base. This, therefore, seems to be a well-ascertained fact; if so, then to what is the hardening process frequently encountered due? Is it to the nature of the infecting agent, or to the anatomical characters of the parts affected? On this point, the answers we have received are not, in all respects, in unison. Nevertheless, the weight of testimony inclines us to the view we had already entertained—viz., that the seat of the sore has a very important bearing on its character.

In reply to the query—"Is difference of character due to difference in texture of the part affected, or to the infecting agent?"—Mr. Maunder and Mr. Buxton Shillitoe say briefly that the difference, in their opinion, is due to the infecting agent.

Dr. Barton, of Dublin, goes farther; he says:—"The difference appears to me not to be due to the texture of the part affected, as I have observed the two species of sore on very different textures, and upon a great variety of parts. I conclude, therefore, that the difference is due to the difference of the infecting agent in each case."

Mr. Henry Lee thinks the difference is "due to both, but especially to the infecting agent;" whilst Mr. Langston Parker thinks it "in most cases due to the difference of texture." Mr. Berkeley Hill says this "difference of character of venereal sores, as a class, is due to a difference of infecting agents; but, excluding local sores, the initial lesion of syphilis is very greatly modified in its appearance by the texture in which it may happen to be placed. For example, induration is *usually*, not always, very defective on the glans penis, and very copious on the prepuce. This peculiarity is often seen when a sore invades both parts at once."

Dr. McDonnell, of Dublin, writes thus:—"The hardness which surrounds the base of a well-marked, indurated syphilitic ulcer is certainly most distinct when the surrounding areolar tissue is lax; when it (the hardness) encroaches on the glans penis, it is less distinct. It is also less distinct in the labium. On the prepuce, it can be so readily taken up between the finger and thumb, that it is there seen in its most exaggerated degree; and also on the skin of the penis. On the lower lip the hardness feels more diffused, as it does in the labium of the female."

The evidence of the two following gentlemen is very strong:—Mr. James Lane says—"Difference in character is due more to difference of texture and difference in constitution than to the infecting agent." Mr. Gascoyen is still more positive in his statements, and to these we are disposed to give every weight:—"I think the difference in the objective character of sores is due to the difference in texture of the part affected, and to constitutional peculiarities of the individual rather than to the infecting agent."

Thus, the weight of evidence would incline us to believe that site or texture and constitution had more to do with hardness or softness than the nature of the infecting agent. On this subject Bumstead says—"The situation of the chancre influences, to a certain extent, the degree of development of the induration, which, for instance, is generally slightly marked, and of the parchment variety, upon the walls of the vagina and the margin of the anus, while, on the contrary, it is fully developed in the furrow at the base of the glans, and upon the lips. Some authorities have gone so far as to maintain that induration is entirely dependent upon the seat of the sore, and have instanced the uniformity with which all venereal ulcers upon the lips are indurated in proof; but, as before stated, this objection to the duality of venereal poisons has been effectually exploded by recent experimental inoculations, in which chancroids with a perfectly soft base have been developed upon the region in question." Ricord has advanced the opinion that induration corresponds to the lymphatic supply, being most marked where the latter is most abundant, and *vice versâ*. This, nevertheless, seems somewhat more than doubtful.

On this subject Lancereaux makes some interesting remarks. "Accordingly as they occupy one or other of these various situations," says he, "chancres of the genital organs in women frequently present well-marked differences, while on the external surface of the labia majora they usually are distinctly indurated at the base; along their inner edges they usually appear in the form of small ulcers, more or less elongated, which gradually run into each other. Another form of ulcer which appears to belong to syphilitic chancre is also seen in this situation, according to Melchior Robert. It is a rounded shallow ulceration, with rather indistinct edges, the surface of which becomes clean, red, and prominent. This variety of chancre not unfrequently rests upon indurated tissues; at other times it is impossible to discover the least induration, although the corresponding groin presents indolent glandular swellings, and that in cases in which the patients have afterwards shown symptoms of constitutional syphilis. The seat of chancre in men is also not without influence upon the characters which it presents, and especially upon induration. The most voluminous indurated chancres are usually situated behind the corona glandis; there, in fact, the induration generally occupies a large portion of the balano-preputial mucous membrane. Chancre of the meatus produces in some cases an induration, as it were cartilaginous, of nearly the whole of the glans. The induration of chancres of the face is usually extensive. In other cases the symptom is scarcely marked; an ulceration of small extent presents an induration which may be termed miliary."

To our next inquiries—(6) "What is the proportion of suppurating buboes following venereal sores, and what sores do they follow?" and (7) "Is a suppurating bubo any protection against secondary symptoms?" — we have received various replies.

Mr. Henry Lee says the suppurating bubo follows the suppurating sore, and no other, except from accidental causes. The sore which produces the suppurating bubo does not infect, but this is no reason why another should not. As to protection, he thinks the suppurating bubo affords "none whatever."

Mr. Maunder says the percentage of suppurating buboes is small. They follow soft sores, and afford no protection against secondary symptoms. Mr. Buxton Shillitoe says the percentage of such buboes following soft sores is from 15 to 20. They rarely, says he, follow hard sores, and their presence is no protection against secondaries. On the other hand, Mr. Langston Parker, whilst maintaining the same views with regard to the connexions of soft sores and buboes, holds that the suppurating bubo "very frequently" acts as a protection. This discrepancy of opinion may, however, be explained by some others of the answers received. Thus, Mr. Berkeley Hill says: — "Suppurating bubo is caused much more by local irritation or mechanical irritation than by the nature of the lesion on the genitals. I find in thirty-two cases of suppurating bubo, in six there was only a urethritis; in six others, general syphilis; in nine others, a hard based sore, without any other sign of syphilis; in eleven others, the sore was soft and suppurating, and no signs of general syphilis were present. In forty-nine other cases the glands were said to be suppurating or indolently enlarged, but no venereal sore, urethral discharge, or sign of general syphilis was noted. To my mind, the presence or absence of suppuration in lymphatic glands is not influenced by syphilis. Suppuration, as shown above, may occur during the existence of any kind of sore. On the other hand, it is not a necessary concomitant of any lesion."

Dr. Barton says:—"I have only once or twice seen a suppurating bubo with a syphilitic sore;" whilst Dr. McDonnell, also of Dublin, says:—"Suppurating buboes may follow any kind of sore, but are by far commoner as a consequence of simple venereal ulcers than of syphilitic. When a patient has had a suppurating bubo, one may hope that the sore which caused it has been a simple sore; if so, of course there is a good chance that no secondary symptoms will follow."

Mr. Gascoyen's views are as follows: — "6. Suppurating buboes occur generally with those sores which secrete pus, and are, therefore, usually found with soft sores; but they will also follow hard sores which have become irritated. I should say that suppurating buboes were met with in about one case in ten; but the number would be much less if rest and proper care could be obtained. 7. I do not think that a suppurating bubo affords the slightest protection against constitutional disease."

Mr. James Lane's remarks are full of interest; they are as follows:—"6. Suppurating buboes follow both kinds of sores, but the soft much more frequently than the hard. Suppurating buboes are preventible by early and proper treatment of the sores. In women subject to the Contagious Diseases Act they are almost unknown. In other women admitted into Lock Hospitals they are exceedingly common. 7. As a matter of fact, secondary symptoms are rare after suppurating buboes; not because they are protective, but because suppurating buboes are usually associated with soft sores, after which secondary symptoms are uncommon."

These remarks by Mr. Lane and Mr. Gascoyen are well worth general attention. They, as well as Mr. Hill's statements, serve to explain the connexion between chancres and buboes. Furthermore, we commend them to the attention of the opponents of the Contagious Diseases Acts. It is plain that these Acts have been efficacious in removing at least one of the evil consequences of venereal disease.

KING'S COLLEGE HOSPITAL.

OPERATIONS.

On Saturday, June 3, the following operations were performed by Mr. Henry Smith:—

The first patient introduced was a little girl, who was the subject of a large nævus involving the upper lip and slightly extending into the nostril. It was mainly cutaneous, and did not implicate the mucous membrane at all. Mr. Smith was enabled, by means of Sir William Fergusson's plan of operating, to surround the entire growth with threads and effectually strangulate the mass.

Mr. Smith next performed his operation for hæmorrhoids upon a young woman, who had suffered long and severely from hæmorrhage from two internal hæmorrhoids, which were constantly protruded. She was placed under the influence of chloroform. Each of the tumours was seized with a forceps and pulled down. The blades of the scissors were applied at the base of the tumour, at the junction of the skin and mucous membrane, and the tumour being embraced within the blades of the clamp, they were tightly screwed home. The prominent surface of the tumour was cut away, and then the cautery was applied very freely to the raw surface at a black heat. The clamp was now carefully released by means of reversing the screw in the handles, so as to ascertain if any vessel was still bleeding, and as the vessels were found to be all sealed up, the parts were well oiled and passed up with the finger, and the operation was completed.

Mr. Smith very carefully explained the mechanism of his operation, and stated that now, after the experience of hundreds of cases, he had no hesitation in coming to the conclusion that it was free from all the dangers and disadvantages of the ligature, and that the convalescence was much shorter. As a rule, the patients operated on were not confined in the Hospital more than four or five days, except in cases like the present, where there had been long-continued hæmorrhage. In such instances the convalescence was of necessity more protracted.

The last patient brought into the theatre was a healthy-looking man, of about 30, whose case Mr. Smith particularly referred to as a very interesting and unusual one, and attended with circumstances which rendered the proper course of action very difficult to decide upon. The man was one of the gardeners employed at Kew, and, many months previous, he had poisoned his left thumb, as he supposed, by means of some of the noxious plants he was obliged to handle. Ulceration took place, the nail separated, and there was not any tendency in the part to heal. He was seen by an excellent Practitioner, an old House-Surgeon of King's College, who tried all remedies, but in vain. The ulceration spread, and involved two-thirds of the thumb, and, some time before he entered the Hospital, a swelling appeared in the corresponding axilla, and gradually increased. When admitted, a month ago, Mr. Smith immediately concluded, from the appearance of the thumb, that it would be necessary to remove it, but, seeing the state of things in the axilla, he was doubtful if it would be prudent to adopt this course, as it was possible that the glandular swelling might be the result of some secondary deposit of a malignant character. Sir William Fergusson saw the case with Mr. Smith, and he recommended delay. The patient's health remained good, and there was not anything of a malignant aspect about his face, and it was hoped that the swelling in the axilla might be simple enlargement, and that it might subside, or suppuration might set in. In about a fortnight the swelling increased; there was considerable prominence of the pectoralis major, and the parts became very tender; it was clear that suppuration was setting in. The axilla was well poulticed, and in a few days, on an incision being made into the axilla, a large quantity of purulent matter was evacuated. Mr. Smith at once decided that so soon as the suppuration had diminished the source of irritation should be removed, and this day he accordingly amputated the greater portion of the thumb, and on cutting into the diseased mass it presented all the characteristics of a firm fibroid tumour connected with and necrosing the terminal phalanx; the whole of the exterior of the mass was in a state of ulceration.

Mr. Smith remarked that there was great difficulty in deciding as to the proper course of action here at first, for, although it was clear that the thumb could not be saved, the existence of the swelling in the axilla was a suspicious circumstance, and pointed to the possibility of some malignant deposit; and he need not say that to remove the thumb and leave a mass of disease in the axilla would have been bad Surgery. The value of waiting was here shown, as it rendered the course of action clear. Mr. Smith stated that he had on a previous occasion seen a somewhat similar case in one of the gardeners at the Regent's-park, who had a most intractable ulcer on one of his fingers. Months elapsed before it got well, which it ultimately did under the use of arsenic internally.

We should have mentioned that the cases from the York County Hospital, published last week, were kindly communicated by Oswald Baker, Esq., the House-Surgeon of the Hospital.

The *Gazette de France* reports that the health of Paris is improving: only four cases of small-pox are reported for the past week.

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Medical Times and Gazette.

SATURDAY, JUNE 17, 1871.

THE HANDEL FESTIVAL.

Amongst the influences which bear upon the public health, Professor Acland (in his late lecture at the Royal College of Physicians) enumerates music. He describes how, on the one hand, bad music may be a source of foulness, degradation, and vice; and, on the other hand, how "vigour may be thrown into the hearts of a nation" by such ballads as the "Wacht am Rhein." Even as an *art*, it should not be undervalued. "It excites," he says, "feelings of the warmest sympathy and admiration to hear the attained results of Leslie's choir, or such societies as now exist in many of our towns, where persons of every class and occupation show an advanced mastery and appreciation of the choice works of Handel, Mozart, Beethoven, Mendelssohn, and acquire a pure culture unalloyed by eating or drinking, or other frivolous ways—culture, moreover, not of a light kind, but one which insures the development of certain mental qualities of accuracy, attention, precision, and refinement, which may be equalled, but not surpassed, by the exercise of other of our faculties."

. We may plead, then, the authority of Professor Acland if we venture to introduce into a Medical periodical a very few remarks on music, suggested especially by that great musical "orgy" (to use the word consecrated by Handel) which brings votaries from all England to commemorate that illustrious composer. We may further plead that Handel was the son of a Physician who practised at Halle.

The special characteristic of Handel is grandeur—the power which he possessed of clothing ordinary ideas in lofty phrases. We sometimes hear him praised for his powers of imitation. Now, all music is in some sense imitation. It may bring before the ear the sounds produced in external nature, or the sounds suggested by internal emotion and mental condition. But imitative music *per se*—that is, the "objective"—must depend for its artistic value on the thing imitated: whether that be of a character to excite the emotion which art ought to excite. To represent the leaping of frogs and the buzzing of swarms of flies (as in the first part of "Israel in Egypt") is of itself trivial, because all the associations are trivial, if not disgusting. With thunder or artillery, with muffled drums, the conditions are different—the associations grand or terrible. Again, we hear him praised for the tremendous volume of sound with which his works are rendered. As Pope says,—

> "Strong in new arms see Giant Handel stands
> Like bold Briareus with a hundred hands;
> To rouse, to stir, to shake the soul he comes,
> And Jove's own thunders follow Mars's drums."

But it is only that which has the requisite proportions which is capable of being magnified; we may have a colossal Minerva, but a colossal doll would be but the more insipid. Neither is it that Handel is in all cases original, for, like other sensible people, he had no scruple in borrowing such phrases, and even such passages, as came to his hand. Many phrases in the introduction to the "Dettingen *Te Deum*" are borrowed; so they are in the "Occasional" overture. In the "Israel in Egypt," the "Hailstone chorus," "They loathed to drink," and "He led them through the deep," are reproductions of some of Corelli's sonatas.(a) But the timid, restricted phrases of this charming composer—how they expand when recast in Handel's gigantic mould!

That which may interest the Medical philosopher is the fact that 4500 persons, who have devoted their time to the attainment of the highest musical skill, all obeying the magic bâton of Sir M. Costa with one impulse, and perhaps from 50,000 to 100,000 persons, from all parts of England, come to a ceremony which requires in the executants the highest labour, culture, and discipline, and in the auditors an appreciation of the sublime in music, as distinguished from the merely boisterous or sensational, the trivial or the fanciful. The effect of such commemorations on public health cannot be other than good; low and debasing ideas are for a time shut out.

PROFESSOR HUXLEY ON MEDICAL EDUCATION.

Professor Huxley distributed the prizes at the Charing-cross Medical College on Friday last. In his able address after the distribution he touched on some points worthy of especial notice. First, with respect to the recipients of the prizes, and those who unsuccessfully competed for them. Whilst he heartily congratulated those who had been successful on the present occasion, he still more heartily expressed a hope that those who had not attained success might continue in their efforts until they did attain it. But he qualified his approval of the prize system in these very remarkable words:—"The successful men in this world were not those who went off at hard gallop, but, if he might use racing phraseology, those who would 'stay.' It often happened that those whose early career was slower and quieter than that of others, exhibited a greater amount of wind and tougher staying power, and came in at the winning-post at last." Nothing more practical or more applicable to the question at issue was ever uttered. Prizes in schools of Medicine are not to be spoken of lightly. They stimulate the energies of the student, and give him a distinction at the commencement of the race, flattering to himself, and promising future success. But the history of prizemen does not bear out this pleasant theory. On the contrary, like precocious children, prizemen too frequently break down in after life. We do not allude to him who is first in a single class, but to him who is first in all departments. As a rule, he is too heavy-weighted with honours to continue the long race of life which is before him. In fact, he has exhausted his energies before the real race of life has commenced. The career of too many successful prizemen affords a melancholy illustration of this fact. Broken down in constitution, their mental energies exhausted, they are "nowhere" when the real struggle has to be made. Professor Huxley himself, we believe, only obtained a certificate of proficiency in physiology. He urged upon his audience the importance of plodding industry, which was often of more service than brilliancy or talent, and of using their Pegasus as a plough-horse, instead of permitting it to soar aloft. He noticed with great satisfaction the important changes which had taken place in the study of Medicine in late years, but there were still great practical difficulties in the way of obtaining efficient teaching in the theoretical branches of the Profession, such as *physiology*, chemistry, and anatomy, which were what the Scotch called the "institutes of Medicine." He suggested that these elements of Medicine should be taught by persons devoting themselves entirely to those subjects, in two or three great centres; and if Hospitals were turned to what he believed was their especial and most important work—the practical teaching of those who were already grounded in theory—the state of Medical education would be far different to what it was now, and the effect of such a change would soon be apparent in its results. These are great words, pregnant with an important truth. There can be no question as to the importance of grounding a candidate for the Medical Profession thoroughly in all that is preliminary to the practical duties of his calling. We would say that that preliminary education should not be carried too far. The great mass of the Practitioners of Medicine have to deal with the treatment and cure of disease. It is not necessary, to do that successfully, that every Surgeon-Physician should be a Huxley in physiology or a Graham in chemistry. The landmarks of the practice of Medicine are clear and defined. The most successful in the past, as they will be in the future, to use the language of Matthew Baillie, "are those who combine a competent knowledge of their Profession with good common sense." With regard to Baillie, an anecdote here may not be without its purpose. Baillie, as plain and common-sense a Practitioner as ever devoted himself to the study and practice of Medicine, once met the classic and accomplished Gregory in Edinburgh. They were not satisfied with each other. Gregory said "Baillie knows nothing but Physic"; Baillie retorted, "Gregory knows everything but Physic." Professor Huxley's recommendation will some day be carried out; at present we are scarcely ready for it. But no one can deny that the multiplicity of subjects to which a student has to attend in his short stay at the Medical schools is bewildering and injurious to him. Professor Huxley alluded with much good taste and feeling to the advantage of the free scholarships connected with the Hospital. He had himself been admitted a free scholar at a time when such a privilege was of great importance to him. On the whole, the free scholarships of Charing-cross Hospital have been a success, and the means of affording assistance to many who have done credit to their *alma mater* by distinguishing themselves in after life.

(a) A very useful edition of these—Dr. Kemp's—for family use is published by Cocks and Co., opposite the office of the *Medical Times and Gazette*.

THE SMALL-POX EPIDEMIC.

The deaths from small-pox in London last week, as registered, were 245—an increase of 16 upon the previous week. In estimating the weekly fluctuations, allowance must be made for irregularities of registration, and what we have chiefly to look to is the general direction which the mortality is taking. Viewing the numbers furnished by the Registrar-General, in this way we can see ground for hope in the fact that on the two occasions on which a weekly rise has taken place after a decline since the week ending May 6, the former has not attained a figure as high as the last high number recorded. Thus, in the week ending May 20, when the mortality rose from 232 to 267, the latter number was 21 short of that recorded in the week ending May 6; and now, when a rise is recorded from 229 to 245, the latter is 12 short of the mortality in the week ending May 27. Such fluctuations in the decline of the epidemic, which we have reason to believe has set in, are no more than are to be expected. The principal increase of mortality appears to have taken place in the West districts, where the deaths have been rising steadily for the last three weeks, the weekly numbers having been 16, 21, 28, 39. The next greatest rise has been in the South districts—from 75 to 85 deaths. In the North the deaths have lessened from 82 to 74. St. Pancras, Walworth, and Battersea are stated by the Registrar to be the parishes which showed the heaviest mortality last week. We are glad to observe from the returns of the Association of Health Officers that last week the fresh cases in St. Pancras had been reduced from 113 to 77. The disease appears still to be very bad at Southampton, where 26 deaths were registered, against 16 in each of the two preceding weeks; this is equivalent to an annual death-rate of 28 per 1000 persons living.

THE MORTALITY IN CIVIL AND MILITARY PRISONS, AND IN THE ARMY.

The *Echo*, while advocating the application of the enforced labour of the prisoners in our gaols to really reproductive purposes—by which these expensive and, in many instances, demoralising institutions might be rendered self-supporting as well as educational—states that their sanitary condition is generally excellent, and that the gaol death-rate is far lower than that of the army. The authority on which this information is announced is not given by our contemporary; but a statement appeared in the same columns some time ago with reference to the comparative mortality of soldiers confined in military prisons and of those serving in the ranks in the United Kingdom, to the effect that the latter was the greater. This led us to examine the alleged grounds for such opinion and we found that it was based on the entirely erroneous method of comparison instituted by Captain Du Cane, Inspector-General of Military Prisons, in his several reports on the discipline and management of those establishments.

In his report for 1868, Captain Du Cane gives a table of comparison of the health of the prisoners with that of the troops in barracks in the several stations at which military prisons are situated, from 1859 till 1868, the information as to the latter having been extracted from the reports of the Army Medical Department for that period. We shall only concern ourselves with the statistics for 1868, as the fallacy which pervades Captain Du Cane's method of handling them can be sufficiently demonstrated by the single instance.

In 1868, in an average strength of 38,862 soldiers in barracks at the stations above specified, 35,131 were admitted into Hospital, and 338 died: this gives a rate of admissions, to the average strength, of 90, and of deaths ·86 per cent., the percentage of deaths to admissions being ·96. During the same year, in an average strength of 1241 soldiers confined in military prisons, 999 were admitted into Hospital, and 3 died: this gives a rate of admissions, to the average strength, of 80, and of deaths ·24 per cent., the percentage of deaths to admissions being ·30.

Captain Du Cane, as a means of further comparison, gives a statement showing the number of admissions into Hospital and deaths among the total strength of troops in the United Kingdom for the year 1868, as follows:—

Average Strength.	Admissions into Hospital.	Deaths.
78,264	70,277	841

Giving a ratio per cent. of—

Admissions to Strength.	Deaths to Strength.	Deaths to Admissions.
89	1·07	1·19

Thus proving to his own satisfaction that "the prisons are healthier than the stations in which they are situated, and the latter not less healthy than the general localities occupied by troops."

We find that in 1868 the total number of soldiers who passed through the military prisons at home was 8672, and that each individual having on an average spent only fifty-nine days in confinement, the average daily number of prisoners becomes 1241. In other words, during the year 1868 the population of the military prisons, instead of representing a homogeneous body, was changed very nearly seven times. But the admission- and death-rates in a strength composed of changing elements do not admit of comparison with those prevailing among an unvarying body of men. The subjects are actually incommensurable; and we maintain that Captain Du Cane, in attempting to compare them, has been misled by a fallacy which completely subverts any conclusions based on such comparison.

It should further be remembered that soldiers, before being transmitted to the military prisons, undergo a careful Medical examination as to the probability of their being able to complete the prescribed term of imprisonment, and the labour and exercises incident thereto, without injury to their health; and that in most instances men who break down during the period of imprisonment are remanded for treatment to their regimental Hospitals, where not infrequently their deaths increase the rate of mortality in the regiment.

It is not improbable that the *Echo*, in its more recent comparison between the death-rate in civil gaols and that in the army, has fallen into an error similar to that which we have demonstrated. The total number of prisoners confined during the year in the gaols of the United Kingdom appears to have been 173,000, giving an average daily number of 21,000; so that the gaol population must have been changed more than eight times during the year. Now, if the death-rate of gaols be calculated on the average strength, as has been done in the case of the military prisons, it is equally absurd to compare it with the death-rate of the army.

A perfectly legitimate comparison might be made between the death-rates in civil and military prisons. For this purpose, however, we have not at present the materials at our command. In selecting an object with which to compare the death-rate in civil gaols, the author of the article in the *Echo* may not have been aware that the mortality of the civil male population up to the age of 30 in the most healthy parts of England and Wales is greater than that of soldiers of the same age in the United Kingdom, and would, therefore, have presented a more striking contrast with the mortality of prisoners in civil gaols.

THE WEEK.

TOPICS OF THE DAY.

The fate of the Medical Bills of the present session it was easy to foretell, and we have have no wish to over-estimate the foresight which led us to prophesy it as soon as there was a rumour of their production. The Bill of the British Medical Association sustained but for a short time the struggle for existence. The grotesque bantling of the revolutionary party represented by our contemporary the *Lancet* went quietly to sleep for the best months of the session, and was only awakened by its foster-mother, Dr. Lush, on Wednesday, to expire without a sigh; whilst the Bill of the Irish College of Surgeons, of which Dr. Brady had charge, and which was perhaps entitled, by its birth and constitution, to a longer existence than either of the others, also succumbed to the icy indifference of the House of Commons in the month of June. The fact is, no Medical Bill can be got through both Houses of Parliament which is not introduced early in the session, which has not the active support of the great Medical institutions and of the leading Physicians and Surgeons of the three kingdoms, and especially of the metropolis, and which is not cordially promoted by a powerful and popular Government. At present we see but little chance of these conditions being fulfilled. One of the main difficulties in the way is the divided state of opinion in the Medical Profession itself. Take, for instance, the subject of direct representation of the Profession in the General Medical Council. We have no hesitation in saying that a legislative measure which granted this would do more harm to the Profession as a scientific and united body than any unification of examinations would do good, much as the latter is to be desired; and we believe our opinion is shared by the calm judgment of our Professional leaders. But it is well-known that this very point was that on which the Government Bill of last session was defeated, and that certain of the loudest talkers, if not the deepest thinkers, in the Profession protest that direct representation is a panacea which must cure all our evils. For ourselves, we cannot regret that all attempts at legislation for the Medical Profession in the present session have failed. Knowing, as we do, that no Medical Bill can pass without the active support of the Government, and that the price of that support must be the admission of Government interference in the education and examination of the Profession, we confess ourselves not anxious for a new Medical Act. The main reform which the Profession requires is the unification of examinations. We still believe that this may be accomplished with ease in England if a spirit of mutual consideration and good-will be brought to the work by the existing licensing bodies. If a Conjoint Examining Board be established in England, the example will certainly be followed in Scotland and Ireland.

Another meeting of the Committees of the three Medical Corporations has been held at the College of Surgeons. We hear that a general determination was evinced to secure, if possible, the aid and co-operation of the Universities in the formation of a Conjoint Board, and that some important steps were taken to secure this object.

We have to correct a mistake which inadvertently crept into the paragraph in which we noticed, last week, the claims of the different candidates for election into the Council of the Royal College of Surgeons. There are four vacancies to be filled, not three, as we stated—the fourth being occasioned by the retirement of Mr. Cock, who is a *remanet* from last year, he, when his turn to retire came last year, being in possession of the President's chair. The candidates, as we stated last week, are six—Messrs. Cock, Busk, Le Gros Clark, Spencer Wells, Critchett, and Barnard Holt.

The fact that the law does not provide any penalties which would prevent persons recovering from small-pox and other contagious diseases, or having small-pox in their families, from exposing themselves behind the counters of shops, marks another of the many defects in our sanitary jurisprudence. It is of course clear that interference with the business and employment of persons is a thing to be avoided by the Legislature of a free country; but a line must be drawn somewhere, though where it is to be drawn, short of complete segregation of the sick and suspected, seems difficult to be seen.

Dr. Murchison has been recommended by the Grand Committee for the appointment of Physician to St. Thomas's Hospital. We congratulate St. Thomas's Hospital and Dr. Murchison on this recommendation. Dr. Murchison's removal to St. Thomas's Hospital will, of course, make a vacancy in the staff at the Middlesex Hospital. Drs. Payne and John Harley are also recommended by the Grand Committee as Assistant-Physicians to St. Thomas's.

There is a vacancy at St. Mary's Hospital for an Assistant-Physician. Three candidates are mentioned—Drs. C. T. Williams, Nunneley, and Shepherd.

Irrigation with sewage is undoubtedly remunerative. We notice that the Croydon Irrigation and Farming Company, notwithstanding many difficulties, have just declared a dividend of 15 per cent. per annum.

The annual *conversazione* at the Royal College of Physicians, on Wednesday, was, considering the state of the weather, very well attended. Amongst the visitors were the Nawab Nazim and his two sons, Professor Owen, Mr. Montague Chambers, Q.C., etc.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The meeting of this Society on Tuesday was signalised by two of the most admirable papers of the season. Mr. Paget brought the weight of his authority to bear on the advisability of removing innocent tumours from bones by simple enucleation, rather than by resection or amputation. Of course the important thing in such a case is a correct diagnosis as to the nature of the tumour, and the author laid down sundry most important rules for that purpose.

Mr. Spencer Wells followed with the results of his fourth hundred of ovariotomies, detailing still more favourable results than any he has heretofore attained. His statistics showed a decided superiority in the chances of life on the part of private patients, and he threw out a hint that this circumstance might be taken advantage of in future. The paper ended with full details of the precautions to be taken in the differential diagnosis of ovarian and uterine tumours; certainly the fullest and best we have ever encountered. Dr. West took the opportunity of congratulating Mr. Spencer Wells on his success, which must have been the more gratifying to Mr. Wells inasmuch as Dr. West at one time was a determined opponent of the operation. Let us hope that before long Mr. Wells will be able to give us the results of his fifth hundred of operations, which, doubtless, will be more successful than his last.

MR. CARDWELL ON THE REPORTS OF THE MEDICAL COMMISSIONERS AT THE SEAT OF WAR.

In reply to Colonel Anson the other night, Mr. Cardwell stated that it is not the intention of the Government to lay before the House the reports of the Medical Commissioners deputed to visit the French and Prussian armies, as such documents hitherto have always been held to be "confidential." The Governments to which the Commissioners were accredited received them courteously, and gave them every facility in their power for the acquisition of all the information they desired, which information, if published in this country, might contain matter which would be disagreeable to the respective Governments concerned. To this, of course, as a matter of State policy, we have no wish to object; but, on a point of Professional interest, we venture to express the hope that Mr. Cardwell may permit an edition of the reports—from which all that he may consider as "confidential" on State grounds shall have been omitted—to appear in the Army Medical Department Report of next year. We have no doubt, from the character and position of the several Commissioners, that their reports, in the form which we have suggested, will be found to contain matter of much interest, not only to army Medical officers, but to the Profession generally.

PSEUDO-CHARITABLE INSTITUTIONS.

Provident Dispensaries, if properly worked and under judicious management, are calculated to be of great service to the lower classes. But they must be strictly provident and self-supporting; if otherwise they are a mere "delusion and a snare." We are led to these remarks in consequence of an influential meeting held at Manchester last week, at which the following propositions were discussed:—

> "Whether it is possible and desirable to adopt the principle of provident dispensaries, whereby the working classes become regular members, and entitled to Medicine and Medical attendance, by a small regular monthly contribution.
>
> "Whether it is desirable to raise additional support for existing institutions, by a payment of —— shillings from each applicant for Medical aid, which payment shall entitle them to Medical assistance for one month.
>
> "Whether it is desirable to seek the aid of employers, managers, foremen of mills, manufactories, and workshops, in making an annual collection for the various Medical institutions, to be divided in given proportions amongst them."

It will be seen that if these propositions were acted upon the "applicants for Medical aid" would demand as a right that "aid" which would be, at least, partly charitable. It is not difficult to see to what numberless abuses this might give rise. If carried out generally in "charitable" institutions, two kinds of applicants would exist, the one claiming as a right that which the other would receive in charity. This invidious distinction should not be made, and, in fact, could not, we believe, be efficiently carried out. That the system of out-door relief at Hospitals is abused to an extent scarcely credible, is well known; but the way to check it is not to make Hospitals merely Medical clubs. Some of the speakers at the meeting referred to appear to have been struck with the anomaly of a "charitable self-supporting system," and, after much discussion, the following sensible resolution, proposed by Dr. Drummond, and seconded by Mr. Hetherington, was passed:—

> "That a committee be formed to draw up a circular to employers, managers, foremen of mills, manufactories, and workshops, requesting them to make an annual collection amongst their workmen for the various Medical institutions, to be divided in given proportions amongst them."

There can be no possible objection to such collections, and, no doubt, more money will be raised in such a manner than by the shilling payment. The workman is then left at liberty to go to the Hospital or not, as he pleases; but what he gives voluntarily should give him no extra privilege. If he becomes a patient at a Hospital, he should be on equal terms with all other patients. The immense majority of the working-men of this country prefer their own "club Doctor" to any relief from any institution. The patient so attended is "independent." He pays for what he gets, and he does not in any way identify himself with charitable relief.

PERSONAL EXPERIENCES UNDER THE COMMUNE.

"An English Medical Student" has been detailing his experiences of Paris under the Commune in the columns of the *Daily News*. The incidents through which he passed were of the most exciting character, and he has succeeded in describing them graphically and well. The indiscipline, disorder, and drunkenness of the soldiers of the Commune were lamentable. The officers were elected by universal suffrage. Men who had served five years in the regular army were eligible as captains, and even commandants, of corps. It was not uncommon for commanders to be incapable of writing their own names, and, in drawing up their reports, to be compelled to seek assistance from better-educated privates. Notwithstanding all this, the devotion of many to the cause was undeniably sincere. The first ambulance established by the "English Medical Student" was in an old château near Neuilly, already perfectly riddled with balls. He had nothing but a little lint, some water, his case of instruments, and a few bandages. His only assistant was an old barber, who was afterwards shot while attending the wounded at the barricade in the Rue du Bac. The wounded men, when brought in, were for the most part intoxicated. He soon had 300 under his charge, and very shortly the floors became actually muddy with blood and dust. The battalion, originally 1500 strong, fighting day by day, became gradually reduced to a demoralised band of 720, among whom the "English Medical Student" was the only officer for whom the men had any respect. It was withdrawn into Paris a few days before the entry of the Versailles troops. The remnant having been surrounded, and probably shot, during our hero's temporary absence in search of supplies, he received a commission from Delescluze to the 96th Battalion, with which his service was very short and hazardous. He then received orders to establish an ambulance in the Northern Railway Station; he as Doctor-in-Chief, with two assistants, apparently English students also. They here passed a night of extreme danger and fatigue. The bullets came whistling through the glass roof, killing some of the wounded, and re-wounding others. On the entry of the Versailles troops, the Doctor-in-Chief and his two assistants were taken prisoners, and ordered to be shot by the Lieutenant of the 85th Battalion of the regulars, but, on the intercession of a Doctor, they were reserved for further examination by the Grand Prevôt, for which, however, very naturally, they preferred not to wait, but made their escape from the station at the risk of their lives, rejoined the Nationals near the barricade Voltaire, and essayed another ambulance. They witnessed the deaths of Delescluze, Longuet, and Vallès, and the summary executions of several men and women, many of the scenes being marked by a brutality almost incredible; and two days afterwards Paris had resumed nearly its ordinary aspect, and no visitor could have imagined, if the dreadful traces of the fire had not existed, that such horrors had been witnessed. We congratulate the "English Medical Student" on his safe return to England, and trust that, in more peaceful scenes, he may reap a full harvest of honours and rewards from the experience acquired during such amazing incidents.

MARRIAGE AND LEGITIMACY.(a)

Mr. Weightman, whose book on the laws relating to the Medical Profession is well known to our readers, has now brought out a small treatise on the laws relating to marriage, divorce, and legitimacy. This book, although primarily intended for practitioners in the Divorce Court, contains abundance of matter relating to questions in which Medical Practitioners may be concerned, and especially the *dicta* of lawyers in cases where legitimacy is contested—in cases where the term of utero-gestation is in debate, or the powers of an alleged father to produce offspring, or the legitimacy of offspring. Hence it is a work which should find its place in the library of every Medical jurist and student of State Medicine. It is very short and very clear, and contains statements which, though familiar to lawyers, must, we suspect, be very unfamiliar to non-Professional readers. Popular opinion, as the author observes, is very hazy on the question as to what constitutes a valid marriage—in fact, "the popular mind will frequently err to the extent of persuading itself that *that* is lawful matrimony which is expressly forbidden by legal enactment, and that that alone is unlawful wedlock which has not been celebrated by some acknowledged religious solemnities." By the law of nature, which is the reflex of the law Divine, no prohibition and no ceremonial regulate the voluntary agreements between any one man and any one woman to live together as man and wife. Originally, no prohibited degrees existed. Marriages of brothers with sisters and of cousins were inevitable, and the latter continue legal still. No degeneration, physical or moral, was the result, or the race must have been vitiated from the beginning; yet "the belief in such a result of consanguineous marriages continues one of the many vulgar errors, which necessarily arise in arguing from a foregone conclusion to the premisses, instead of from the premisses to their legitimate conclusion." Thus, if there be a specific disease in any family, the marriage of two members of that family must intensify the disease in their progeny; and hence it is argued that such marriages are contrary to law, natural and Divine. But disease has been the growth of time and circumstance, and there is, to say the least, no proof that, in the early ages of mankind, any disease arose from consanguineous mariages. Let us say, that in this age of the world, when almost every family has some specific morbid tendency, the marriage of near relations, as a general rule, is inexpedient. The degrees of affinity prohibited in the Mosaic law were so prohibited for moral and not for physiological reasons. Whether marriage with a deceased wife's sister is amongst these prohibited degrees is not quite clear; but the prohibition of such marriages by the rules of every Christian church, and by the law of England, has been based upon purely social grounds. The Parliament of England has determined for itself the moral and social basis upon which the relationship of marriage is to be regulated. So, with regard to legitimacy, it is, says Mr. Weightman, "entirely a matter of social policy, under what circumstances the issue of a man and woman shall be deemed legitimate. In some countries one rule prevails, and in some, another; and just as the validity of marriage depends upon the law of nature, *plus* any municipal regulations, either of a moral, social, or ceremonial character, so does the legitimacy of the issue depend on the like law. The one is a corollary to the other." Mr. Weightman bases his book on the Legitimacy Declaration Act, which was intended to enable the offspring of numerous irregular and ill-attested marriages in the colonies to claim and obtain a certificate of legitimacy. Hence the necessity of enforcing a knowledge of what constitutes a really valid marriage; and of showing the delusion that any religious ceremony *per se* confers that validity.

HAIRY MEN.

As the question of hairiness has entered somewhat largely into the great Darwinian controversy, and as the Ainos are the most hairy men in the world ("The Descent of Man," vol. ii., p. 321), it may be worth while to devote a few lines to the external characteristics of these almost unknown people. The latest writer on "the Ainos" is Mr. Satow, who holds an appointment in our Legation at Yedo, and who some years ago visited two of their villages. In a short but valuable paper which he has published in the *Phœnix*,(a) he gives the following account of the appearance of both sexes:—

> "The men are of about the same stature as the natives of Japan proper, but the immense bushiness of the beard and hair in the older men gives an unnaturally large appearance to the head. The beard and moustache are allowed to attain their fullest development, and in some cases the length of the former appeared to be fully twelve or fourteen inches. The hair on the front part of the head is clipt short, but that at the back and sides grows very full, and often falls down over the shoulders. The colour is of a true black, unlike that of the Japanese, which is reddish-brown. The body and limbs are thickly covered with black hairs, about an inch in length. The colour of the skin is brown. The eyes are horizontal, and the nose is generally well-formed. The women are of proportional stature to the men, but, unlike them, their appearance is revolting and ugly. The hair grows in wonderfully thick masses down to the shoulders."

Nothing is stated as to whether their bodies and limbs are especially hairy. The Ainos are a race very low in the scale of humanity; their gods are white sticks placed in the ground, with shavings depending from their upper ends; their weapons are of the rudest nature; their women are hideously tatooed; the women have no individual names; and their only luxuries are *saké* and tobacco.

Mr. Adams, in his "Travels of a Naturalist in Japan and Manchuria," describes a visit he paid to an Aino village; but, with regard to the peculiarity we are now specially considering, he merely observes that their hirsute limbs, long tangled hair, and bushy beards have earned for them the *soubriquet* of "hairy Kuriles."

THE HASTINGS PRIZE MEDAL.

The Hastings Prize Medal of the British Medical Association has been awarded to Dr. J. Milner Fothergill, of Leeds, for his essay "On Digitalis: its Mode of Action and its Use." The adjudicators (Drs. Charlton, A. P. Stewart, and Waters, of Liverpool) describe it as an essay of great original merit.

EPIDEMIOLOGICAL SOCIETY.

At the general meeting of this Society, on Wednesday evening last, Inspector-General Lawson was elected President for the ensuing year, in succession to Dr. Seaton; and Professor Corfield, M.B., as Secretary, in succession to Mr. J. N. Radcliffe. A short discussion followed on the paper read at a previous meeting by Inspector-General Lawson on "Cholera on board Ships at Sea."

FROM ABROAD.—THE DAMAGE DONE IN PARIS—DEATHS FROM CHLOROFORM IN THE UNITED STATES—GROWTH OF THE NAILS AS A PROGNOSIS IN PARALYSIS.

We have not heard as yet of any of the Paris Medical men of note having lost their lives during the late dreadful scenes, although, in passing to and fro to the various ambulances, they were constantly exposed to the most imminent risks. The danger, indeed, was not confined to the outside, as balls and shells often penetrated to the interior of the Hospitals, as well as of the houses. Several have, however, been severe sufferers in their property, their houses or apartments having been burnt, together with their libraries, manuscripts, and various objects whose loss is irreparable. Among the sufferers are, MM. Dechambre, editor of the *Gazette Hebdomadaire*, Laboulbène, Genouville, Martineau, Audhoui, Paris, and Lacroix. Others, by their courage, presence of mind, and energy, succeeded in saving their own and neighbours' houses from the flames when menaced by incendiaries. Thus, M. Linas saved the one he inhabited in the Place de la Madeleine, by establishing an ambulance in the courtyard, and receiving the federal wounded. In the Rue de l'Université, M. Léon Lefort, revolver in hand, stemmed the advance of the incendiaries, and compelled them to retreat. Several of our *confrères* were among the most active in directing the extinction of fires already commenced. M. Amédée Latour, the well-known editor of the *Union Médicale*, has been placed in a deplorable position, having been closely shut up in his own country house at Chatillon, unable to leave it under peril of his life, and constantly exposed to the fire of the neigbouring forts and batteries.

(a) The Law of Marriage and Legitimacy, with especial reference to the Legitimacy Declaration Act. By Hugh Weightman, M.A., of the Inner Temple, Barrister-at-law. London: Sweet, 1871.

(a) The *Phœnix* is "a monthly magazine for China, Japan, and Eastern Asia;" it is edited by the Rev. J. Summers, Professor of Chinese in King's College, and the numbers hitherto published—eleven in all—contain many papers of great interest.

With respect to the scientific and charitable establishments, we may notice a report made by the honoured veteran in science, M. Chevreul, to the Academy of Sciences, upon the "Muséum d'Histoire Naturelle," of which he is the director. He had great pleasure in stating that, although placed in the most imminent peril from fire, especially during May 26, it has undergone but trifling damages. He eulogises the valuable efforts made for the preservation of their several collections by the resident Professors Decaisne, Milne-Edwards, Delafosse, and Quatrefages; and advances the difficulties which the other Professors Blanchard, Deshayes, and Gervais had of getting access to the museum as a reason why all the professors should be resident. As director of the celebrated Gobelins tapestry manufacture, he has a more painful task to perform, inasmuch as this has been most seriously, if not irretrievably, damaged. Whole galleries and workshops have been destroyed, and, worst of all, the invaluable collection of tapestries from the time of Louis XIV. to the present day. It was to the courageous exertions of the *employés* and the inhabitants of the neighbourhood that the preservation of any portion of the establishment was due, "and if amidst such disasters I permit myself," says this veteran *savant*, "to add a word of my own, my excuse will be in the feeling of gratitude which dictates it—and that is, that without such courage and zeal the Gobelins would have no longer existed, and with it would have disappeared the products of those researches in wool and its fatty matters (*suint*) to which I have devoted myself for now well-nigh half a century." M. Yvon Villarceau also reports that the portion of the Paris Observatoire devoted to astronomical geodesy has suffered much from the incendiary attempts, and that some of the valuable instruments have been so damaged that it will not be possible for French *savants* to take part in the International Geodesic Congress to be held at Vienna in 1871.

The Sorbonne and the Ecole de Médecine are entirely uninjured; and of all the great libraries of Paris, that of the Louvre is the only one that has suffered. This, however, which contained 100,000 volumes, many of them of great value and rarity, is utterly destroyed. The Mazarin library, which was at one time stated to have been burned, has been preserved intact. A magnificent edifice forming an annexe to the Hotel de Ville, and employed in the administration of the Assistance Publique, has been entirely destroyed. None of the Hospitals have suffered otherwise than by reason of their propinquity to the various scenes of combat; but the Lariboisière, St. Louis, Necker, and Pitié have sustained much damage in this way. The Hôtel-Dieu may be said to have had a narrow escape, for it was mainly due to the exertions of M. Hanot and other *internes*, made at the risk of their lives, that the attempts at burning the adjoining Notre Dame were defeated. At the Luxembourg Palace, again, the ambulance was the means of saving it from destruction. The agents of the Commune insisted that the ambulance should be evacuated, in order that the petroleum which they had brought might be ignited. M. Danet, who, with M. Brochin and other Medical men, was in charge, sought by every means to obtain delays, telling the incendiaries that their own wounded would unavoidably fall victims. They succeeded in staving off the danger, which grew every moment more imminent, until, at last, the marines of the Versailles force arriving, the rebels retreated. The palace suffered to some extent from the explosion of a powder depôt, which took place soon after; and one of its *façades* has been terribly mutilated by shell and ball. The apartments of M. Lucien Boyer, containing valuable furniture, were demolished by shells.

In the *Gazette Hebdomadaire* for June 2, M. Linas gives a very graphic account of the terrible scenes which passed around his house in the Place Madeleine during the dreadful days and nights of May 22, 23, 24, 25, and 26.

In an interesting paper on "Anæsthetics," contributed by Dr. Squibb to the May number of the *New York Medical Journal*, he, among various other matters, attempts some calculation as to the amount of chloroform employed, and the number of deaths caused by it, during 1870 in the United States. His statements, however, are as vague and conjectural as most of those have been which have been hazarded in this country. As to the quantity of chloroform produced, he is, however, a great authority, being himself a celebrated manufacturer of the article in a very pure state.

> "No chloroform," he says, "has been imported into this country, or exported from it, within several years past, and there are but about four original sources of supply, of which the establishment of the writer is the smallest. Upon consultation with the three other sources of supply, it is found that the total quantity of chloroform sold for consumption in the United States during 1870 cannot be less than 80,000 lbs., though it may be something more. This, and the total number of reported deaths, is all that can be had with any degree of practically useful accuracy. What follows, then, is simple speculation or rough estimate, though probably safe in the interest of human life. It may be estimated that not over one-third of this 80,000 lbs.—or say 26,000 lbs.—is used for anæsthetic purposes by inhalation. Next, it may be estimated that two avoirdupois ounces, or one fluid ounce and a half, are used and wasted for each administration; and this would give 26,000 × 8 = 208,000—or say 200,000—administrations, as a very extravagantly safe estimate for the whole country during 1870."

Then, as regards the number of deaths, Dr. Squibb can only find 17 deaths reported, or 1 in 11,764 administrations; but assuming that one-half of those occurring were not made public, we should have 34 deaths, or 1 death in 5882 administrations. "If any reader judges this estimate to be still not sufficiently liberal, he may double the number of deaths once more, and he will then have 1 death in 2900 administrations, and thus get the mortality up to somewhere near that of Dr. Richardson for Great Britain. But the author cannot admit the probability of any such mortality for this country, though he knows of no good reason why it should be so much lower here." It is obvious that figures such as these are of no avail. Dr. Squibb, in common with all the other observers, testifies to the entire harmlessness of chloroform in obstetrical practice, a fact which he believes not so much to be due to its administration being pushed less far, as to the presence of some unknown condition in parturient women which confers immunity on them.

With respect to the great toleration of chloroform in certain individuals, Dr. Squibb mentions the case of a lady, 48 years of age, who for some years had employed it for the alleviation of the severe pain of hereditary gout. Between March 31 and

December 16 she was supplied with fifty-three pounds of purified chloroform, and during her acute attacks she not unfrequently used two pounds each day, "and used it as economically as she could after her long practice."

In a communication to the College of Physicians of Philadelphia (reported in the *American Journal of the Medical Sciences* for April), Dr. S. Weir Mitchell drew attention to the "growth of the nails as a prognostic indication in cerebral paralysis." In a case of paralysis Dr. Mitchell observed that the nails of the paralysed hand, which had been previously healthy, became marked with deep serrations, crossing from side to side, and about a line apart. The peculiarity continued as long as the case was under his care, the growth of the nails being much slower than that of the nails of the unaffected hand. He resolved in future cases to study the nail-growth attentively. In a patient 47 years of age, the subject of paralysis supervening on apoplexy, he stained four of the nails of the palsied hand a deep yellow with nitric acid down to the lower edge. To his surprise, while the nails of the other hand grew as usual, these did not grow at all during three weeks. "Then, and while the arm was throughout still motionless, the nails began to grow, as was shown by a narrow line of white below the tinted portions. Within a week after this, the fingers became controllable by the will, and gradually the whole hand and then the arm was restored." In another patient, aged 46, suffering from paralysis of the arm, and aphasia, the nails of both hands were stained with the acid on the fourth day. Not the slightest growth took place on the palsied side for a fortnight, when, a white line being detected, the prediction was risked that, within a week, the limb would be moved, and this was realised more than completely. Apologising for bringing the circumstance before the Profession on the slight basis of only two cases, Dr. Mitchell observes that some time may elapse before he meets with others at a sufficiently early period of their process, while the attention of other persons may be advantageously called to the subject.

"I have been unable to find that this observation has been made before. In old cerebral palsies the nails very often become deformed, and even the muscles may undergo changes, which are possibly due to the neural sclerotic alterations which sometimes come on after the part has been long disused. They are then the direct result of isolation from spinal trophic influence. In recent cerebral palsies there is often œdema, but no muscular atrophy; and it is, therefore, remarkable that the nails should even suffer in their nutrition. It is still more curious, when we reflect that even in parts whose nerves are severed the nails grow as usual, and that chiefly in partial nerve-wounds do we meet with clubbing or serration. It seems as if the injuries of the brain must have excited an inhibitory influence, and the fact aids, to my mind, the view which I hold with many, that there are nutritive nerves. Theorists who follow Brown-Séquard would probably regard the checked growth as due to a spastic contraction of the vessels feeding the nail, and as a vaso-motor nerve impression. I cannot admit this, because no considerable amount of such spasm could last long enough, or be complete enough, to cause the result without making a visible difference in the tint of the nail and the thin parts at its matrix. These remained much as usual—perhaps even a little redder than common. To test this view, I faradised with a secondary current and dry wire-brush two of the nails daily, giving great pain and greatly flushing them. They were also kept, thrice a day, for half an hour in hot water, so as to flush them as much as possible. My patient, an intelligent person, being much interested in the question, submitted readily to this treatment, but no more growth took place in these nails than in the others. I have noted the low temperature in the last case, but in hands cut off from all nerve-connexion it is still lower, and yet the nails grow. It does look, therefore, in this case, as if some influence was at work here which did not act through a change in the vascular supplies. It is a point in favour of trophic nerves.

"Other and most interesting questions also present themselves. The re-growth preceded the return of will-power. If this should prove constant or common, it will certainly help us to answer the inevitable query as to whether the arm will recover at all, and how soon. It is, of course, desirable to learn how often this check of nail-growth occurs—whether in all cerebral palsies or only in certain ones—whether, in a word, it relates itself to particular brain regions, and is a direct effect, or arises from the spinal shock which these brain injuries occasion. I trust that I have been able to show, therefore, that this apparently trifling symptom may open the way to the solution of very important questions, and is certainly not devoid of interest for the most purely practical amongst us."

PARLIAMENTARY.—LUNACY REGULATION ACTS—PHARMACY BILL—MEDICAL OFFICERS ATTACHED TO THE GERMAN AND FRENCH ARMIES—MEDICAL ACT AMENDMENT BILLS—PETITIONS—DEBATE—WITHDRAWAL OF THE BILLS.

On Monday, June 12, in the House of Lords,

The Lord Chancellor presented a Bill for the amendment of the Lunacy Regulation Acts, and it was read a first time.

The Pharmacy Bill was read a second time.

In the House of Commons,

In answer to Colonel Anson (Medical Officers attached to the German and French armies),

Mr. Cardwell said he was sure it must be evident that if our Medical officers were to be received with kindness by foreign Governments, and they were to report to her Majesty's Government with freedom, it was absolutely necessary that their reports should be confidential.

On Tuesday, June 13, in the House of Commons,

Petitions against the Medical Act Amendment Bill were presented, by Mr. Weguelin, from Willenhall; by Mr. Eaton, from Coventry; by Mr. Hick, from Bolton; by Colonel Brise, from Halstead; by Mr. Strutt, from Chesterfield; by Mr. W. E. Forster, from Great Horton; by Mr. Leatham, from Hyde; by Mr. Turner, from Leigh and neighbourhood; by Captain Egerton, from Chesterfield; by Mr. Lea, from Kidderminster; and by Mr. Serjeant Simon, from Dewsbury.

Petitions were also presented by Dr. Lush, from Islington Medical Society, in favour of Medical Act (1858) Amendment Bill.

On Wednesday, June 14,

Petitions against the Medical Act Amendment Bill were presented by Mr. Buckley, from Mossley; by Mr. Fielden, from Brigley; by Mr. Jacob Bright, from Manchester, with 5000 signatures; by Mr. D. Chadwick, from Macclesfield; by Mr. Hibbert, from Oldham, Lees, and Shaw; by Mr. Clay, from Hull; by Mr. Mundella, from Sheffield and neighbourhood; by Mr. H. M. Feilden, from Blackburn; and by Mr. J. White, from Brighton.

Petitions were presented by Dr. Lush, from various Medical Practitioners in London and elsewhere, in favour of Medical Act (1858) Amendment Bill.

Dr. Lush, in moving the second reading of this Bill, said the measure introduced by the right hon. gentleman (Mr. Forster) last session was not satisfactory to the Profession, and, as the right hon. gentleman was deterred by the press of business from bringing forward any Bill this year, it only remained for a private member to make the attempt at legislation. Though he brought forward the present Bill in a Professional point of view, he wished it to be borne in mind that the interests of the Profession and the public were blended, and that what was good for one was good for the other. It was because little had yet been effected by legislation towards Medical reform that he proposed the present Bill, the purpose of which was to abolish the Council of twenty-four members at present existing (which, being too numerous, was apt to degenerate into a debating society), and to establish a new Council in its place, consisting of twelve members. It was proposed that the present examining bodies, amounting to nineteen in number, should be associated together and collectively nominate four members; that the Crown should nominate four members, and that the whole body of the Profession should have the right to nominate the other four members. It was provided that, before any man should be entitled to practise, he should pass through one examination; and that examination should indicate the minimum standard of Professional education in this country. He believed that the standard of Medical education had been considerably raised of late years, but there was still great room for improvement, and he trusted the House would consent to give a second reading to the Bill he now proposed.

Mr. Jessel said that the present Bill differed in a most important respect from the Government Bill of last year, which did not propose to put in the hands of the Medical Council, however elected, the right to nominate the Board of Examiners, without any security against an abuse of the power. The Bill, in fact, proposed a monopoly of examination, and all monopoly was objectionable; but if it were created, care should be taken to prevent it leading to a position of stagnation. The Bill defined in a positive manner what the examiners were to do, without having regard to the natural progress of science and learning, for an expansive and improvable system was not provided for by the Bill. The great defect of the present system was that no confidence was felt in a great many members of the Boards of Examiners. It had been a competition downwards, and there had been a race to diminish the qualifications required, in order to attract a large number of fee-paying persons to the examinations. The examiners must be made honest by preventing them from having a pecuniary interest in the result of the examinations. The cardinal point was to secure a fair examination for all, and to give security for progressive improvement in the Medical Profession. He was not prepared to say that an infusion of elected councillors would not be desirable, but it would not be right to have the Examination Board and Controlling Board composed of the same class of persons. He trusted that the Bill would be modified, so as to satisfy the just expectations of the Profession.

Dr. Brewer supported the Bill, which, he thought, would effect the purposes desired by the hon. and learned member.

Dr. Playfair observed that there were two questions with which the Medical Act Amendment Bills (No. 1 and No. 2) professed to deal—the constitution of the Medical Council, and the qualification of Medical Practitioners. As to the former, the real point to be ascertained was whether the Council should be a body for the promotion of the public interests, or for purely Professional objects. If it was intended to promote the interest of the public, the public should pay the cost, and there would be a lay as well as a Professional representation—the public predominating over the Professional element. The second Bill recognised and left nearly alone the old corporations. The Amendment Bill (No. 1) extinguished them, which he thought was a great mistake. It was a disadvantage to have nineteen examining bodies having a tendency to compete with each other, and therefore giving the public a security for only a minimum qualification; but it did not follow that they should be reduced to one, as was proposed by the Bill of his hon. friend the member for Salisbury. It would be much better that there should be an examining body for England, another for Scotland, and a third for Ireland. This was a subject with which the Government only could fairly grapple; but these Bills would be useful as pointing out the paths of Medical reform which it was desirable they should follow. He hoped both Bills would be withdrawn, and that the Government would deal with the question next session.

Mr. W. E. Forster said there were two points for discussion —one as to the mode of examining and certifying Medical Practitioners, and the other as to the constitution of the Medical Council. With regard to the first point, the Government entirely appreciated its great importance. They were aware of the very great practical evils that resulted from there being nineteen accredited bodies for certifying Medical Practitioners, but they had been unable to deal with the question this year. This led two private members to bring in Bills on the subject, but neither could hope to pass his Bill during the present session. From the number of questions pressing on the Government for legislation, he could not pledge them to bring in a Bill next year, but it was their wish and anxiety to do so. If they were unable to deal with the subject next year, and if any private member, such as his hon. friend the member for Salisbury, or any other, took up the subject, no obstacle would be thrown in the way of the fullest consideration of it by the House; and if it was desirable the Bill might be referred to a committee upstairs. Legislation had failed last year because, although the Bill which had been introduced in the House of Lords had been most carefully considered, it had been thought desirable, when the Bill came down to that House, to add to the questions they were then attempting to settle the other question of the constitution of the Medical Council, and it was then too late in the session to deal with that subject.

After a few words from Dr. Brady, who stated that his own Bill, the Medical Act (1858) Amendment (No. 2) Bill, had been carefully prepared, and gave great satisfaction to the Profession; and from Sir J. Gray, who congratulated the House on the disposition shown by the right hon. gentleman on the part of the Government to deal with the subject next session, both Bills were withdrawn, and the orders of the day relating to them discharged.

PROFESSOR ACLAND'S LECTURE ON NATIONAL HEALTH.

Professor Acland delivered at the College of Physicians, on June 2, a lecture on National Health, which he has since reprinted in a separate form, with an Appendix containing the elaborate Memorandum on Medical Officers of Health issued by the Royal Sanitary Commission, and the scheme of education in State Medicine proposed by Trinity College, Dublin, and authenticated by the initials "W. S." We may express *in limine* our gratification at seeing the Regius Professors of Medicine in our national universities coming forward and putting into practical shape the vague wishes and ideas of scattered workers, and assisting the Legislature to give effect to these ideas in the form of practical systems of education and workable Acts of Parliament.

Professor Acland begins by noticing Mr. Goschen's effort to introduce a comprehensive Bill dealing with the whole subject of public health, though political exigencies, and the fact that it involved the subject of local taxation, have compelled him to withdraw it for a time. It is to promote the growth of public opinion on the necessity of further legislation, and on the nature of that which legislation should aim at, that he delivers this lecture. He begins by affirming that there is such a thing as National—distinguished from Personal—health.

"National habits, good or bad—national licence and national self-restraint — national vice and national piety — national vigour or national indolence—are propagated through the individuals of which the nation is composed; being attached to individual character, and handed on from generation to generation, modified, however, by individual education, or those great catastrophes which, like subsoiling in a barren land, bring about fresh combinations, and give birth to products good or bad, better or worse, as the laws, moral and physical, which regulate the combination, may compel.

"It may be alleged against these fundamental conceptions that national health is a fiction of the mind, that no such collective physical condition exists. The objection would be one of words. Family constitution and hereditary taint certainly exist; and a multitude of individuals forming one army may, by the operation of moral causes, go anywhere and do anything, or may be without power, without will, without hope.

"The national health is that condition of the individuals of the nation which enables the individuals of the nation to discharge rightly their respective functions in the State—'to do their duty in that state of life to which they are called'; the statesman to be in training for exercising the complex intellectual operations of his high office; the artisan, the soldier, the abstract thinker, each for his: and if we regard the philosophic teaching of the great author of the "Republic," parents of either sex, for the raising of the future citizens for the State."

What are the antecedents which influence national health?

"Take any given Englishman. What is his descent—Roman, Norman, Saxon, Dane, French? What influences have operated on him since his progenitors were among the number of workers in flint or in bone, or bronze? Did they become farmers, warriors, chiefs? Intellectually accustomed to command or to obey? physically to endure or to shrink? morally thrifty, contented, peaceful or turbulent, drunkards and dissolute? Were they in later times exposed to the diseases of hot climates? Were any syphilitic? did they intermarry in close relationship, or seek far afield the partners of their lives? What would be the qualities which, like the now famous Black Bar of the Rock Pigeon, might reappear on their scutcheons? pride, pugnacity, syphilis, gout, phthisis? Terrible questions these which the third and fourth generations ask of the sins of their forefathers and of their own. There is much to be said for the Squire who never passed the picture of his great-grandfather, but he shook his stick at him with an oath and said, 'Your drink brought gout down upon us all.'

"The view we take of the elements of national health is coloured by our conception of the respective relations of body and spirit. When we look abroad on the animal world, we perceive such union of mental and bodily functions, that we are at a loss to say whether the matter, of which the organism is composed, and by which alone the bundle of mental qualities which it possesses can operate in the world, is primarily set in motion by mind, or is itself the *primum mobile*, the basis and very essence of mind."

Does it depend on natural or mental causes?

"The soul of man is not the abject slave of mechanical organisation; in some way, which science cannot at present ascertain, it acts on, as well as is acted upon by, the physical structure through which alone it here exists, and the groundwork of sound national health lies as much in mental as in physical training and guidance. . . . The union of moral with intellectual and physical health (if, indeed, they can be separated), can alone save a people entered on the struggle of so-called civilisation. True, indeed, is it that without good sewers and healthy dwellings, the poor can neither labour well nor reasonably enjoy their being; but as true, that without a pure state of the moral sentiments, no material improvements will ensure to a people present happiness or permanent stability. Material comfort and material luxury are apt to engender, even in a noble race, meanness of soul, and woe and destruction wait on its fall. Physicians, therefore, in discussing the grounds of national health, must compass the whole bearings of this question."

They must study the laws of moral and physical being; especially those which bear on the relation of population to subsistence. They must instruct their fellow-citizens in the dangers of "unthriftiness in marriage, of limited area, of difficulty in emigration, and of working and trading for the world.

"The reality of our difficulty about population is told in a very few words—England and Wales are increasing by about 200,000 annually. This number will of course increase by a small increment. Since A.D. 1810 the population, which was 10,000,000, has become 22,000,000, and at the same rate will become by A.D. 1920 over 45,000,000. The acres in England and Wales are about 37,325,000, including waste ground. There are now, therefore, nearly two acres per man; there will be in fifty years not one."

In a second division of his lecture, Professor Acland treats of how the foundations of public health are sapped, and of the difficulty of tracing evils to their origin in an old and complicated state of society like ours. Old standing rights and privileges need to be sifted.

"Take the single illustration of mills on streams. How long, after the effect of damp subsoil in injuring the health of the people has been proved, is it just to a population that one man should keep up mill-dams to such a height as to swell his profits by some small percentage and destroy his neighbour's health, when other arrangements might, with a little loss to him, at once abate the evil? . . . . The human race and every civilised community is essentially progressive, and no society ought to shrink from dealing with rights which have produced consequences essentially different from anything that could have been contemplated when they were allowed to grow up."

In the third part, he considers how those foundations may be strengthened. Strength must be had if there is to be stability. State after state exhibits the phenomena of progress and decay. To hold our ground, it is necessary not only to know what to do, and what not to do, but to have a high standard of public opinion and general habits; and it is to be got by education—not a mere stereotyped, fixed, Chinese system, but expansive, comprehensive, and elevating. How much there is to be done before enlightened public opinion is embodied in law, may be seen by a few simple questions:—

"Is there yet a country which systematically punishes a man for wilfully or negligently poisoning another's food, air, and water, as well as for stealing his brushwood, turnips, or wild-fowl?"

Affirming that the modern crusade against the vice, ignorance, and mortality of our cities is not one whit less glorious than those attempts of old to deliver the Sepulchre of Christ from the hands of the Paynims, he speaks of two sets of measures—one of persuasion, the other of authority. Regarding persuasion he says—

"England must rule herself in this as in all other matters. The time is gone when people can be dragooned into cleanliness and virtue. We hear that the middle class of England is inefficient, the guardians of the poor bad, and the working-classes ignorant. If so, still they are the people; they and their children pay the penalty of disease and of vice. Show them, truly and without exaggeration, the source of avoidable disease and of destructive vice—they will abate it. Bring the knowledge to their doors—they have heart and will; give the power by enactment, and the work is done."

For the executive, we want a central health department in the metropolis, which shall make use of the already existing and universally pervading machinery of the Poor-law.

"Invest the guardians of rural districts with adequate power, give them the requisite knowledge, appoint persons to the office with special qualifications, and trust them, on behalf of the people, to do all that can be done for maintaining the national health in their district. Keep the Medical officers informed of all established knowledge bearing on health functions; give them in the eyes of their fellow-men an honourable office; and a scientific and trained staff is at once to your hand in every corner of the nation."

We are well aware that some very earnest sanitary philosophers are discontented with the scheme of the Royal Sanitary Commission. Let us concede all that can be said against it, and yet it remains that it has the merits of simplicity; of least disturbance of existing offices and interests; of harmonising materials and functionaries which now work independently and at cross-purposes; and of being economical and feasible. Anyhow, sanitary laws cannot step fully developed like Minerva from her father's head. The task of simplification is a laborious and thankless one; and we are grateful to men, like Dr. Acland, whose sense of public duty impels them to do good work towards the future welfare of England.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending						
	May 6.	May 13.	May 20.	May 27.	June 3.	June 10.	June 10. Sent to Hospital.
West—							
Chelsea	4	16	7	12	?	?	—
St. George, Hanover-sq.	14	11	9	15	17	21	16
St. James, Westminster	3	8	4	3	8	1	1
Paddington	20	24	15	?	?	?	—
North—							
St. Pancras	104	101	117	116	113	77	?
Islington	64	59	42	50	36	52	32
Hackney	?	18	28	17	25	?	—
Central—							
City of London	5	13	11	8	17	10	1
St. Giles-in-the-Fields	5	5	?	?	?	?	—
Holborn	5	13	10	5	8	6	6
St. Luke's	12	13	17	12	13	13	11
East—							
Whitechapel	7	4	23	13	5	18	?
Poplar	?	?	11	14	?	?	—
South—							
St. Mary, Newington	28	28	29	30	35	36	23
St. Olave, Southwark	3	2	2	5	5	2	1
St. George-the-Martyr, Southwark	?	28	?	?	?	?	—
Lambeth	20	?	26	24	22	23	29
Clapham	29	13	16	6	14	11	9
Wandsworth	4	4	1	5	6	2	1
Streatham	?	?	?	2	?	3	?
Lewisham	?	?	?	?	6	?	—
Camberwell	?	?	45	?	?	41	13
Greenwich	?	?	12	?	2	?	—
Plumstead	?	6	6	5	4	6	1

The yellow fever was declining at Buenos Ayres on the 16th ult., and the death-rate diminishing at the rate of twenty per day. Business had been resumed.

The Bill to amend the law relating to the registration of births in England, just brought in by Dr. Lyon Playfair and others, will make giving notice of births compulsory. It is to come into operation on January 1, 1872. Notice must be given, after the passing of this Act, of the birth of every child within forty-two days, under a penalty not exceeding £5. In cases of suspicion of concealment the registrar may obtain an order to inquire from any two justices, and there is a penalty, not exceeding £5, on any person whom the registrar is thereby entitled to question, who shall answer untruly.

DARWINISM AND POLITICS.

By Dr. F. A. HARTSEN.

Not only by sociologists, but also by politicians, has the doctrine of struggle and selection been abused. We are sorry to say it, but some preachers of the theory "Might (brutal force) is above right" have sought shelter against their antagonists under the wings of Darwinism.

A short time ago, a Professor of Zoology at an important university published a pamphlet upon "Darwinism and the Franco-Prussian Struggle." In this he expresses himself thus —"When we see that lower races are exterminated by higher races, it may be asked: what right have the stronger races to exterminate the weaker? The question is a useless one. Might is above right. This is so, and it cannot be helped."

We see, then, that not superficial minds only, but men of talent and influence propagate such error, and, consequently, the matter deserves inquiry.

In the first place, we strongly maintain that "Darwinism," however meritorious, is entirely unfit to serve as basis for a moral or religious code.

"Darwinism" treats of *accomplished facts*. Now, every act, good or bad, when performed is an accomplished fact. Thus, the fact of a thing having been committed is, in itself, no measure of its moral signification. But, admitted that it were a moral code, what is its teaching? Darwinism teaches us that the aspect of the organic world on earth has been due to the struggle for life between stronger and weaker beings. This may be true. But this is not all. Two circumstances here are not to be overlooked—1. It is not necessary that the principle which governed the earth at its beginning should also govern it for ever. Under more complicated circumstances, new laws and rules may come into play. 2. Darwinism teaches us what has been in "*prehistoric*" times. From the age of well-formed language, Darwinism retreats to the background, and leaves the field to "*history*."

Now, admitting that the life of the past is a moral code—that we have nothing to do but to imitate the acts of our fathers—would it then follow that we ought to act in politics upon the principle that "Might is above right"? By no means. Even among the lower animals Darwinism teaches already that "struggle" is not the only constituent principle of the organic world, but that struggle has been guided and limited by love, protection, gratitude—in short, by moral principles.

But here our investigation is far from terminated. There is no reason why we should derive our morals from the actions of lower animals alone, and take no account of what has been done by our *human* ancestors. In fact, that period of the past, generally known as the "*historical* time," and unjustly severed from the field of *natural* history, ought to be taken account of. For in history, which is just as much a part of *natural* science as geology, we find the principles of love, protection, gratitude, etc., still more powerful. Here the moral principles, far from gradually dying out, gain so much in activity that we may fairly ask if "struggle for life" can be said to be the true expression of the ruling principle of the world.

This much is certain, that we should be much mistaken if we considered the drama of history as a "*struggle for life*" between men in the same manner as such a struggle is exhibited by the lower animals. Nay, even the most sophistical Darwinist will not go so far as to draw from his master's ingenious books an apology for brutal murder.

But the matter changes as soon as there is question, not of the relation between individuals, but of that between *nations*. So far as *nations* are concerned, many Darwinists tell us a struggle for life certainly does exist, has always existed, and must always exist. In short, according to them, struggle for life between nations is the normal state of things in politics.

Here, again, we must observe that the past of mankind cannot be depicted as a struggle for life among nations in the same sense as the past of the lower animal species.

A struggle for life, in the real sense of the word, supposes that the stronger party *destroys* the weaker as soon as possible, and by *all* means.

Now, this is by no means what has taken place in history between nations. Very few wars have ended in the entire destruction of the beaten nation. Instead of a struggle for *life*, many a war has been a struggle for principles of another kind—viz., honour, justice, etc.

This constitutes already a great difference between political struggles and the "struggle for life" in the lower animals. But there is something besides. Who has ever heard of diplomatic relations and parliamentary discussions between the wolf and his prey? Who has ever known of a society of fishes and gulls for the "aid of the sick and wounded" in the struggle for life?

Thus it is evident that, in spite of much selfish ambition in politics, principles of humanity and good relations between nations are gaining ground. Progress, in this respect, is a fact quite as undeniable as the facts of geology.

From all this, we conclude that they who wish to defend the theory that "Might is right" will seek in vain for arms in the dominion of Darwinism.

As to the extermination of lower races, against this we energetically protest. It is said that those races are uncivilised, useless. This may be. But, with all that, they can scarcely be less civilised than the idiots for whom we build splendid asylums, and whom we try to improve. If it be right to exterminate uncivilised people, why do we not begin with our own idiots?

GENERAL CORRESPONDENCE.

DR. STALLARD AND DR. GIBBON.

Letter from Dr. J. H. Stallard.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am not in the habit of criticising the Professional opinion given by a brother Physician before a non-Professional audience. The fact in the case referred to is, that Dr. Gibbon was never required to give any Professional opinion whatever, Dr. Norton having already certified that the child required immediate removal to Hospital.

The just complaint of the Guardians is that the Board of Works, of which Dr. Gibbon is the officer, have not taken proper steps for the prompt removal of patients to Hospital; have not properly and promptly disinfected the houses in which small-pox has occurred; have not provided a proper disinfecting apparatus; have nothing but a costermonger's truck on which to carry infected bedding; and have not reduced over-crowding in illegally-occupied cellars, even in the face of small-pox.

I am, &c.,

J. H. Stallard, M.B. Lond., M.R.C.P., etc.

Letter from Dr. Septimus Gibbon.

[To the Editor of the Medical Times and Gazette.]

Sir,—As I have always endeavoured to carry out my duties as Medical Officer of Health to the best of my ability, I care nothing for the gratuitous criticisms of Dr. Stallard in his capacity of Poor-law guardian. He would do well, as the local journal observes, if his declamation was a little more delicately tempered in expression, because the "hammer-and-tongs" style is rather a feeble mode of enforcing the Professional opinion he holds in opposition to mine.

I do, however, hold that his interference in going to the police-court with Mr. Birch, the relieving officer, and getting a magistrate's order to remove a small-pox case—without informing either myself or the parents of the child—was most officious and uncalled-for. Although this order was not complied with until a week after it was obtained, and until the child was in a fit state to bear the journey, the child died a few days after entering the Hospital. There was, in my opinion, no sanitary reason for the removal of this child, it being perfectly isolated and well nursed.

I have further to complain of this gentleman showing his little brief authority by inducing the Board of Guardians to upset the local arrangements for carrying out the Vaccination Act, 1867. Early in 1868 the then Board of Guardians asked me to continue to enforce vaccination by accepting the newly-created post of Vaccination Officer. I did so, and, with the assistance of three very skilful and careful public vaccinators, I flatter myself that the Vaccination Act of 1867 was carried out as well, if not better, in the Holborn District than in any other portion of the metropolis.

Last midsummer, in accordance, I believe, with a recommendation of the Privy Council, Dr. Stallard moved the dismissal of the three public vaccinators, and this year, in as ungracious a manner as I ever witnessed, he moved the Board of Guardians to call upon me to resign my post as Vaccination Officer. This, at the request of most of the Practitioners of the district, I declined to do, and then he *more suo* moved the Board to dismiss me from the office, which I am assured that I discharged to the satisfaction of my Professional brethren and the public at large. I am, &c.,

June 14. SEPTIMUS GIBBON.

⁂ The narrative of this little occurrence shows how necessary it is that the "destitution" and "sanitary" authorities should be identical. We may add that every Medical man who sits on a board should exercise the utmost delicacy in his relations with a brother-Practitioner who may happen for the time to be serving under him.—ED.

SUPERFINE VACCINATION.

LETTER FROM MR. JOHN SMITH.

[To the Editor of the Medical Times and Gazette.]

SIR,—It is really too bad that men holding the important and responsible public position of Mr. R. Ellis should fill the columns of the almighty *Times* with letters which must tend to bring his less fortunate Professional brethren into disrepute. Mr. Ellis has invented a new method of vaccinating. He first of all makes one or two little vesicles with cantharides, then next day applies his vaccine to the surface thus denuded of cuticle. His method, he tells us, never fails; but it is only men of genius who never fail, and this one can't be at will; moreover, other men say the same of their own schemes. But he clearly intimates that anyone who does not do as he does is guilty of ignorance, neglect, or carelessness, and of being an accomplice in the spread of small-pox.

Now, I might argue, on the other side, that if the object be to denude the cuticle, that may be done easily in a second with the point of the lancet. I might, also, argue that men who are paid small fees could not find the time for two operations; for I need hardly say that the vesicant, to be applied discreetly, should be done by a Medical hand, and, as a matter of course, the like of myself do not receive the extra guinea or two which would be the reward of Mr. Ellis for his extraordinary skill and humanity. But what I would respectfully bring under the notice of Mr. Ellis, and personages moving in the same elevated sphere, is this—There is a large number of persons in this town and elsewhere who live from hand to mouth, who are toiling and moiling from morning to night with their families and work, and whom it is next to impossible now to get to come twice for the vaccination and inspection. How, then, shall we get them to come thrice, if we add one visit for the preliminary vesication? Would that Mr. Ellis had to look up an Irish "widdy," who, when upbraided with not coming on the eighth day, replied that she would not give up a day's "choring," and "let her childher's bellies go empty for all the Doctors this side of—" a place which Pope's soft Dean would not mention to ears polite.

I am, &c., JOHN SMITH, M.R.C.S.,
Public Vaccinator to District No. 7.

St. Giles's, June 13.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 26, 1871.

Dr. W. W. GULL, President, in the Chair.

DR. MEADOWS related a case of Acute Disease of the Hip-joint following the introduction of a tangle tent into the uterus. The patient was 31 years of age, married ten years, sterile, and suffering from dysmenorrhœa. For this the cervix uteri was dilated with tangle tents, and after several had been applied she was seized with severe pain in the left hip-joint, and she then came under Dr. Meadows's care for some supposed pelvic inflammation. It turned out, however, to be a case of acute inflammation of the hip-joint, which rapidly suppurated, and ended in the course of a few weeks in destruction of the joint and the death of the patient. On post-mortem examination, no cellulitis or inflammation of any kind was discoverable about the uterus or its appendages, but an enormous abscess had completely destroyed the hip-joint and parts adjacent. There was no indication whatever of any mischief having been done to the uterus itself.

MR. COOPER FORSTER took exception to the explanation of the inflammation. It was said to be tubercular, but he had seen cases where a slight abrasion on any part of the body, but specially on the os uteri, had been followed by great mischief. He rather thought it arose from pyæmic poisoning. Nothing else would explain the rapid destruction of cartilage.

Dr. BUZZARD asked a question as to the nature of the double os uteri, and also whether other joints were examined.

Mr. GEORGE LAWSON said that, after passing a tangle tent, the part beyond the stricture swells, so that it requires great force to withdraw it. In this way the abrasion might be accounted for.

Mr. HAWARD also thought the mischief pyæmic. He was of opinion that tubercular affections were rather rare in joints, and quoted statistics to show this. The temperature militated against the idea of pyæmia in this case.

Mr. BRUDENELL CARTER put a query as to the necessity of any abrasion going before pyæmia. Mr. Prescott Hewett had told him of three cases following gonorrhœa.

Mr. LAWSON TAIT had used tangle tents, but a fatal case occurred, and he gave them over. In that instance the tent had apparently pierced the walls of the uterus, and given rise to peritonitis.

The PRESIDENT thought Mr. Carter's remark important. He remembered a case of suppuration of the veins of the spinal cord after gonorrhœa. In puerperal fever it was generally the veins of the os which were most affected.

Dr. MEADOWS replied that he did not pronounce the disease tubercular; that no other joints than the hip were examined. He took exception to the statements relative to the danger of tangle tents. It was true they might be dangerous if allowed to go too far in.

Mr. HOLTHOUSE read a paper showing the good effects of Opium in Strangulated Hernia. He narrated several cases where opium had been given and relief obtained without the necessity of operation.

Mr. COOPER FORSTER protested against the use of opium as compared with the knife. He thought that the rule was absolutely proved—If a hernia is strangulated and cannot be reduced, operate. He considered sickness the most important test of strangulation. Delay was to be avoided by all means, and the knife was the true remedy. The operation was perfectly safe.

Mr. LAWSON TAIT narrated a case where he injected morphia subcutaneously while waiting for his instruments. When they came and chloroform was administered, the taxis sufficed. He thought the knife safe with the subcutaneous operation.

Dr. ANSTIE read a remarkable case of Neuralgia in all the three branches of the Fifth Nerve, reinduced, in a person who had suffered from it before, by the intercurrence of constitutional syphilis. The complications were remarkable: there was complete anæsthesia of the affected side of the face, exactly reaching the mesial line, complete paralysis of the third and sixth nerves, loss of taste in the neuralgic half of the tongue, loss of smell on both sides, and spasms of the masseter muscle. The neuralgia and the anæsthesia were rapidly cured by large doses of iodide of potassium, and, singular to say, not only the function of taste, but also that of smell, recovered *exactly pari passu with the recovery of the fifth nerve.* The ocular paralyses remain at present unaffected. The spasm of the masseter disappeared simultaneously with the neuralgia and anæsthesia. The woman, who was married, and had three very healthy children, and never aborted, was probably only syphilised about one year ago, and many years after the first attacks of neuralgia, which partook of the character of migraine.

Dr. HUGHLINGS-JACKSON remarked on the great interest of Dr. Anstie's observations on the occasional coincidence of facial neuralgia with partial anæsthesia of the painful organ. He (Dr. Jackson) supposed persistent, although partial, loss of feeling must depend on destruction of nerve fibres and neuralgia, especially if it was paroxysmal on discharges of ganglion cells connected with intact fibres. An analogous fact was the not unfrequent occurrence of convulsion of muscles which are imperfectly paralysed. Dr. Jackson asked as to the condition of the masseter and temporal muscles. He suggested that the loss of smell might depend on an olfactory neuritis analogous to optic neuritis, and, as bearing on this, asked if an ophthalmoscopical examination had been made. It was certain that severe optic neuritis might exist when sight was unaffected. In some cases of cerebral disease there was loss of smell, with amaurosis from optic neuritis.

Mr. GEORGE LAWSON said it was rare to find paralysis following so soon on syphilis. That usually came years after, as did the worst affections of the tongue.

Dr. BUZZARD remarked on the loss of smell on both sides, whilst the fifth was affected on one side only. Might there not have been an additional paralysis of the olfactories.

Mr. B. Carter hoped to be able to clear up the case later. The patient came for the ptosis, which was complete. He was sorry there had been no ophthalmoscopic observation made. The eyes were evenly balanced, although only the superior oblique muscles were left intact.

Mr. Cooper Forster hoped they would not add this case to the many evils already attributed to syphilis, for it was quite impossible it should be syphilitic from the time it came on. Had it resulted from a node, the patient would have got quite well with iodide of potassium.

Dr. Anstie thought there was time for the syphilis to develope itself. He was really disappointed when the syphilis appeared.

Dr. Hughlings-Jackson gave particulars of a case of Right Hemiplegia, with Loss of Speech (nearly complete aphasia), which had been investigated by himself and Mr. Stephen Mackenzie. The hemiplegia, with the affection of speech, pointed to some kind of disease of, and of the convolutions near to, the corpus striatum. From the manner of onset, and from other circumstances, he inferred that there was softening from thrombosis; and as the patient presented well-marked external signs of syphilis, he supposed the softening depended on thrombosis of an artery which was diseased from syphilis. He did not speak of atheroma (endarteritis), which was believed by some to be an occasional result of syphilis, but of what may be called nodes of arteries (gummatous affections). He alluded to the observations of Bristowe (Pathological Society's *Transactions*, 1859) on thrombosis of cerebral arteries from syphilis, and those of Wilks (Guy's Hospital Reports, 1863) and Moxon (ibid., 1867-8) on cases of syphilitic disease of cerebral arteries, and referred to several cases published by himself (the *Lancet*, 1866, and London Hospital Reports, vol. iv.). He urged the great importance of recognising that many "syphilitic affections" of the nervous system are really dependent, but very indirectly, on syphilitic changes, and especially that in some cases of "syphilitic hemiplegia" the pathological condition of the nerve-centre on which the palsy directly depends is like that produced by embolism. We quickly cure recent palsies of cranial nerves from the direct action of syphilis on the nerve-bundles, but to cure certain cases of syphilitic hemiplegia we have to do more than to treat syphilis, and our treatment of these cases is often unsuccessful.

The President remembered the case referred to. He considered that Dr. Jackson's remarks went against the views of Mr. Cooper Forster. Iodide of potassium would cure the syphilitic deposit, but not its effects on the surrounding tissues.

Mr. B. Carter recalled a case he had seen with Dr. Hughlings-Jackson. Many results followed syphilis, which iodide cured, but at last hemiplegia set in. Twelve months after this he had seen the patient again, still hemiplegic; it was too late for the iodide. This had been given in large amount, with no result.

Mr. Lawson Tait referred to a case he had seen where cerebral symptoms were followed by hemiplegia from a gummy tumour in one of the cerebral vessels.

Mr. Cooper Forster explained that he only held to the value of iodide of potassium in the early stage of tertiary syphilis; not in the effects of the tumour on surrounding parts.

Dr. Anstie pointed out that in his case the iodide had removed the neuralgia.

Mr. Callender narrated and exemplified a new mode of dealing with long-standing dislocations of the shoulder, after which the Society adjourned for the season.

LEGAL INTELLIGENCE.

CENTRAL CRIMINAL COURT.—June 8.

(Before Mr. Justice Byles.)

A most extraordinary charge of attempting to procure a noxious thing with the intent to cause the miscarriage of one Margaret Jane Southey was made against Walter and James Tregellas, the uncles of the young woman in question.

From the evidence of Mr. Benjamin Duke, Surgeon, of 272, Kennington-park-road, it appeared that, on April 5, James Tregellas called upon him, and asked for some medicine to cause a child to be born dead. Witness declined to supply any, but, having made an appointment, James called again on the same day; Mr. Duke, in the meantime, secreted a constable in a skeleton-case. James Tregellas said he wanted a pill or a powder to kill the child by degrees. At ten, James and Walter called together, and asked Mr. Duke to name his price. He named £5, which was paid. Mr. Duke then gave them a bottle of harmless liquid—a mild tonic.

On the 20th, Walter called again, and stated the medicine had had no effect. After some correspondence, it was agreed that Mr. Duke should see the woman at their office on Saturday, May 7, whither he proceeded, accompanied by a detective, whom he represented as a Medical student. He saw the woman, who stated that she was pregnant, and he gave her a bottle of harmless medicine. He had, on the 3rd, been promised another £5 if he would make it all right. In his cross-examination, Mr. Duke said he had been acting throughout under the direction of the detectives. His evidence was corroborated by the detective concealed in the skeleton-case.

The learned judge, in summing-up, observed that great zeal was exhibited to bring this crime home to the parties, but he doubted whether such zeal was proper when the course taken necessarily led to another offence. I do not accuse, said he, the Medical man of being actuated by improper motives, but I doubt whether in this case the proper limits have been observed which a prosecutor ought to keep in view.

The two prisoners received a high character, and, in conclusion, the judge remarked that, if the Doctor had driven them from his door, he would have done his duty. He did not say that the Doctor was guilty of treachery, but he did say that the artifice that was used to draw these persons into crime, though not illegal, was subject to severe observation. There was not sufficient evidence that they intended to procure something noxious, but still there remained the question that they did unlawfully and wickedly conspire and agree together to procure the miscarriage. The prisoners did not appear to have had any selfish motive, but had acted generously and affectionately towards the young girl.

The jury found both the defendants "Not Guilty." The foreman added that they wished to censure the manner in which the prosecution had been brought forward.

SMALL-POX.

On Monday last, Dr. Aldis, Officer of Health of St. George's, Hanover-square, applied to Mr. Woolrych, at the Westminster Police-court, for a summons against a milkwoman in Belgravia for exposing herself during the time that she had the small-pox. She had sold milk in her shop all the time that she and others of her family had the disease. The magistrate said the Act only applied to exposure out of doors, and he should not therefore issue the summons.——At the Southwark Police-court, Mr. Jonathan Newson and his wife were charged with exposing their servant, who was ill with small-pox, in the public streets. The girl, upon being attacked with the disease, complained of it to her mistress, who thereupon paid her her wages, and told her to leave the house immediately. She did so, but had to beg the assistance of a neighbour to assist her in walking. This neighbour brought her before a magistrate for his advice. Eventually, the girl was taken to the workhouse. Mr. Benson fined the female defendant £5, but discharged the husband.——At Clerkenwell, Michael Turner was charged with conveying his daughters, then suffering from small-pox, in a public vehicle. The defendant had hired a cab, and taken away the two girls from his residence in Roman-road to the New Cattle Market, where they were transferred to an ambulance. Mr. Cooke fined him 40s., and costs.

OBITUARY.

JAMES JONES, M.D. Lond., M.R.C.P.

We regret to record the death of this excellent Physician and estimable man, which took place at his residence, 4, Harley-street, on the 6th of the present month. Dr. Jones was a native of the north of Ireland. On completing his Medical curriculum he determined to settle in England, and for a short time assisted the late Mr. Hunter, of Islington, in carrying on his very extensive practice. He afterwards commenced practice in the neighbourhood of Brunswick-square, as a general Practitioner, and rapidly made a considerable business. It was during the leisure snatched from the hard work of general practice that Dr. Jones accomplished the feat of preparing for graduation and obtaining the degree of M.D. at the University of London, and obtaining by examination the Fellowship of the Royal College of Surgeons of England. He afterwards removed into a better situation, and began practice as a Physician. He became Physician to the Metropolitan Free Hospital and to the Margaret-street Infirmary for Consumption. Dr. Jones was the author of a little book on phthisis, in which the value of treatment by iron in small doses, continued for a long period, in that disease, is insisted on. He also contributed papers of practical value and interest to this and other Medical journals. His Medical skill and acquirements, and his genial, kindly character, were elements well calculated to obtain the public appreciation; and, no doubt, had not failing health limited his exertions, these qualifications, together with his untiring industry and perseverance, would ultimately have obtained a large measure of Professional success. For some months before his death, his health had been visibly declining. He had one or two severe attacks of pleurisy, from which he only partially recovered, but he still struggled on, and even a few days before his death he was found at his post at the Margaret-street Infirmary. Dr. Jones has left behind him the character of an able Physician and a kindly gentleman, and his comparatively early death will be deeply regretted by those who knew him.

PRESTWOOD LUCAS, M.D., M.R.C.P. Lond., OF BRECON.

Dr. Prestwood Lucas, the eldest son of the late Henry Lucas, M.D., of Brecon, was born in the town of Carmarthen in the year 1801. Dr. Henry, the father, a member of the old family of Lucas, of Stouthall, in Gower, Glamorganshire, practised for upwards of twenty years as a Physician in Brecon. He was Physician to the Brecon Infirmary, Mayor of Brecon in 1839, and died in 1840.

Dr. Prestwood Lucas was educated at a school in Bath, and studied Medicine in Edinburgh, accompanied by his younger brother, the present Dr. Henry Lucas, of Crickhowell. In Edinburgh he soon mixed in the very best society, and before he left the University secured the firm friendship of many of the most eminent men of his day. The two brothers graduated in 1825, just a year later than their college friend, Dr. Charles B. Williams. After leaving the University, Dr. Lucas studied in Paris, and diligently attended the cliniques of Laennec, Trousseau, Louis, and Piorry. In April, 1827, he was appointed, by commission, Assistant-Surgeon in the Royal Artillery. He continued in the service for very nearly twelve years, leaving it in March, 1839. In forwarding to him the official notification of his resignation having been accepted, Sir John Webb, Director-General of the Ordnance Medical Department, says, "I feel the retirement of Dr. Lucas from the Ordnance is one of the greatest losses its Medical Department can sustain, both as an able Physician and a high-principled gentleman."

On leaving the Royal Artillery, Dr. Lucas went to Swansea, and was elected in May, 1839, Physician to the Swansea Infirmary. But the following year, in consequence of the illness of his father, he determined to settle in Brecon, and, his father dying soon after, he succeeded him as Physician to the Brecknock County and Borough Infirmary. From 1840 till his death Dr. Lucas took the greatest interest in this Hospital, visiting it every day, when at home. To him the institution is chiefly indebted for its present high standing in the county. Dr. Lucas took a warm interest in the sanitary improvements of the town. He was a member of the Council and the Local Board of Health, and an Alderman of the Borough. He was offered the Mayoralty, but declined the honour. In 1859 he was elected a member of the Royal College of Physicians of London. He was a Governor of Christ's College, Brecknock, and a Deputy-Lieutenant, but though in the commission of the peace for the county he never acted. He was the local secretary of the Sydenham Society.

Well qualified, as he was, by general scholarship and by extensive Professional knowledge for authorship, he wrote but little. In the April number of the *Medico-Chirurgical Review* for 1834 he published an interesting review of M. Piorry's work on Mediate Percussion, and there advocated, under certain conditions, notwithstanding M. Piorry's ingenious contrivances to adapt his pleximeter to unequal surfaces, the use of the hand, "as being far the better instrument." In October, 1864, Brecon was visited by a severe outbreak of cholera, and the town was much indebted to him for the sanitary arrangements he instituted. An instructive report, by him, of the local epidemic, with remarks on the causes and propagation of cholera, was published by order of the Board of Guardians. In the *Medical Times and Gazette* for February 25, 1865, he contributed an account of a case of opium-poisoning successfully treated with belladonna.

For a year past he had gradually declined in health, and became perceptibly thinner and weaker. He went to Weymouth last autumn, hoping to get some benefit from the change of air, and before he returned home proceeded to London and sought the advice of his old college friend, Dr. Charles B. Williams. Latterly his emaciation rapidly increased, and for some weeks before his death he was confined to his house, where he calmly, gently, and trustfully awaited, with a perfectly clear intellect, the call which was to summon him to the reward of his labours. On Whit Monday, May 29, in his 70th year, died this good and pious man. Only a few weeks back, we (the *Medical Times and Gazette*) published in our columns an account of the valuable testimonial which his numerous friends had presented him. The illuminated address which accompanied it, containing the names of 500 subscribers, all friends or patients of the Doctor, pleased him exceedingly, and his honest pride was intensely gratified by this public mark of esteem and respect.

Dr. Lucas practised purely as a Physician, and was the recognised head of his Profession in the county of Brecknock, and in request as a consultant in many of the neighbouring towns. He had travelled much, and when in the Royal Artillery spent a good deal of his time in Malta, Gibraltar, and the Mediterranean coast. Previously conversant with French, he there became proficient in Italian, a language which he spoke well and continued to be fond of all his life. He was a good classic, and understood Hebrew and Sanskrit, and he spoke and read Spanish with great ease. He was very fond of natural history, and a most excellent practical botanist. His love for meteorology was such that for the last twenty or thirty years he kept daily records of the weather and temperature. His general information, polished manners, and his kind sympathy with everything good and elevating, rendered his conversation most attractive. He was gifted with a rare eloquence, and his public speeches were characterised by a peculiar elegance and earnestness. In politics, he was a most conscientious Liberal, and a warm admirer of Mr. Gladstone. In private life, Dr. Lucas was the gentleman, the scholar, and, even more and better than these, the Christian. He had all the mental cultivation that high literary tastes, combined with travel and mixing with the world, give a man of natural elevation of mind. This, however, was not the chief point of his character. Above all were his devout religious convictions and child-like trust in his God and Father, which made a deep impression on all who were favoured with his intimate friendship.

His funeral took place on Monday, June 5, and was accompanied to the Brecon Cemetery by the Mayor and Corporation, the magistrates, tradesmen, and inhabitants generally of the town. Throughout the whole of the route, shops were closed, blinds drawn, and every possible thing done to show the sense felt by the inhabitants of the public and private loss they had sustained.

Dr. Lucas had no children. He has bequeathed to the Brecon Infirmary all his Professional and scientific books, together with suitable cases for them. By his desire, they will be lodged in the room of the institution in which for thirty years he almost daily sat and prescribed for the out-patients. And in this room will also be kept another gift and object of much Professional interest—viz., Laennec's own stethoscope or "cylinder," which was given to Dr. Lucas, while a student in Paris, by Laennec himself.

DR. ENGLAND, OF IPSWICH.

The death of this gentleman occurred somewhat suddenly, on the 1st inst., at Lowestoft, where he was staying for the benefit of his health. Dr. England was born on April 16, 1799, at Sandringham, Norfolk, and commenced his Medical career as an apprentice to the late John Joy, Esq., of Massingham, in the same county, and in 1824 entered as a pupil at the Medical School of Guy's and St. Thomas's Hospitals. Having passed through the usual curriculum at this School, he proceeded to Paris, and for some months diligently attended practice at the Hôtel-Dieu, and lectures at the Sorbonne. On his return to England, still feeling desirous of prosecuting his anatomical studies, he visited Dublin, and entered at the Richmond Hospital School of Medicine. From Dublin he proceeded to Edinburgh, where in the autumn of 1828 he matriculated at that University, and in the following year had the degree of M.D. conferred upon him, selecting for the subject of his thesis "Functional Diseases of the Kidneys." In 1830 he commenced practice as a Physician in Norwich, and took a very active part in the sanitary measures that were adopted during the fearful epidemic of cholera which occurred in that city in 1832. In the beginning of 1836 Dr. England left Norwich, and went to Wisbeach, where, after the death of his father-in-law, the late Dr. Fraser, he practised until 1855, when he retired from the Profession, and took up his residence in Ipswich. Dr. England was very fond of, and well read in, the literature of his Profession, and contributed several papers of a practical character to the various Medical periodicals of the day. He was a Fellow of the Royal Medico-Chirurgical Society, and a Member of the Royal Medical Society of Edinburgh.

MR. S. MURCHISON, OF BICESTER,

Was in his 60th year at the time of his death. He was born in India. His father, an indigo planter, died comparatively young—at the early age of 36 years. He received his general education at the Grammar School at Bath, and was apprenticed to the late Mr. Nicholls, of Wells, a Practitioner of considerable local reputation. He attended as a pupil at the United Hospitals (Guy's and St. Thomas's), and afterwards at the Seamen's Hospital (the *Dreadnought*), under Mr. Busk. Of the value derived from the instruction under such a master, he ever spoke with feelings of respect and affectionate remembrance. He passed the College of Surgeons in 1834, and the Society of Apothecaries in 1835, and began his Professional career at Bath, where he engaged in general and family practice. After some years he removed to London, and joined as a partner in a practice, which he did not find altogether suited to his tastes. As a Fellow of the Royal Medical and Chirurgical Society he attended the meetings of the Society, but without taking part in the discussions or contributing any paper to the *Transactions*. Soon after his marriage he left London and settled at Bicester, in Oxfordshire. Upon the first occasion of a vacancy he was appointed Medical Officer of the Union Workhouse, with a large district of parishes. The duties of such an office, added to the laborious work of an extensive private practice, told upon a constitution by no means strong. Though he was seldom disabled by illness, his intimate friends observed that his strength was far from being equal to the demands made upon it, and he was told of their fears that there was degeneration of the muscular substance of the heart. At the beginning of the present year he had agreed on terms of partnership with Mr. Drinkwater, but before these had come into full operation he sank, after four days' illness, under the exhaustion attending on an acute inflammatory affection of the fauces and larynx. As a Practitioner he was careful and painstaking, judicious in treatment, and, as a consequence, successful. Honourable and straightforward in all his conduct, he gained the respect of his Professional brethren. A gentleman by habit and education, he was one of the men who can ill be spared from the ranks of the Profession.

GEORGE MALLETT, F.R.C.S.,

Died, after a long illness, on the 5th inst., in the 69th year of his age, at his residence, Silverwell House, Bolton. He was articled to the late John Moore, Esq., Bolton, and finished his Professional studies at St. Bartholomew's Hospital. He was, from 1825 to 1831, House-Surgeon to the Bolton Dispensary, and so discharged the duties of that office as to receive, on his resignation, a gratuity and warm vote of thanks from the committee. From that period, until disabled by his last illness, he was actively engaged in an extensive and a lucrative practice. From 1840 to 1864 he was one of the Honorary Medical Officers of the Infirmary, and on his retirement he was immediately appointed Consulting Surgeon. A thorough knowledge of his Profession, a clear, sound judgment, and conduct strictly honourable, secured to him the confidence of the public and the Profession, causing him to be frequently consulted by his brethren, not only in the town, but in a wide circle around it. A warm and faithful friend, his loss is keenly felt and deeply deplored by his numerous friends, and to a great extent by the community among whom he so long and so usefully laboured.

OLIVE SIMS SHAW, M.R.C.S. Lond., L.S.A.

We regret to say that another and a highly talented young Medical officer has fallen, in the person of Olive Sims Shaw, M.R.C.S. Lond., and L.S.A., House-Surgeon of the Mill-road Hospital, Everton, Liverpool, under typhus fever, contracted in the execution of his duties. Mr. Shaw was in his 25th year, of considerable promise and skill. His kind, gentle, and truly amiable disposition endeared him to all. As a fellow-student, or as a Practitioner, he won the hearts of those with whom he had to do, and it will be long ere his kind look and genial disposition be forgotten by those associated with him in the Hospital. He breathed his last on Monday, the 11th inst., at 8 a.m. All that skill and attention could do was done to save such a valuable life by Drs. Irvine, Cameron, and Jerman, but the great Disposer of events had otherwise ordained. Referring to Mr. Shaw's death, a correspondent writes :—

"It requires great courage to storm the breach and dash amid the stern melody of the battle-field upon the foemen's serried ranks; yet it may be questioned if the moral courage requisite to pace 'the deadly typhus' wards of a pest-house day by day and night by night be not as great as that which inspires men who, for God and Fatherland, tread the ensanguined field. We embalm the names of the brave who sleep on the field of fame, 'red and gory'—shall we forget the Medical men who, as heaven-sent messengers, seek to soothe and save, and perish in their duties?"

MEDICAL NEWS.

◆

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 8, 1871:—

Murdoch, Donald, Rotherhithe, S.E.
Strafford, Thomas, Ripley, Derbyshire.

The following gentleman also on the same day passed his first Professional examination :—

Wallis, William, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Boulton, Dr. Percy, M.D., L.R.C.S.E.—Physician for Out-patients to the Samaritan Free Hospital for Women and Children, Lower Seymour-street, *vice* Dr. Junker.

Johnson, Thomas Soars, L.R.C.P. Edin., M.R.C.S. Eng.—Medical Officer to the Lutterworth Union.

Meadows, Alfred, M.D. Lond., M.B., M.R.C.P. Lond., &c.—Physician-Accoucheur at St. Mary's Hospital.

Parker, W. A., M.R.C.S.—House-Surgeon to the Victoria Hospital for Sick Children, Chelsea, *vice* H. M. Steele, M.R.C.S. resigned.

Wheatcroft, C. H., L.R.C.P., M.R.C.S.E.—Assistant House-Surgeon to the Sunderland Infirmary, *vice* T. R. Heycock, M.B., resigned.

MILITARY APPOINTMENTS.

Medical Department.—Staff Assistant-Surgeon George Herbert Clifton, M.D., has been permitted to retire upon temporary half-pay; Staff Assistant-Surgeon James Hinton, from half-pay, to be Staff Assistant-Surgeon, *vice* Robert Nasmyth McPherson, appointed to the Royal Artillery.

Royal Artillery.—Staff Assistant-Surgeon Robert Nasmyth McPherson to be Assistant-Surgeon, *vice* George Edward Gascoigne, who resigns.

BIRTHS.

Ambler.—On June 9, at Hemel Hempstead, the wife of Edward H. Ambler, F.R.C.S., of a daughter.

Cogman.—On June 12, at 267, New North-road, the wife of Charles Cogman, L.S.A., of a daughter.

Lewis.—On June 13, at Loughton, N.E., the wife of W. T. Lewis, M.RC.S.E., of a daughter.

Lowndes.—On June 12, at Egham-hill, the wife of T. M. Lowndes, M.D., retired Surgeon, H.M.I. Army, of a daughter.

Muriel.—On May 31, at 14, Scotch-street, Whitehaven, the wife of G. J. Muriel, M.R.C.S.E., of a son.

Murray.—On May 14, at Kurrachee, Scinde, the wife of Surgeon-Major William Sim Murray, M.B., 66th Regt., of a daughter.

Radcliffe.—On June 8, at 14, Regent's-park-terrace, N.W., the wife of J. Netten Radcliffe, M.R.C.S., of a daughter.

Steggall.—On June 7, at 3, Queen-square, Bloomsbury, W.C., the wife of John William Billing Steggall, M.R.C.S., of a son—Octavius.

Turner.—On June 7, at Ryde, Isle of Wight, the wife of Dr. W. F. J. Turner, of a son.

Tyrrell.—On June 11, at Dover, the wife of Assistant-Surgeon W. J. Tyrrell, 102nd Fusiliers, of a daughter.

MARRIAGES.

Delmege—Scott.—On June 7, at St. Paul's, Prince's-park, Liverpool, E. T. Delmege, Esq., of Galle, Ceylon, eldest son of the late C. C. J. Delmege, M.D., Staff Surgeon-Major, to Agnes Jessy (Sissie), eldest daughter of John Scott, Esq., Prince's-park, Liverpool.

Fay—Parker.—On June 7, at Christ Church, Timperley, Cheshire, Tullius William Ward Fay, M.R.C.S., Canning-street, Liverpool, eldest son of the late T. P. Fay, Esq., to Euphemia, youngest daughter of the late John Parker, Esq., Liverpool.

Hey—Lyon.—On June 8, at the Church of the Holy Trinity, Newington, Surrey, Charles Black, eldest son of the late Henry Hodgson Ogle Hey, M.D., of Sunderland, to Henrietta Elizabeth, eldest surviving daughter of Mr. William Lyon, of Guildford, Surrey.

Kirsopp—Stokoe.—On June 13, at the parish church, Camberwell, William Scurfield Kirsopp, Esq., of Maiden Cross, Hexham, Northumberland, to Ellen, third surviving daughter of Richard Stokoe, Esq., M.D., of Peckham-rye.

Simpson—Manson.—On June 7, at All Saints' Church, Upper Norwood, the Rev. Philip Henry Simpson, B.A., eldest son of the Rev. Philip Simpson, M.A., of Metham Hall, Yorkshire, to Mary Ross Alexandra Ann, only daughter of the late Fredericke Robert Manson, M.D.

Stamford—Walker.—On June 7, at the parish church, Chesterfield, William Ackrill Stamford, M.R.C.S., of Tibshelf, Derbyshire, to Florence Louisa, third daughter of Hugh Eccles Walker, M.D., of Chesterfield.

Steward—Cory.—On June 8, at Blundeston, Suffolk, the Rev. Charles John Steward, rector of Somerleyton, Suffolk, to Edith Ann, daughter of the late William Cory, Esq., M.D., of Kingston.

Trent—Delay.—On June 10, at the parish church, Lower Tooting, Thomas Trent, Esq., M.R.C.S., to Mary Ann, eldest daughter of William Delay, Esq., of Brookfield-house, Upper Tooting, S.W.

Wyllie—Gairdner.—On June 8, at Crieff, Harvey Wyllie, Forest-hill, London, son of David Wyllie, banker, Aberdeen, to Janet Orr, eldest daughter of M. B. Gairdner, M.D., Edinburgh, F.R.C.S.

DEATHS.

Fletcher.—On June 11, at Bromsgrove, aged 55, Obedience, wife of Dr. T. S. Fletcher.

Hunt, John Frederick Gould, the eldest son of John Hunt, Surgeon, at 1, St. George's-square, Pimlico, on June 6, aged 4 years and 3 months.

Jones, James, M.D., M.R.C.P.L., at his residence, 4, Harley-street, Cavendish-square, on June 6.

Lewis, Hester Margaret, wife of Dr. Waller Lewis, Physician to H.M. Post-office, and youngest daughter of the late General Sir William Pringle, K.C.B., at 17, Bedford-place, Russell-square, on June 12.

Peacocke, Dr. George, M.A., Surgeon H.M. 63rd Regt., on June 5, at Hazareebaugh, Bengal, in his 40th year, of diphtheria, dearly loved and mourned by his sorrowing wife and relatives.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Birmingham and Midland Free Hospital for Sick Children.—Two Extra Acting Physicians and an Ophthalmic Surgeon. Applications and testimonials to the Secretary, at the Out-patient Department, Steelhouse-lane, addressed to the Medical Committee, on or before June 22.

Brighton and Hove Dispensary, Queen's-road, Brighton.—Resident House-Surgeon; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Chairman of the Committee of Management, on or before June 26. Election on July 4.

Devon County Lunatic Asylum.—Assistant Medical Officer. Applications and testimonials to Mr. T. E. Drake, Solicitor, Exeter, the Clerk to the Committee, on or before June 20.

"Hamadryad" Hospital Ship for Seamen of all Nations.—Port of Cardiff.—Resident Assistant Medical Officer. Candidates must be unmarried, and possess a Surgical qualification. Applications, with testimonials, on or before Monday, June 26, to David Roberts, Secretary, 17, Church-street, Cardiff.

Henley Union.—Medical Officer for the Nettlebed District. Candidates must possess the qualifications prescribed by the General Orders of the Poor-law Board. Applications and testimonials to Mr. N. Mercer, on or before June 20.

Huddersfield Infirmary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians, and be duly registered. Applications and testimonials to John Marsden, Esq., Hon. Sec., on or before July 28.

Liverpool Dispensaries.—Assistant Resident House-Surgeon; must be duly qualified, and unmarried. Applications and testimonials to the Secretary, on or before June 29. The attendance of candidates will be required on the following day at 2 o'clock p.m.

Parish of Lambeth.—Dispenser; must be either a Licentiate of the Apothecaries' Company of London, or have been duly registered under the Pharmacy Act, 1868. Applications, with testimonials, on or before Monday, June 19, to W. B. Wilmot, Clerk to the Guardians.

Westhampnett Union, Sussex.—Medical Officer and Public Vaccinator for the Rumboldswyke District. Candidates must be qualified in accordance with the General Orders of the Poor-law Board. Applications and testimonials to Mr. R. G. Raper, on or before June 17.

West London Hospital, W.—Physician, Ophthalmic Surgeon, Junior Surgeon. Candidates for the post of Physician must be F. or M.R.C.P.L., and the Surgeons must be Fellows of one of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin. Applications and testimonials to Mr. T. Alexander, on or before June 22.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bridgwater Union.—Mr. Rayner has resigned the Huntspill District; area, 13,073; population, 3195; salary, £60 per annum.

Great Yarmouth Parish.—Mr. S. J. F. Stafford has resigned the North District; salary, £100 per annum.

Luton Union.—Mr. G. H. Torrance has resigned the Markyate-street District; area, 11,085; population, 3853; salary, £50 per annum.

APPOINTMENTS.

Alton Union.—John Woods, M.R.C.S. Eng., L.R.C.P. Edin., to the Fourth District.

Chester Union.—Thomas Brittain, M. and F.R.C.S. Eng., L.R.C.P. Edin., to the North Eastern District. Also, Wm. C. Watson, M.R.C.S. Eng., L.R.C.P. Edin., to the North-Western District.

Gravesend and Milton Union.—Charles G. Firman, L.F.P. and S. Glasg., M.R.C.S. Eng., L.S.A., to the Milton District.

Prescot Union.—John F. Little, L.R.C.P. Edin., L.R.C.S. Edin., to the Much Woolton District.

Thingoe Union.—Frederick G. Lawrence, M.R.C.S. Eng., L.S.A., to the Seventh District.

Collegiate Elections.—The time having expired for candidates sending in their nomination papers for seats in the Council of the Royal College of Surgeons, the Fellows will proceed to the election on Thursday, the 6th proximo. The following gentlemen offer themselves for re-election—viz., Messrs. Edward Cock, of Dean-street South, elected in 1856, and President in 1869; George Busk, F.R.S., of Harley-street, elected in 1863, and now Senior Vice-President of the College; and Frederick Le Gros Clark, of St. Thomas's-street, elected in 1864; these gentlemen are members of the Court of Examiners. Mr. S. A. Lane, as intimated in the *Medical Times and Gazette*, has resigned his seat in the Council, retaining that in the Court of Examiners. For the four vacancies, therefore, there are, in addition to the three above named, Messrs. Thomas Spencer Wells, of Upper Grosvenor-street, George Critchett, of Harley-street, and Barnard Wight Holt, of Savile-row. The annual festival will take place the same day, when Mr. H. D. Carden, of Worcester, will preside.

Arts Examinations.—For the preliminary examination for the diploma of Fellow and Member of the Royal College of Surgeons, commencing on Tuesday next, it is stated that there are 343 candidates—viz., 92 for the former distinction, and 251 for the latter. The result of the examination, however, cannot be made known for many weeks, owing to the large number of papers to be read and examined.

Royal College of Surgeons.—The following is an abstract of the unconfirmed minutes of the last meeting of the Council on the 8th inst.:—After confirming the report from the Court of Examiners, and admitting the gentlemen (of whom a list appeared last week in the *Medical Times and Gazette*) as Fellows of the College, the report from the Museum Committee was read, recommending Mr. James Frederick Goodhart, of Guy's Hospital, and Mr. James Lidderdale, of St. Mary's Hospital, as pathological and anatomical assistants respectively for the year ensuing. It was resolved that the best thanks of the Council should be tendered to Dr. Thurnam, of Devizes, for his valuable donation of forty-six pathological specimens to the Museum of the College. The nominations to the following offices were made by the Council, viz.:—The Professors and Lecturer; the Examiners in Midwifery and the Examiners in Medicine. It was moved by Mr. Birkett, and seconded by Mr. Paget, that all legal opinions taken by the authority of the President or Council be laid before the Council at the earliest convenient period; the votes of the Council being taken, a majority was in favour thereof. Messrs. John Morgan Puddicombe, of Dartmouth, Devon, and Edward Glover Bartlam, of Brosely, were elected Fellows of the College. Mr. Charles Hawkins gave notice of the following motion at the next meeting of the Council, viz.:—"That a committee be appointed to consider and report to the Council if any alteration should be made in the wording of the diploma now granted to members of the College, or in the mode of issuing such diploma."

Mr. Darwin has been elected a Corresponding Member of the Academy of Vienna.

We regret to learn that the veteran Professor Dr. Frederick Holst, of Christiana, died on June 4. Professor Holst was within three months of having completed his 80th year.

At a meeting of the Court of Aldermen, on Tuesday, the City seal was affixed to a draft bill, the object of which is to enable the Governors of Bethlehem Hospital to establish and maintain a convalescent Hospital at Godalming, in Surrey.

The Reigate Cottage Hospital has been formally opened by the Bishop of Winchester.

We hear that Dr. Talfourd Jones, M.B. Lond., who has for six years held the post of Resident Medical Officer to the Brecknock County and Borough General Infirmary, and who acted as Physician during the illness of the late Dr. Lucas, is a candidate for the vacancy created by the lamented death of Dr. Lucas.

Mr. Job Hindley, of Bank-street, Red Bank, Manchester, has presented to the Manchester Royal Infirmary a Corporation bond for £1000, "in grateful remembrance of services rendered to him when a patient in the Hospital in the year 1826."

According to Dr. Parrish, of Philadelphia, the chances of a sober man's life being prolonged, as against an intemperate man, are—at the age of 20, as 44·2 is to 15·6; at the age of 30, as 36·5 to 13·8; and at 40, as 23·8 to 11·6.

Intelligence received from the interior of the United States of Colombia to May 12, informs us that a frightful epidemic was raging at Santander. The Government was taking extraordinary sanitary precautions.

Death of M. Payen.—This well-known veteran of the Académie des Sciences has just died. He was especially known for his numerous communications on applied chemistry as relates to economic and industrial arts, and to public hygiene. Notwithstanding his advanced age (76), he has exhibited during the recent critical times extraordinary activity in regard to researches respecting the vital question of public alimentation.

The Strasburg Faculty of Medicine.—The transfer of this Faculty to Lyons seems to have been decided in principle. A deputation of titular Professors and *agrégés* of the Faculty has arrived at Versailles at the same time as the Director of the Secondary School of Medicine at Lyons, in order to confer on the subject with the Minister of Public Instruction.—*Gazette Médicale*, June 4.

The late Dr. Charles Armstrong.—At the last meeting of the Cork Dispensary Committee the following resolution was passed unanimously:—"That we sincerely deplore the death of our Medical Officer, the late Dr. Charles Armstrong, and feel it but due to his memory to publicly express this day our opinion of the great loss the poor of the district of St. Luke's have met in the death of one whose life and best exertions, ever ready and willing, for over twenty years were spent in their service, and whose warm-hearted philanthropy and benevolence were unremitting in attending the sick and alleviating the sorrows of the widow and the orphan."

The principle of personal responsibility observed in the German army is strongly advocated, we understand, in the reports furnished to the War Office by the Medical officers who were attached to the belligerent armies during the late disastrous war. The French Medical Department appears to have failed entirely. Dr. James reports very favourably of the manner in which the Medical charge in the German army was conducted.

An inquest was held on Monday by Mr. Payne touching the death of Mr. Charles Mapplesome, a Surgeon, living at Brunswick-villa, Clapham. It appeared that on Friday evening he returned to his home in good spirits, after having been to visit some friends. At half-past eleven he said, "I will give the dog a run on the common, as he has not been out all day." He then left the house accompanied by a large black dog, and he was never seen alive after. A policeman, shortly after twelve o'clock, found him lying on Clapham-common, dead. Dr. Lock, police-Surgeon, said that the deceased died from disease of the heart, after running on Clapham-common. Verdict accordingly.

Dr. Gairdner, Medical Officer of Health, in his annual report of the health of Glasgow for 1870, says that, after a year's experience of the new and enlarged organisation of the sanitary department, the working of the new machinery promises improved results in the removal of the causes of disease and death; and adds:—"The true permanent sources of epidemic disease, and of all its associated evils—filth, overcrowding, physical degeneracy, and moral deterioration of every kind—are to be found, not so much in the mere existence of certain external nuisances, as in the growth and multiplication indefinitely of a population prone to beget and to tolerate nuisances—a population educated through successive generations into habits of squalor and indecency by the mere fact of defective house accommodation." In Glasgow, as elsewhere, by far the largest part of the mortality is due to pulmonary disease; and Dr. Gairdner shows the close relationship of this dread evil to the state of the homes of the lower classes.

Manchester Board of Guardians.—The Medical Officers and Vaccination.—Dr. Meacham, one of the Medical Officers of the Union, referring to a placard stating that he was unfavourable to vaccination, said "that although twenty years ago a child of his had died eight days after vaccination, yet since then he had had two children vaccinated."

Small-pox in Liverpool.—The epidemic of small-pox continues, on the whole, steadily to decline in Liverpool, there having been 41 deaths from it last week, as compared with 74 during the sixth week previously, and the intermediate weekly periods having been marked by successive declensions of a tolerably uniform character.

According to Dr. Holt, the Medical Officer of the Westminster district, the small-pox epidemic in that locality is "gradually and surely subsiding."

The Metropolitan Asylums Board, finding that the small-pox epidemic has become nearly stationary, and having 200 vacant beds at their disposal to meet any immediate emergency, will not at present fit up the second ship-of-war which the Government had placed at their disposal to serve the purpose of a convalescent Hospital.

The Chairman of the Hampstead Vestry gave notice, at a meeting of the vestry last week, of his intention to move that fifty guineas be voted to the Medical Officer of Health for the additional work which the small-pox epidemic had cast upon him, and that it be referred to the Works Committee to consider whether any, and if so, what, gratuities should be given to the Assistant-Surgeon and the Assistant-Inspector of Nuisances.

Spread of Small-pox in the Potteries.—The reports respecting this epidemic show that the disease is spreading. The worst type of the disease is at Longton, where some 200 cases are now under treatment. During last week the disease had assumed a more fatal character than before, six deaths having been recorded, making the total number of deaths about forty. The Sanitary Committee do all they can to promote sanitary matters. They have now arranged that poor people may be supplied with nutriment from the Cottage Hospital, the Council defraying the cost. At Fenton, several deaths have occurred, and a number of cases are under treatment. At Stoke a number of cases are under treatment, and one or two of a mild type are reported from Burslem. Hanley, Tunstall, and Newcastle have at present escaped the epidemic.

The intelligence that the mail steamship *Norseman* had arrived at the Cape with small-pox on board caused great excitement. The men affected were shipped at Plymouth. We have already exported small-pox to Madeira, the Cape of Good Hope, New York, Quebec, St. John's (New Brunswick,) and Lerwick (Shetland Isles), and still the shipping remains free from sanitary supervision.

In the Report of the Sanitary Condition of St. Mary, Islington for May, 1871, Dr. Ballard says that "the deaths registered in the four weeks ending May 27 were 299. Almost precisely the same number was registered in May last year; and it indicates a very low general death-rate. The general public sickness also has only been slightly in excess of that in the corresponding weeks of last year. Small-pox is the only disease of the epidemic class which has given us any cause for anxiety. It is ten years since we have had so little scarlet fever in May. The number of public cases of small-pox has been 236, and the deaths registered from this disease have been 51. Both numbers are nearly the same as were recorded in the four weeks of April, the difference representing a trifling decline. The first week in May appears to have been the culminating point of the epidemic in Islington. A decided diminution was noticed in the last two weeks of the month. This corresponds as precisely as possible with my anticipations expressed early in the epidemic outbreak—and which were based upon my observations here during the last fifteen years. There is every reason to hope now that, as the atmospheric temperature rises with the approach of summer, we shall see that continued decline of the epidemic which we have so long been waiting for. Still, it is not to be expected that the decline will continue steadily without fluctuations. The atmospheric temperature is the principal factor, and the cold weather experienced lately is not unlikely, at the expiration of a fortnight of incubation, to raise the number of fresh cases temporarily. Up to the present date we have a list of 1023 houses infected. Of these the houses and their contents have been disinfected in 853 instances, leaving 170 yet to be dealt with."

Mr. Redgrave, the Factory Inspector, in his half-yearly report, says that it is a painful duty to receive day by day reports detailing the maiming and disfiguring of so many workpeople in the earning of their daily bread, and to be powerless to help them. Boiler explosions are very fatal. In one sub-district, in which 10,000 boilers are estimated as being in use, there were seventy explosions in the last half-year—85 persons killed, and 138 injured. The large majority took place at ironworks; and, notwithstanding the fact that

7000 boilers are worked at high pressure, Mr. Inspector Baker expresses his belief that hundreds of these boilers are never inspected at all by competent authorities. This, however, is a class of accidents which could be more easily grappled with than those in which fault can be attributed only to the sufferers.

The Licensing System Amendment Association have put forth a circular, in which they announce an extended agitation which will "embrace not only a powerful opposition to the Government Licensing Bill during the present session, but the preparation of a complete measure in the session 1872." A strenuous effort to pass the Habitual Drunkards Bill of Dr. Dalrymple is to be made next session.

A touching incident is recorded in the annual report of the trustees of the National Portrait Gallery, which has just been issued. Referring to the visitors—3291 in number—on Easter Monday last, the trustees subjoin the following extract, amongst others, from the report made on that occasion by the Secretary to the Chairman:—"Dr. Jenner, although now placed very high and in an unfavourable light, did not escape frequent observation. A woman, pointing to it, said to her girls, 'There's the one that's making such a lot of children suffer now from vaccination.'"

In a paper addressed to the French Academy of Sciences, Dr. Bonnafont adverts to a singular and valuable property arterial vessels seem to possess of resisting the direct action of spherical bullets much better than the nerves do. One of his observations which led him to this conclusion was made at Koodiatasy, near Constantina, where a soldier was hit from behind in the armpit by an Arab who was close upon him. The bullet, in its passage forwards, cut the nervous plexus nearly through, and also the axillary vein. The integuments, and all the other fleshy substance in that region, were frightfully lacerated, and even blackened by the gunpowder, yet in the midst of all this ruin the artery alone lay uninjured in the cavity, like a solitary cord. Another case quoted by him was exactly similar. He explains the fact by the cellular and elastic structure of the arterial coats, and by their cylindrical form, rendered still stronger by the continual motion of the blood.

Poisoning by Mistake in Newcastle.—The following melancholy case of poisoning by mistake occurred recently at Newcastle:—During the past month two of the children of a man named Jobling, residing in Juthill-stairs, have died of small-pox, and two others, girls of the respective ages of 8 and 5 years, have been suffering from the same disease. On the occasion in question, their mother having gone out for a short time, the elder child, seeing a bottle which she supposed contained their medicine, but which really contained carbolic acid used for disinfecting purposes, gave a portion of the acid to her little sister, and then took some herself. The younger child died in a short time, but the elder one is gradually recovering.

The Right to make a Post-mortem.—On Friday, the 9th inst., Mr. Bedford held an inquest at the Westminster Hospital, on the body of Charles Cooper, aged 46, house painter, York-street, who fell a depth of twenty feet, from the balcony of a house which he was painting. Deceased was at once removed to the Hospital, when it was found that he was suffering from a severe scalp wound; the collar-bone and one of the ribs on the left side were fractured. He lingered some days, when he died from the effects of the injuries and shock to the system. William Cooper, son of the deceased, complained that the post-mortem had been made against the determined opposition of his family. Mr. Rae, House-Surgeon, not having made the post-mortem himself, could give no explanation why the wishes of the friends of the deceased were disregarded; upon which, Mr. Wilson, the secretary of the Hospital, was called, and, in answer to the coroner, said he was not aware that the consent of the friends had been refused, and regretted the post-mortem had taken place at all, as it was against the rules of the institution. The Coroner said he would never permit the feelings of relatives to be outraged by such an unwarrantable proceeding on the part of Hospital Surgeons, and it was also most injurious to the interests of the institution that such things should occur. He could not characterise the proceedings in too strong language, and he would do his utmost to put a stop to it. The poor had as keen feelings as the rich, and he would protect them as much as he would the others. He directed Mr. Wilson to bring the subject before the Visiting Committee, with the view of preventing the recurrence of such proceedings.

Health of Scotland.—During the month of May, 1871, there were registered in the eight principal towns of Scotland 3734 births, 529 marriages, and 2800 deaths. These numbers are the highest recorded during any month of May since the Registration Act came into operation in 1855. Allowance being made for increase of population, the marriages and deaths are, respectively, 47 and 266 above the average of the corresponding month of the previous ten years; but had the number of births been in proportion to the increase of population, they ought to have been 3791. A comparison of the deaths registered in the eight principal towns shows that during May the annual rate of mortality was 21 deaths per thousand persons in Leith, 24 in Dundee and in Aberdeen, 28 in Perth, 30 in Edinburgh and in Greenock, 34 in Paisley, and 36 in Glasgow. Of the 2800 deaths, 1429 were of males, and 1371 of females. Of these, 1234, or 44 per cent., were of children under 5 years of age. In Perth, 26 per cent. of the persons who died were under 5 years of age; in Dundee, 31; in Paisley, 32; in Greenock, 35; in Aberdeen, 37; in Edinburgh, 42; in Leith, 46; and in Glasgow, 50 per cent.

The New York Abortionists.—At the trial of a "Dr." Wolf, a well-known abortionist of this city, for causing the death of a woman, the Assistant District Attorney thus stigmatised a noted female abortionist, who occupies one of the most palatial residences in the Fifth-avenue:—"I have a right to refer to that den of shame in our most crowded street, where every brick in that splendid mansion might represent a little skull, and the blood which that infamous woman has shed might have served to mix the mortar with which that palace of iniquity was built. When I see American mothers, with servants in livery, and all the evidences of splendour and wealth, frequent these bloody courts, and contribute to keep up this woman in her extravagance and licentiousness, I, in common with my fellow-citizens, become indignant at this blot on the otherwise fair fame of our city. It is not so much that the crime exists, but that it is not the only crime in the catalogue which defies the courts and juries. If there is anything that adds to its atrocity, it is that the men and women who commit it take Professional titles. What right has this infamous woman, by whose den of shame and blood we have to ride to get to the fairest scenes in our city—erected there as the old dragon's castle was, close by the fabled Eden—to take the title of 'Madame' upon her lips? 'Madame Restell' forsooth! Madame Murderer! Madame Abortionist! And Dr. Evans, and Dr. Wolf, are they entitled to the name of Doctor? Are they regular Physicians? The defendant nods his head; so much the deeper and darker, and more damning his iniquity." "Dr." Wolf was committed and sentenced to seven years' imprisonment.—*New York Journal*, April.

Gas-cooking.—Mr. Nixon, House-Governor of the London Hospital, writes, respecting Leoni's gas-cooking apparatus:—"In the six months ended Dec. 31 last the large roaster was in use 125 days, being about six days short of a full half-year's work. The waste of meat during this period averaged about 14⅓ per cent., as against 33⅓ per cent. under the old systems of roasting; while the consumption of gas was also reduced from a daily average of 610 to 250 cubic feet. The actual saving to the Hospital in 125 days was—in meat 4579 lbs., and in gas 44,525 cubic feet, or for a full year's working of 261 roasting-days, very nearly 10,000 lbs. of meat, worth at present prices £296; and about 88,000 cubic feet of gas, costing £17 12s., and representing together an annual saving in money of £313 12s. The baking-ovens are also extremely satisfactory; with regard to cleanliness and saving of labour and trouble, it is difficult to exaggerate the advantages derived from them. The gas apparatus for disinfecting clothes and bedding and for destruction of vermin by dry heat works exceedingly well. The chamber can be heated to 270 degrees (the temperature required for disinfecting purposes) in about three hours, at a cost of 10d., the consumption of gas being about 200 cubic feet."

A distinguished personage of his period, Lord Radnor had a great fondness for letting the blood—at the point of an amicable lancet, not a hostile sword—of his friends. But his lordship, far from accepting a fee, was willing to remunerate those who had the courage to submit to his Surgical care. Lord Chesterfield, wanting an additional vote for a coming division in the House of Peers, called on Lord Radnor, and after a little introductory conversation complained of a distressing headache. "You ought to lose blood, then," said Lord Radnor. "'Gad! do you, indeed, think so? Then, my dear lord, do add to the service of your advice by performing the operation; I know you are a most skilful Surgeon." Delighted at the compliment. Lord Radnor in a trice pulled out his lancet-case, and opened a vein in his friend's arm. "By-the-bye," asked the patient, as his arm was being adroitly bound up, "do you go down to the House to-day?" "I had not intended going," answered the noble operator, "not being sufficiently informed on the question which is to be debated; but you that have considered it, which side will you vote on?" In reply, Lord Chesterfield unfolded his view of the case, and Lord Radnor was so delighted with the reasoning of the man—who had held his Surgical powers in such high estimation—that he forthwith promised to support the wily earl's side on the division. "I have shed my blood for the good of my country," said Lord Chesterfield, that evening, in telling the story to a party of friends.

THE Chinese have very strict notions as to hereditary taint; chiefly, however, on moral grounds. The children of actors, among others, for three generations are excluded from the greatest privileges of citizenship, and capital punishments may follow unlawful attempts to exercise them. Not long since, thirty examiners, including an ex-chancellor, were put to death for admitting an actor to a competitive examination.—*Dr. Acland.*

DR. CLIFFORD ALLBUTT has contributed a paper to the *Alpine Journal*, May, 1871, "On the Effect of Exercise upon the Bodily Temperature," from which we make the following extracts:—"In the summer of 1870 I made it one of the lesser aims of my Swiss ramble to ascertain how far the temperature of the body was changed by muscular exertion. . . . . It may excite the angry impatience of some of my readers to be told that the effect of exercise upon bodily temperature is very trifling. It seems absurd to tell a man who is toiling up a steep snow-slope, about 11·45 a.m., under a blazing sun, that if he thinks he is decidedly hot he is wholly in error, and that his temperature, if raised at all, is raised in a measure only perceptible to a very delicate thermometer. . . . . I may venture, perhaps, with more impunity to reassert this fact now, as most of my readers are far away from slopes of 45°, and are shivering in their easy-chairs under the rigours of an English spring. The 'general reader' has probably been made aware that modern men of science have shown that all forms of force, such as heat, light, motion, chemical action, vital action, and the like, are mutually convertible, the one into the other; or rather that, indeed, they are but various manifestations of one thing—motion; motion of molecules or motion of masses. Heat, for instance, is a motion of molecules: a climber upon a slope represents the motion of a mass, and the one kind of movement is convertible, and constantly being converted, into the other. Food taken into the blood, if so directed, will raise the man through 14,000 or more feet, as a ton of coals, if so directed, will carry a locomotive along a certain length of railway. In each case, by a process which differs only in detail, is heat converted into motion. It might be expected, therefore, that a man ascending Monte Rosa would lose in heat what he expends in movement; for on his arrival at the top he represents a certain definite amount of force derived from combustion of food in his body. . . . . The average temperature of the human body is about 98·5° Fahr., and it may vary between 97·5° and 99·2°, with a few tenths of indifference above and below. To rise to 100° is, however, to become slightly but decidedly feverish, and temperatures of 105°—110° are positively and rapidly destructive. On the other hand, temperatures below 97° show danger of an opposite kind, and signify a depression of vitality below the limits of health. It is clear, then, that if the body is to survive, its temperature must preserve a constant level, or rather it must move in a definite curve, the place of which is constant for the same hour of every day, or nearly so. . . . . M. Lortet denies, upon the strength of his own observations, that the body has the power of making up for rapid conversion of heat into mechanical work during an ascent. He says that, not only on ascending Mont Blanc—which he did, I think, twice—but also on climbing little hills at home, his temperatures underwent very serious depressions, amounting to 5° Fahr. and more. Such depressions I twice noted, but one was during a descent, and the other during a gentle ascent of lower slopes. . . . . In my own case, I believe, the two depressions of temperature were due to lack of fuel. . . . . I cannot but think that if a warm-blooded animal has stomach enough to assimilate plenty of food, a strong heart to propel the food through the lungs, and lungs of capacity sufficient to burn it rapidly off, such animal will not be liable to lose the balance of his forces during wholesome exertion. I am disposed to think that no better test could be found than the thermometer to decide the wholesomeness of exertion in different persons; and if I may reason from myself to others, I should say that the effect of hard exercise in a mountainous district is to accelerate the morning rise, to carry it two- or three-tenths above the average level of health, to favour the somewhat earlier occurrence of the evening fall, if the exertion be ended, to make the fall more rapid, and to carry it again one-tenth, or perhaps two, below the usual night level of health. Also, that any depression during exertion signifies either deficiency of food or inefficiency of internal work."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The following are in type, and shall appear as soon as possible:—Mr. Jonathan Hutchinson, on Fracture of the Patella; Mr. Brooke, on Force and Energy; Mr. Maunder, on Lumbar Colotomy; Dr. Moxon, on Syphilitic Softening of the Brain; Abstracts of Dr. Guy's Lectures on War.

A Veterinary Surgeon, St. Pancras.—The skeleton of "*Orlando,*" presented by the Queen, has just been placed in the Museum of the College of Surgeons, where you can examine it.

A ROUGH TEST FOR ALBUMINOUS URINE.

By F. PORTER SMITH, M.B. Lond., M.R.C.S., etc.

It may be useful to know that the presence of albumen in the urine is marked by the strong tendency to froth, when the urine is passed in the ordinary way into a vessel, or from the persistence of the bubbles forming in the urine when shaken up in a bottle. A very small quantity of albumen will bring about these results, which should lead to further examination. Diabetic urine may be supposed to show the same tendency in a less marked way; but I have had no opportunity of ascertaining the fact. The alcoholic strength of tinctures (seldom up to the mark) may be roughly tested by watching the rate of disappearance of the bubbles caused by shaking the bottle containing the preparation.

TENAX.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—We observe a notice of "Tenax" in your number of June 10, in which you state that "it seems to be a finely-carded hemp or tow perfumed with tar." As the manufacturers of that article, will you permit us to say that we are anxious this impression of its constitution should not go abroad, as an article so made is a very inferior product, having a damp and sticky character, which is offensive in use. Tenax has a fresh tarry odour, but it is perfectly dry and clean in use. Its value as an absorbent and antiseptic, and as an elastic pad, has gained for it rapidly a place in many of the Hospitals of the Kingdom.

We are, &c.,
SOUTHALL, SON, AND DYMOND.
Birmingham, June 12.

THE MEDICAL DEPARTMENT OF THE ARMY.—"AT THE OFFICE."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Unavoidable circumstances reluctantly compel nearly all of us, one time or another, to visit the Army Medical Department Office in Whitehall-yard. Some go to toady, others to get leave, to offer explanations, to ask favours, to complain, to return thanks, or to keep their memory green;—from the Deputy Inspector, who presumes on his position to bore the hard-working patient officials, down to Staff Assistant-Surgeon Pooke, last joined, who complains of being ordered from Dover to Shorncliffe, when the disciplined colonel of a regiment goes like a lamb, all want something. As for the gentlemen who, from Professional merit, gallantry in the field, administrative ability, or perhaps a little private interest, have been selected for laborious non-lucrative duties, too much praise cannot be awarded for unvarying obliging courtesy: busy with a mass of papers, complicated correspondence, and War-office references, these important subjects are delayed to listen to the weary whine of Surgeon-Major Grubb. Fully aware the Director-General is the last person to blame, I cannot resist going up to complain of not being promoted; grey, bald, toothless, putting on stomach (fourteen years' subordinate service in varied climates age one considerably), zeal extinguished, my wife sick of eternal moves; and the children—young Arabs!—eating us out of house and home, growing out of their clothes, cause many restless nights of speculation as to means of education and what is to become of them. The hall-porter receives us with undisguised contempt; the waiting-room, most depressing, has an album on the table, the Foreign Service Roster; on the shelves are noticed Annual Reports from Timbuctoo for 1816. Glancing round, China, India, Malta, and the Mauritius are painfully stamped on various countenances: diseases never to be shaken off have been contracted in these places. After ventilating well-worn time-honoured grievances, excepting a flannel-shirted senior or the fiery, untamed, verdant junior, all swear by the regimental system. Poor Married Half-pay—with a cotton umbrella, Inverness cape, shaved moustache, and a seedy-general-Practitioner look—wants a military prison or a Contagious Diseases Act appointment. Bachelor Half-pay (who cuts the other)—wigged, dyed, groggy-nosed, occupies a bed-room in Craven-street, affects the park, lives entirely at the club, calling himself Mr. Foster, late Royal Dragoons—comes to idle, to fritter away valuable time. Surgeon-Major and Lieutenant-Colonel Thompson wishes to explain that the row with his commanding officer arose entirely from the want of temper of the latter, and that on principle he intended to fight it out. Mr. Jones, 18th Lancers, Naval and Military Club and the Burlington-arcade, with an eye-glass, lavender kid gloves, splendid clothes, white hat, and patent leather shoes, simply wants more leave; if there is another cavalry man he fraternizes, otherwise treating the company superciliously; he slams the door of the Hansom cab, swears at the driver, and departs. Surgeon-Major Blackburne, as good an old man as ever breathed, with his rich Irish brogue, massive rings, tremendous pin, enormous watch-chain with innumerable gigantic appendages, and dressed in a thunder-and-lightning-pattern astounding pair of trousers, is up from Aldershot for a lounge; he condoles with one, cheers another, uncomfortably digs Bachelor Half-pay in the ribs, and calls him a dog; but, whilst telling a good story and raising a hearty laugh, the bell rings, and Dr. Connell, of Castle Connell, County of Kildare, is called for; otherwise a description of the "Captain," who would cut his uncle for stone one day and stick him with a horse the next, would have been attempted. I am, &c.,

Phelim O'Connell, M.B., T.C.D.
(Favourite Pupil of Stokes and Corrigan, and violently opposed to Unification.)

Death by Hanging.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—When the question of respiting a murderer, from the difficulty, on account of a cicatrix, of carrying out the sentence, was under consideration, I submitted to the Home Secretary a plan by which death by hanging, even in the present unsatisfactory manner, might be rendered "painless," and be produced in considerably less time than at present.

If the cap drawn over the convict's face before the fatal bolt is pulled back were made of oil-silk, padded with cotton-wool, and secured at the bottom with elastic binding—the cotton-wool might be saturated with methylic ether, an anæsthetic agent which Dr. Richardson has shown in your columns will produce insensibility to pain in forty-eight seconds—in the time afforded between the adjustment of the rope and the withdrawal of the bolt, the convict would be rendered insensible to pain. As nearly every prisoner requires while on the scaffold to be supported by the warders, his inability to keep up would not be noticed, and thus a perfectly painless death would be secured.

The numerous unfortunate deaths from chloroform have shown upon what a slender thread the life of a person under its influence depends, and I proposed to show to anyone Mr. Bruce might appoint, that an animal hung in this insensible state makes no struggles, while in less than two minutes after suspension the action of the heart is stopped, and the animal is dead. Should an "instantaneous" death be desired, a wire cord should be used in place of the thick rope, one end welded to a piece of iron fitted with a ring, through which the other end should pass, an iron projection to slide on the larynx, the entire shock of the fall would thus be thrown upon the front and back of the cervical vertebræ, in place of the muscles of the neck, the respiration would be entirely stopped, and the ligamentum transversum, as I proposed to show on a model, invariably broken, as in the garotte. The same effect is generally produced by the long-drop used in Ireland, but the head of a convict was last year torn off by the severe strain, which must severely test the strength of the rope. The objection, I believe, made to my suggestion was that an instantaneous and painless death would not be so much dreaded by our criminal population as the present painful and lingering one. I am, &c., H. R.

COMMUNICATIONS have been received from—

Mr. H. H. Cornish; Mr. F. Ferguson; Mr. E. L. Hussey; W. A. G.; Dr. Pagenstecher; Mr. T. C. White; Mr. Metcalfe Johnson; Mr. Heathcote; Messrs. Southall, Son, and Dymond: Mr. Maunder; Dr. M. J. M'Cormack; Dr. Talfourd Jones; Mr. H. Reece; Mr. J. Drummond; Mr. T. Hopgood; Mr. W. Parker; Mr. F. H. Welch; Mr. Oswald Baker; Mr. Young; Dr. Stallard; Dr. R. L. Dutt; Dr. Brushfield; Dr. Burdon-Sanderson; Mr. J. Chatto; Mr. Chas. Brooke; Mr. H. Arnott; Mr. John G. French; Dr. Gibbon; Rev. G. Carson; Dr. E. Haughton; Mr. C. Cogman.

BOOKS RECEIVED—

Parkes's Effects of Diet and Exercise on the Elimination of Nitrogen—Buchan's Introductory Text-book of Meteorology.

PERIODICALS AND NEWSPAPERS RECEIVED—

American Journal of Psychological Medicine, No. 2—The Scotsman—Saunders's Newsletter—New York Medical Journal, April—Nature—Pharmaceutical Journal—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

June 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

19. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

21. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Royal College of Physicians, 5 p.m. Dr. Chambers—Harveian Oration.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

23. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

Quekett Microscopical Club, 8 p.m. Mr. N. E. Green, "On Diatom Markings as examined by the Lime-light."

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 10, 1871.

BIRTHS.

Births of Boys, 1080; Girls, 1052; Total, 2132.
Average of 10 corresponding weeks, 1861-70, 1926·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	756	681	1437
Average of the ten years 1861-70	628·4	594·3	1222·7
Average corrected to increased population	...	...	1345
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	19	4	5	3	9	...	2	3	7
North ...	618210	117	2	10	1	7	3	4	2	4
Central ...	383321	7	2	3	1	5	...	1	1	1
East	571158	17	3	4	...	6	1	1	5	7
South	773175	85	12	12	1	5	...	4	3	4
Total	2803989	245	23	34	6	32	4	12	14	23

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·825 in.
Mean temperature	49·9°
Highest point of thermometer	66·8°
Lowest point of thermometer	38·7°
Mean dew-point temperature	42·4°
General direction of wind	N.
Whole amount of rain in the week	0·31 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 10, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending June 10.	Deaths Registered during the week ending June 10.	Temperature of Air (Fahr.)			Temp. of Air (Cent.)	Rain Fall.	
					Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	In Inches.	In Centimetres.
London	3258469	41·8	2132	1437	66·8	38·7	49·9	9·94	0·31	0·79
Portsmouth ...	125464	13·2	68	32	67·2	39·8	51·6	10·89	0·10	0·25
Norwich	81787	10·9	60	33	63·0	38·0	47·2	8·44	0·21	0·53
Bristol	173364	37·0	117	62	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	53	25	63·0	36·7	49·3	9·61	0·35	0·89
Birmingham ...	378574	48·3	262	154	63·7	38·5	50·3	10·17	0·22	0·56
Leicester	101367	31·7	85	42	70·2	37·7	50·8	10·44	0·07	0·18
Nottingham ...	90480	45·3	79	32	65·2	37·5	50·7	10·39	0·05	0·13
Liverpool	526225	103·0	289	317	66·2	41·4	51·6	10·89	0·01	0·03
Manchester ...	379140	84·5	316	206	...	...	...	...	...	...
Salford	123851	23·9	127	91	65·7	38·4	51·6	10·89	0·04	0·10
Bradford	148030	22·5	82	73	62·0	38·0	49·6	9·78	0·00	0·00
Leeds	266108	12·3	176	115	61·0	41·0	49·8	9·89	0·00	0·09
Sheffield	255247	11·2	202	111	63·0	41·5	49·8	9·89	0·02	0·05
Hull	135195	38·0	84	58	63·0	30·0	48·1	8·94	0·02	0·05
Sunderland ...	103037	31·2	94	63	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	110	93	58·0	41·0	47·0	8·33	0·00	0·00
Edinburgh	179944	40·6	136	86	61·7	40·0	50·5	10·28	0·20	0·51
Glasgow	477627	94·3	393	314	...	...	...	...	...	...
Dublin (City, etc.)	322321	33·1	172	136	68·4	35·5	55·0	12·78	0·12	0·30
Total of 20 Towns in United Kingd'm	7336961	34·4	5037	3480	70·2	35·5	50·2	10·11	0·11	0·28

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·83 in. The highest was 30·00 in. on Monday evening, and the lowest was 29·72 in. on Thursday afternoon.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

ORIGINAL LECTURES.

LECTURES ON FORCE AND ENERGY

DELIVERED AT THE ROYAL INSTITUTION, ON MAY 9 AND 16,

By CHARLES BROOKE, M.A., F.R.S.,
Consulting Surgeon of the Westminster Hospital.

Lecture I.

The lecturer commenced by remarking that the present relative signification of the terms "force" and "energy" is of considerable antiquity; the terms *dynamis* and *energeia* are employed in the ethics of Aristotle, and may perhaps be best represented by the terms "potentiality" and "actuality," related as that which has the power of producing activity is to that which acts.

Force may be defined as the power of producing energy; energy, as the power of doing work. To these terms may be added the qualitative adjuncts *actual* or *potential*. The meaning of the former is obvious; the latter signifies, capable of being brought into action. Thus, the force of gunpowder is potential until it is ignited, when it becomes destructively actual. The vapour raised from the earth's surface by the rays of the sun acquires in the clouds potential energy; in again descending to the sea-level, it acquires actual energy, and may do useful work in the shape of mountain torrents, the usual motive power in mountainous districts, or mischief to the garden and greenhouse, in the solid form of hail. Again, the energy of a pendulum is wholly potential at each extremity of its oscillation, and wholly actual at the middle or lowest point. Practically, the term "actual" is not used, and potential is frequently used elliptically for "potential energy"; thus, we speak of the potential of an electric charge, or of a voltaic current.

The ambiguous manner in which the term "force" is frequently used was then pointed out; thus, it is common to speak of the *force* of the powder, and the *force* of the shot; the powder has force, but the shot only energy. Again, the terms "force of inertia," "force of percussion," "centrifugal force," have been frequently but erroneously employed. Inertia is simply the negation or non-existence of any disturbing energy. In cases of percussion, the energy of the striking body may be more or less imparted to the body struck, either with or without the intervention of the force of elasticity. This was shown by means of two suspended ivory balls. If a little bit of putty be placed on the point of impact of one ball at rest, and the other be raised and allowed to impinge upon it, they will swing together to exactly half the height that the one ball descended from, because the energy acquired by the descending ball, from the action of the force of gravity, is just sufficient to raise double the mass to half the height. But if the elasticity of the balls be allowed to come into play by the removal of the yielding material, then the striking ball remains at rest, and that which was struck rises very nearly to the height from which the former descended, elastic force having in this case imparted to the ball at rest the remaining half of the energy of the striking ball. The instantaneous transmission of the energy of impact through a long row of glass balls in contact was then shown, as an illustration of the molecular transmission of energy. It was observed that the first experiment illustrates what is described in works on mechanics as the impact of two *perfectly hard—i.e.*, incompressible—bodies, a property certainly not possessed by putty, and to which, in fact, there is not the remotest approximation in natural objects: *perfect inelasticity* is the property actually required, and it would be more consistent with fact to assume it directly, and not *indirectly*, as a consequence of the inconceivable attribute of perfect hardness. The term "centrifugal force" will in all cases be correctly replaced by "centrifugal energy."

The next point alluded to was the principle of the Conservation of Energy, which is identical with that treated of in all theoretical works on dynamics as the "conservation of *vis viva*." This implies that energy, once impressed on matter, is as indestructible as the matter itself; it may be variously modified, transferred, or transformed, but cannot be annihilated. This subject has been so ably treated by Mr. Grove that it was proposed to give in the sequel only a few conspicuous examples.

The diffusion of energy was then spoken of. In many cases there may be, at first sight, an apparent loss or disappearance of energy, but a little attentive consideration will in all cases indicate what has become of the missing energy. Thus, for example, a stone falling on another stone on the ground probably displaces the latter; but if it fall on the hard ground, what becomes of the energy of the falling stone? Is it expended in an infinitesimal displacement of the whole mass of the earth? Certainly not; it is expended in the disturbance of particles adjacent to the point of contact, accompanied probably by a minute evolution of heat. The cold nail on the anvil, which, by a few adroit blows from the blacksmith's hammer, becomes sufficiently heated to light his forge, and the rifle-ball, which, on striking the iron target, is scattered in splashes of molten lead, are both instances of the evolution of heat by internal friction, in consequence of the molecules being urged against each other with considerable energy. Again, suppose a steel spring to be forcibly flexed and retained in its flexed position, like the spring of a gun-lock when cocked; a certain amount of energy has been expended in raising the hammer, which remains potential in the spring: now, suppose the lock to be placed in the fire until the spring is softened, what has become of its potential energy? Doubtless, it has been used up in producing permanent molecular displacement at the moment when the spring was just sufficiently softened to yield to that particular amount of energy which had been impressed on it.

It was then remarked that light and heat, electricity and magnetism, which are all now more or less generally recognised as forms of energy, have all been assumed to be *material*, but *imponderable*. The corpuscular theory of light sufficed to explain ordinary optical phenomena until the discovery of diffraction and interference, when a very forced supplementary hypothesis became necessary—namely, that the molecules of light were egg- or spindle-shaped, and made perpetual somersaults during their onward progress: rebounding, or being reflected from the surface of a medium, if they encountered it sideways, but penetrating, and being refracted, if they met its surface endwise. This hypothesis is, however, insufficient to account for the phenomena of polarisation. But all observed phenomena of light are in perfect harmony with the undulatory theory, as now commonly accepted—namely, that light consists of transverse indulations or vibrations, like the ripples on the surface of still water when a stone is dropped into it; and not only does this theory fit all previous observations, but the appearance that will be presented to the eye, when a ray of light is transmitted through any hitherto untried arrangement of transparent media, may safely be predicted by analysis; as in the remarkable case of Airy's spirals, seen when a polarised ray is successively transmitted through two plates cut from a right- and a left-handed quartz crystal. "Caloric" was once assumed to be the matter or substance of heat; and the observed radiation of cold induced Black to ascribe to cold an independent material existence; but these phenomena are completely explicable on the "theory of exchanges," which means that every body radiates *its own* temperature, whether high or low, and that every surrounding body absorbs the radiations; consequently, the radiations of a cold body will lower the heat of a warmer body in its vicinity, just as a cistern with two pipes of unequal bore will, if fed by the larger and emptied by the smaller, become gradually fuller, while, if fed by the smaller and emptied by the larger, its contents will be diminished: the parallel, in absorbed and emitted radiations, is obvious.

Again, it was formerly taught that there were two electric "fluids"—the "vitreous" and "resinous"; but these were subsequently merged into one, and the positive and negative aspects of electricity were assumed to be differences in *quantity* only, and not in *kind*, positively electrified bodies being in excess, and those negatively electrified, in defect of the normal quantity. Moreover, magnetic properties were supposed to be vested in two "fluids"—the "austral" and "boreal"—possessing mutually attractive and self-repulsive properties. But all these theories are probably alike groundless; they are, moreover, utterly inconsistent with the perpetually recurring interchanges of the various presumed forms of energy; for it is impossible to conceive one kind of matter to be converted into another kind, or matter to be converted into mere motion, and *vice versâ*.

The phenomena of so-called "latent heat" have by many been supposed to present an argument against the dynamic or undulatory theory of heat, on the ground that it is impossible to conceive motion to exist in a latent or quiescent state; but this objection rests on an erroneous appreciation of the phenomena themselves. It is well known that nearly 78° C. are required to convert ice at 0° C. into water at the same *sensible* temperature; also, that nearly 556° C. are required to convert water at 100° C. into steam at the same temperature. These quantities constitute what has been termed latent heat. The simple fact is, that these amounts of thermic energy are necessarily occupied in maintaining water in the fluid and gaseous states respectively, and are independent of sensible temperature.

Some conspicuous examples of the interchanges of the several forms of energy were then brought forward.

1. *The Interchange of Dynamic and Thermic Energy.*—This is the only transformation in which the equivalence has yet been determined quantitatively, and it is remarkable that three independent methods of investigation led to almost identical results. Before mentioning these it may be remarked that, in order to arrive at a numerical relation, it is necessary to assume certain units, as means of comparison. In this country the unit of dynamic energy is the amount required to raise one pound-weight through the vertical space of one foot; this is usually called a foot-pound. The unit of thermic energy is the amount of heat required to raise one pound of pure water at common temperatures one degree of Fahrenheit's thermometer. In the metrical system the units are one kilogramme raised one metre in height, and one degree Centigrade in temperature. Dr. J. R. Mayer's result was deduced from purely theoretical considerations, which are in perfect harmony with analysis—namely, that the amount by which the specific heat of a given volume of gas, maintained at a constant *pressure*, exceeds that of the same gas when maintained at a constant *volume*, must be the equivalent of the dynamic energy it is capable of exerting in its expansion under a constant pressure. This result, when rectified by a more accurate subsequent determination of the specific heat of air by Regnault, gives (in the metrical system) 1 thermic unit = 426 dynamic units. Very nearly the same result was obtained by M. Hirn from the actual work of the steam-engine, assuming that the difference between the heat imparted to the steam, and that contained in it after it has left the cylinder (amounting to about 5 per cent. of the imparted heat), is the thermic equivalent of the work done in and by the engine. Dr. Joule obtained very nearly identical results by the reverse process of the conversion of dynamic into thermic energy. This was effected by a careful estimation of the heat developed by expending a known amount of energy in stirring water and mercury, and in rubbing one iron plate against another. Dr. Joule's equivalent mean value is 425 dynamic units.

2. The interchange of dynamic and electric energy is best exemplified in the machine of Holtz, and in those of Wheatstone and Siemens. In the former, induced electricity is gathered by a comb from the front of a rotating glass disc, the induction being effected by an electrified slip of paper placed behind, but not in contact with, the disc. In this machine it may be remarked that the higher the potential of the charge the greater is the resistance offered to the rotation of the disc. In the machines of Wheatstone and Siemens two armatures rotate between the poles of an electro-magnet; one of these returns the induced currents, if any, into the coil; the other is designed to utilise the induced currents in any required manner. If the iron were absolutely free from magnetism, these machines would have no action; but, inasmuch as there always remains a small amount of residual magnetism, a minute current is induced, which, traversing the coil, developes a small increase of magnetism, which again induces an increased current, and so on. And thus the electro-magnet becomes self-excited at the expense of the dynamic energy exerted in rotating the armature.

3. The conversion of thermic into electric energy, and *vice versâ*, was then shown by the passage of a voltaic current through a single thermo-electric element of bismuth (b) and antimony (a). It has long been well known that the application of heat to the point of junction determines a current from b to a, and of cold, from a to b; also that the transmission of a voltaic current (if not of too high potential) through the element from b to a produces *cold* at the point of junction, while if from a to b, *heat* is produced. It some time since appeared to the lecturer that, in accordance with the principle of the conservation of energy, the heat lost in the one case at the point of junction must be found in increase of current, and that the heat gained in the other case at that point must be gained at the expense of current; and this was shown to be the fact, by placing such an element in one of the branches of a Wheatstone's bridge, and balancing its resistance in the corresponding branch, and then sending the current from a small Smee's element through the bridge; the galvanometer distinctly showed a *gain* of current in one case, and a *loss* in the other.

4. The interchange of thermic and photic energy is shown in the phenomenon which has been termed "calorescence," in which a plate of platinum absorbs the obscure rays of heat situated at and beyond the red end of the spectrum, and becomes white-hot—*i.e.*, emits light; and the ordinary phenomena of incandescence and phosphorescence tend more or less to illustrate the same point; also the phenomena of "fluorescence" show the conversion of what may be termed actinic energy, manifested chiefly in chemical actions—as, for example, in the processes of photography—into light. This occurs when the rays at and beyond the violet end of the spectrum formed by a quartz prism, or train of prisms, fall upon various substances; of which solutions of quinine and æsculine, and glass coloured by oxide of uranium, are the most conspicuous examples.

The fact of the dynamic nature of electricity is strongly corroborated by the observed interchanges of electric and thermic energy; it is further confirmed by the analogy of an acoustic experiment made by Sir C. Wheatstone. If a tuning-fork be held obliquely in contact with an appropriate sounding-board, a resonance is immediately perceived; but if the tuning-fork be moved parallel to itself while still in contact with the board, the resonance ceases, from the perpetual interference of the molecules of the wood vibrating in a series of parallel planes. The instant, however, the fork is allowed to rest, the resonance recommences with an instantaneous outburst of sound, which is doubtless owing to the resistance offered by the inertia of the molecules of the wood to the commencement of continuous vibration. This is probably an exact analogue of the initial "extra" current of Faraday—the rush, as it were, with which a voltaic current commences traversing a conductor, when the circuit is closed.

ORIGINAL COMMUNICATIONS.

EXTENSIVE SOFTENING OF THE BRAIN FROM SYPHILITIC DISEASE,

INVOLVING THE CAROTID ARTERIES.

By WALTER MOXON, M.D., F.R.C.P.,
Assistant-Physician to Guy's Hospital.

THE effect of syphilis on the arteries is now an important and interesting question. Some authorities believe that the aorta is frequently directly attacked by syphilis; others doubt this. I have never yet found a probably syphilitic deposit in a great artery along with disseminated syphilitic formations in other parts. The appearances that are set down as syphilitic by Dr. Aitken and others are too like the common deforming arteritis of advancing years to allow a certain conclusion of their syphilitic nature. But there is no doubt of the occurrence of syphilitic disease of arteries of middle size, such as the carotid and basilar.

The following case is not one of primary arterial disease, but it shows well what terrible results may follow from syphilitic disease seizing upon a cerebral artery:—

The patient was a man, aged 30. He was well-built and nourished, and with a good healthy skin and plenty of hair and beard. He applied in December, 1870, among my out-patients at Guy's, suffering from intense headache. There was no local paralysis, etc., but the headache was so intense that it was difficult to retain his attention. He would go aside and rest his head between his hands on the mantelpiece instead of answering. He, however, gave me to understand that he had had chancres several times within the last seven years, but he denied secondary symptoms. He had no apparent syphilitic cachexia. The man was at once admitted to Stephen Ward under the author's care, and iodide of potassium given to the extent of a drachm in the day. This produced no ill effect, but the headache diminished with wonderful quickness, and in a few days he was quite free from it. In three weeks he left the Hospital, being quite well and lively, and anxious to get to his work. He was cautioned that on the reappearance of such pain in the head he should at once come back.

Four months afterwards he was again admitted to another ward, his symptoms being intense headache, as before, but now with decided somnolence and mental weakness; he vomited sometimes, but had no local palsy. The iodide of potassium, which was given to him in three-grain doses, often returned, through the irritability of the stomach. He grew worse, and had an attack of an epileptiform kind, marked by entire insensibility and fixation of the eyes in an upward and inward direction. He then sank gradually during a fortnight, with all the symptoms of softening of the brain.

Inspection of the body showed a mass in the sella turcica of about the size of a half walnut, composed of half fleshy, half caseous material, such as makes up syphilitic gummata. The dura mater, pituitary gland, and the parts of the floor of the third ventricle adjacent were confounded together in the mass, and the bone was superficially diseased. The optic nerves were implicated, and so were the carotid arteries; both of these were affected, the left being almost entirely closed up, its wall wrinkled longitudinally by swelling and by pressure from without. The left brain was, for the most part, softened to pulp, some parts, irregularly defined, remaining comparatively firm. The right brain showed a lesser degree of the same change; the cerebellum and pons were healthy. The state of other viscera gave important aid in identifying the disease. Both testes were good examples of syphilitic sarcocele, and the liver and spleen had numerous characteristic syphilitic deposits in them—*i.e.*, deeply sunken scars adherent to parts around, and having in their depth caseous patches, surrounded by zones of fibrous wasting tissue—these patches in contrast with the healthy remainder of the organs.

It is worthy of remark that, while syphilis is thus unsparingly general in its attacks upon organs, yet it plays over much the same series of organs as other diseases. I mean that vulnerable or much-abused organs which suffer disproportionately from common causes of disease, suffer also, in much the same proportion, from syphilis, while the thyroid, spleen, capsules, deep-seated bones, and, indeed, generally those parts which are not obnoxious to other "common" diseases, escape also in syphilis. This suggests that syphilis acts as a factor cumulative with other factors of disease. An overworked part in a syphilitic is more liable to syphilitic accidents—just as, in an untainted person, that part easily falls under common accidents. Indeed, it appears that the taint of syphilis induces circumstances of little intrinsic importance to determine a local outbreak of disease. As an easily observed instance of this, take the common occurrence of pigmented patches on parts of the skin that are subjected to pressure by buttons, etc. Indeed, as Mr. Hilton in his very interesting lectures used to enforce, you may thus often find valuable evidences of syphilitic taint which, in parts of the skin that do not undergo slight pressures, are not produced. We get from these facts suggestive hints as to the importance of easing vital organs from overstrain, etc., in persons who have syphilis about them. The case is significant as showing the effect of large doses of iodide compared with that of small doses.

ON LUMBAR COLOTOMY.

By CHARLES F. MAUNDER, F.R.C.S,
Surgeon to the London Hospital.

In this journal I have on several occasions communicated facts and remarks upon Lumbar Colotomy, illustrated by reference to six cases in which I have performed this operation—two in Hospital and four in private practice. The last communication was made on April 16, 1870, and referred especially to the last instance of the operation, in which I had experienced great difficulty (a circumstance quite new to me in the performance of colotomy) in finding the bowel, by reason of the well-developed condition of the muscles in the lumbar region. It was feared that this unusual thickness of abdominal wall would become a source of discomfort to the patient, and of anxiety, lest the wound should tend to close, to the Medical attendant. And so it proved to be for a time; but the means employed to overcome the obstacle were successful. This patient, a male, was under the immediate care of Mr. Dryland, of Kettering; and certainly he conducted the treatment of a most difficult Surgical case with great judgment. The operation was performed on December 27, 1869. From time to time Mr. Dryland informed me of his patient's progress, and I cannot do better than quote his remarks:—

"January 3, 1870.—Mr. E. was in high spirits; had passed about half a gallon of fæces through artificial anus without much pain, and felt much relieved; no pain in cancer; no desire to pass fæces per (natural) anum; appetite very good."

"8th.—Mr. E. is going on in every way satisfactorily, with the exception of the new passage being much filled up with muscle, which projects from the wound, and now blocks it up to a considerable extent, and causes much pain and soreness. Two things I want to ask about. Shall I let him get up (which he very much wishes to do)? and would you approve of my trying to destroy some of this muscle slowly with nitrate of silver, or some other caustic?"

I suggested that the wound and passage to the bowel through the loin should be enlarged, both with the knife and actual cautery, by removing a portion of skin from around the former and by destroying the superabundant muscle of the latter.

On March 10 Mr. Dryland says, "I performed the actual cautery operation on January 31, and it has been a complete success. There is now a good free opening into the bowel, and the whole of the fæces passes through without pain or difficulty, and in large pieces—in fact, the artificial opening has much the appearance of a veritable 'anus,' with a very slight prolapse of the rectum. Mr. E. comes down dressed every day, and his spirits are very good on the whole. I believe the rectum is completely blocked up."

On May 6, 1871, the operation having been performed in December, 1869, the patient is dead. Mr. Dryland reports:—"Mr. E. died on Thursday (May 4). At the post-mortem I found cancer of the liver and omentum. As far as the operation was concerned, all the parts were in the most perfect order, and might have lasted for twenty years. The gut below the artificial anus was shrivelled up and very small; the opening was large enough for anything, and the colon, above, large. I had for some time to use the catheter occasionally, but a few weeks ago the urethra (which had been gradually getting so) became so crooked from the growth of the cancer, that it was impossible to pass either a silver or elastic catheter. He was by this time so very bad that I did not entertain the idea of tapping the bladder above the pubis, and per rectum was impossible. The immediate cause of death was convulsions, caused, I doubt not, by uremic poisoning, as the bladder was much distended, and what urine did pass at last seemed to come through the remains of the rectum." No word from me is necessary to show the value of lumbar colotomy in certain cases of abdominal disease. The history of the above case is conclusive.

In a future number of this journal I will record the history of a seventh instance in which I have recently performed colotomy, and in the *right* loin.

New Broad-street, E.C.

DIGESTED MILK.

By JAMES MORRIS, M.D.

As you have just spoken of digested or fluid meat in your journal of last week, your readers may perhaps be interested in the cognate subject of digested milk. I do not remember to have seen this mentioned in your pages. To whom the original idea is due I do not know, but to me it came from Sir William Jenner. He recommended that a trial should be made of it more than four months ago in the case of an infant at that time in a most precarious state. The only other child of the same mother had died under similar circumstances at about the same age, six months. The milk used was asses' milk; the pepsine that of Messrs. Bullock, Hanover-street—the proportions, as calculated by Mr. Bullock, being as follows:—Asses' milk, ℥v.; pepsine, gr.v.; dilute hydrochloric acid, ♏xxx. These ingredients were digested together for two hours by the heat of a water-bath at the temperature of 120° Fahr. The acid was then neutralised by carbonate of soda, gr. xij., and the solution then filtered. It had always a slight bitterness, but this was covered by sugar, and at first, also, by a little brandy, which was then needed. At first this quantity was prepared twice daily; after a short time a double quantity twice, the child being able to take more food. Still later, other infants' food was given, but this had to be omitted again and again, from failure to digest it. After persevering with the artificially digested milk for more than three months the child at last became strong enough to take ordinary food, and is now in fair health. Cows' milk was tried occasionally, but it was found that unless more pepsine and acid were used much curd remained upon the filter. The removal of this is, perhaps, not a disadvantage. This case has strongly impressed me with the advantage of the artificial digestion of milk for suitable cases.

13, Somer's-place, Hyde-park-square, W.

The *Gaz. Farm. Ital.* advocates the addition of chloral hydrate to cod-liver oil; it renders it much less nauseous, and prevents the night-sweats of the phthisical patient, induces sleep, and creates appetite. It is prepared as follows:—Ten gr. pure chloral hydrate crystals with 199 gr. cod-liver oil, digested in a sand-bath with gentle heat. Dose, six tablespoonfuls daily.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

LARGE PEDUNCULATED VILLOUS TUMOUR OF RECTUM REMOVED BY LIGATURE.

(Under the care of Mr. MARSHALL.)

Joseph R., a railway porter, aged 60, was admitted into Mr. Marshall's male ward on April 30, 1871, with the following history:—He had always enjoyed good health, never being laid up until his present trouble but twice—once with a severe compound fracture of the leg, and another time with the effects of a dog-bite. For six or seven years, however, he had felt a small tumour in the rectum, which came down whenever he had a motion, but which was always replaced without difficulty. It gave him no pain, and, save for its slimy discharge and occasional sharp hæmorrhage, was not a source of any special trouble. But on the morning before admission it came down, and could not be replaced, and, after losing much blood from repeated trials at reduction, both by himself and his Doctor, he was brought to the Hospital.

On admission, there was found projecting between the nates a tumour, the size of a fist, dark in colour, apparently made up of small round masses, and full of venous blood.

The same day, chloroform was given, and Mr. Marshall passed a needle, armed with a stout double-ligature, through the base of the tumour, and tied it in two portions. Another thread was also passed round the pedicle, and the man was returned to bed with carbolic acid dressings upon the tumour. He passed a restless night from pain, and next day the tumour was found to be considerably shrunken, pale, and already with an offensive smell. The burning and bearing-down pains continued for some days, but by May 12 the ligatures came away, and he then began to mend rapidly, and is now convalescent.

A piece of the tumour was cut off for examination by Mr. Beck, the Surgical Registrar, who gave the following report of its structure:—"It was found to be a large papillary growth, composed of numerous lobules about the size of a large filbert, which were fixed by pedicles to the base of the growth. Each lobule was again subdivided into smaller lobules, the size of peas, seated upon a common stalk, and these again into delicate papillæ. Under the microscope, the stalks upon which the lobules and papillæ were seated were found to be composed of a delicate fibro-nucleated tissue, containing large numbers of vessels of considerable size. This fibro-nucleated tissue extended into the papillæ, forming their stroma. No vessels could be seen in the ultimate papillæ, and towards their extremities the fibres disappeared, leaving only the nuclear tissue. The whole was covered with a thick layer of columnar epithelium. The epithelium on each side formed more than three-quarters of the thickness of the papilla. The papillæ were about one-tenth of an inch in length and one-thirtieth of an inch in breadth, and of a conical shape."

We are glad of the opportunity of recording this case, as we believe this special form of disease in the rectum, in which a villous tumour of considerable size is attached to the bowel by a slender pedicle, is exceedingly rare. In our Hospital Reports during last summer we narrated a case of very similar character, occurring in the practice of Sir William Fergusson, who pursued the same line of treatment as that adopted by Mr. Marshall on the present occasion. Villous growths in the rectum are by no means unknown, and small polypi in the same position are, of course, familiar objects to Surgeons seeing much of the diseases of this region, but villous polypi of the dimensions of those now under consideration are amongst the rarest forms of growth met with in the rectum, and hence the value of the report upon the microscopic structure of this tumour furnished by Mr. Beck.

CANCER OF THE TONSIL.

(Under the care of Mr. ERICHSEN.)

Eliza B., a married woman, aged 50, was admitted under Mr. Erichsen's care on May 1, 1871, with a tumour of the tonsil, apparently cancerous. She stated that she had always enjoyed good health herself, and that her parents had both lived to a great age. Her five children also were perfectly healthy. Last October she caught cold, and with it sorethroat, and when this had continued for a month she noticed a swelling in the throat, which had steadily increased, with much pain and soreness. She noticed, at the same time, that the neck glands became swollen, but these after a time subsided somewhat, although still much enlarged. Her appetite now began to fail, and she lost flesh rapidly.

On admission there was found a large tumour occupying the position of the left tonsil. This growth reached down out of sight, below the root of the tongue, and, on a digital examination, its lower extremity was found to be about on a level with the epiglottis. It was nodulated on the surface, and the mucous membrane covering it was slightly redder than natural. The soft palate was not implicated by the growth. It was not tender on pressure, nor was there any ulceration of the surface. It was of firm consistence, and covered with thick white mucus. The glands beneath the jaw on the left side were clearly visible, forming rounded prominences as large as filberts. They were perfectly free from adhesions, were hard, and not at all tender.

It was not deemed prudent to attempt any operation for the relief of the disease in so advanced a stage, and we only report the case as an interesting specimen of a somewhat rare complaint.

THE LONDON HOSPITAL.

SALIVARY CALCULUS, OBSTRUCTING WHARTON'S DUCT AND CAUSING SWELLING OF THE SUBMAXILLARY GLAND AND TONGUE.

(Under the care of Dr. RAMSKILL.)

[Reported by Mr. Stephen Mackenzie, Resident Medical Officer.]

A. K., admitted April 4, 1871. The patient, an intelligent, healthy-looking lad, gave the following account two days subsequent to his admission:—He has had "mumps" several times during the last few months. By mumps, he means a swelling which made its appearance on the right side of the neck just below the jaw, which was not painful, but "felt like a weight." The swelling generally attained the size of a pigeon's-egg, but did not interfere with eating, and, after lasting about three days, would subside. He has never had any swelling of the testes coincident with or following the "mumps." He has not been feverish at these times, nor have any other persons in the house been similarly affected.

On April 2 he was in his usual health.

On April 3, he noticed in the course of the day that there was a little lump near the right angle of the lower jaw. In the evening it was a little larger, and "felt like a weight"; but it did not prevent him eating his supper, nor did he feel in way ill.

When he awoke on the morning of April 4, he found he could not close his mouth, and "could only breathe out of his nose." He was unable to swallow his tea at breakfast, and noticed that the swelling under the jaw had much increased. He felt ill and feverish, and could not get his breath well. His mother took him to Victoria-park Hospital in the afternoon, where he was seen by Dr. Baümler, who advised his being brought here, telling the mother that, if his breathing got worse, some operative measure might be necessary. On admission, it was observed that his mouth was partially open, and that he was unable to close it on account of the swollen condition of the tongue. The latter appeared pushed somewhat backwards, so that the floor of the mouth was easily seen, and this was occupied by viscid saliva, which overflowed and ran out of the mouth. The tongue itself was moist, and of a natural colour, but so swollen as to occupy the whole of the oral cavity with the exception of the sublingual space. There was a somewhat hard, smooth swelling, unaccompanied by any redness, extending from the right angle of the jaw to the middle line. The patient could neither speak nor move his tongue. He had rather an anxious look; but his breathing did not seem particularly embarrassed. He was sent to bed, and ordered to suck ice continuously. In the evening his condition was about the same. His breathing was 24 in the minute, not laboured, and there was not any recession of the epigastrium or intercostal spaces during inspiration; pulse 124; temperature 101·5°. He was able to swallow fluids, but with considerable difficulty. As his bowels had not acted for several days, he was ordered an aperient. He was ordered to continue sucking the ice, and no other medicinal treatment was adopted. About midnight I was told that his breathing was more difficult, but when I saw him shortly after, he was asleep and breathing quietly. His mother, who stayed with him, said that he would sleep for about ten minutes at a time, and then awake as if about to choke.

April 5th.—He says that early this morning he found something under his tongue. He did not know what it was; "Thought it might be an orange-pip, or a piece of a tooth." He took it out of his mouth, and put it by to show. In a very short time after finding this, "his tongue felt much smaller, and he could breathe through his mouth." When I saw him in the morning he was able to close his mouth, and could move his tongue about in it; but the latter was still a good deal enlarged, and its surface covered with a dirty-white fur. When he raised his tongue, a round ulcerated opening could be seen on the right side of the frænum in the sublingual space, and through this there welled up a thin purulent fluid. The swelling beneath the jaw was slightly diminished in size. He could swallow much more easily, and could articulate, but in an indistinct manner. Pulse 90; respiration 23; temperature 99°. The object he found under his tongue was a calculus. It was of the shape, but about double the size, of an oat-grain, of a yellowish-white colour, and corrugated on the surface.

6th.—Tongue almost of its natural size; the swelling beneath the jaw much diminished. A little purulent matter still wells up through the opening beside the frænum. Pulse 88; respiration 20; temperature 98·4°. He was allowed to get up and to take solid food.

7th.—The opening in the sublingual space much smaller, and does not exude any fluid. There remains a swelling beneath the lower jaw, commencing a little anterior to the angle, which is composed of three separate segments. There is a fourth part, which proceeds from these others towards the middle line. This is apparently Wharton's duct, thickened. Tongue clean and of a natural size. He feels perfectly well, and his appetite is good.

He left the Hospital on the following day, feeling quite well, but slight swelling of the submaxillary gland remaining.

ROYAL INFIRMARY, EDINBURGH.

CASE OF CATARRH OF CERVIX UTERI.

(Under the care of Dr. MATTHEWS DUNCAN.)

[Communicated by Dr. J. R. HARDIE.]

A. E., aged 36, is married, and has had six children. Last March she miscarried of a five months' fœtus. For three months before this miscarriage she suffered from metrorhagia, which during the last fortnight of its presence increased in severity. The bleeding did not recur until last October, when it continued for three weeks. Five weeks ago it again returned, and has continued without intermission, in varying quantity, ever since. She has not much pain, but complains of great weakness.

On *physical examination*, the belly is found to be soft, natural, and resonant on percussion over all the lower part. The uterus is movable, and apparently natural; os uteri slightly patulous; superficial ulceration is seen to surround it, covering an area of about the size of a sixpence. A muco-purulent discharge issues from the os. The probe introduced into the uterus further shows the patulousness of the cervix; it enters a little less than three inches.

Treatment.—The abrasion round the os was touched with nitrate of silver three or four times, and the cervix was imbedded in iodide of lead ointment every evening. Three grains of iodide of potassium were administered twice daily. The patient was under treatment for about three weeks, when she was discharged cured.

Remarks.—The above is an example of one of a set of cases in which too much importance is sometimes given to signs or symptoms, the attention not being directed to their cause. As much stress is frequently laid on the superficial ulceration which ordinarily accompanies catarrh of the cervix uteri as if it were the disease itself; the minds of Physician and patient become so absorbed with the idea of ulcer of the womb, that efforts at treatment are directed solely to this local sign instead of to its origin. Nothing is more common, even in Hospital practice, than for the Physician to be told by a patient that she labours under ulcer of the womb, or a plurality of them, and that she has for a longer or shorter period, generally a considerable one, been subjected to frequent cauterisation of the affected part. On examination, many of such cases are found to be of the nature of that under discussion. Assiduous cauterisation of these abrasions is injurious, and if improvement does not follow the use of nitrate of silver after it has been applied two or three times, it had better be entirely abandoned. The local application of iodine is of some value. Dr. M. Duncan thinks that the iodide of lead ointment is the most convenient and least irritating form in which it can be used, but he is of opinion that a better method is desiderated. The ointment is applied by means of the instrument to be described. The instrument, which is made of wood, consists of two parts—a hollow cylinder about eight or nine inches long and two inches in diameter; into this is inserted a piece of wood of the same shape, but smaller, and solid. The whole apparatus closely resembles a boy's pop-gun, both in shape and mode of action. The tube, being charged with about one drachm of the ointment, is introduced into the vagina and carried up to the cervix uteri, where its contents are evacuated. This manœuvre is performed with or without the aid of a speculum. This method of using ointment is to be preferred either to the balls with wax coating or to the pessaries made with caçao butter, because, the object being to keep the iodine in contact with the neck of the womb as long as possible, this is attained by neither so well; the wax coating of the first frequently refuses to melt, and the whole ointment comes to be discharged as introduced; the latter melts and runs out shortly after introduction. The ointment is applied daily. It is necessary, for the sake of cleanliness, to wash out the passage every morning while using it.

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Medical Times and Gazette.

SATURDAY, JUNE 24, 1871.

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THE SMALL-POX EPIDEMIC.

THE general total of small-pox deaths registered in London last week was only five below those registered in the week ending June 10. Indeed, it is only in the West and South districts that any diminution was recorded—in the West from thirty-nine to twenty, and in the South from eighty-five to seventy-seven deaths. In the East the mortality rose from twenty-six to forty-four. Neither can it be said that there is any amendment observable in the character of the attacks. The hæmorrhagic form prevails far more than it is pleasant to contemplate, and in all parts of London we hear of cases fatal on the third or fourth day of the illness. The prolonged delay of summer weather is a noteworthy fact in connexion with this tardy and unsatisfactory progress towards decline. Last week the mean temperature rose to 59·5°, seven degrees above the mean of fifty years; but for six weeks previously the mean temperature has been almost constantly below the average of the season.

Nothing but panic appears capable of stirring up English people to take proper precautions for their personal safety in epidemic seasons. The small-pox panic lasted for a month or six weeks, and during that time the public vaccinating stations were crowded with applicants, mainly for revaccination; but familiarity has now brought about its proverbial result—a contempt of a danger which is even greater than it was in February and March. Notwithstanding the fact that the deaths in London from small-pox have been very much over 200 per week, the business at the stations has subsided, generally, to its average amount in ordinary seasons; while at some stations it has actually been so low that there has been a difficulty in keeping up the arm-to-arm vaccinations from unexceptionable pocks. Surely, in the face of an epidemic like the present, this is not a satisfactory state of things, and there can be no surprise that the Asylum District Board, on whom local authorities have thrown much of the work that they ought themselves to have performed, demand that it should be amended. Among other recommendations which they made to the Vice-President of the Privy Council, in the conference they had with him the other day, is one which we have over and over again urged in these columns—namely, that, under certain circumstances, visits should be made from house to house, for the purpose of vaccinating at the houses of the defaulting poor. It is true their suggestion only goes to the extent of thus insuring the primary vaccination of infants, and we should like to see revaccination offered in a similar manner; but on its adoption the latter would be not unlikely to follow. The great obstacle to revaccination among the labouring classes is the loss of time incurred by going to the station and awaiting their turn; and local authorities have, in many instances, only added to the difficulty by fixing such days and hours for attendance as are the least likely to be convenient to persons actively engaged during the day. We are satisfied that inconvenience has more to do with the neglect of revaccination than any positive objection to undergo the process, and that, were it made the duty of a vaccinator to visit the dwellings of vaccinated children on the eighth day, he would succeed in inducing a large number of adults and young people to submit to the operation; but then he should go at a time when these elder members of a family are likely to be at home and accessible. Local authorities seem to act upon the principle that the vaccination of the poor is a matter which only concerns the individual, just in the same way as the Medical care of an ordinary sick person; they are strangely oblivious to the fact that every case of small-pox they can prevent, by vaccination or revaccination, is one focus the less from which the disease may spread in a neighbourhood to unprotected or insufficiently protected persons. They have to deal with a great public calamity, but they have shown themselves incapable of rising to the contemplation of their duty as regards the public, whose sanitary affairs they are appointed to administer, or of moving the merest trifle out of the groove in which they have been travelling. We are convinced that it is in the power of our vaccination authorities to check the epidemic, if they had the will and the courage to incur the expense, and it has been in their power all along. A determined and well-arranged raid against it by a sufficient number of vaccinators, to whom small districts were assigned in every metropolitan parish, would within a month or six weeks prove its own justification. Regarding the proceeding in a pecuniary point of view, the salaries or fees of special vaccinators would scarcely be appreciable when compared with the demands which will be made upon the ratepayers for Hospital expenses, and the support of poor families deprived of their occupation or left dependent upon public charity by the illness or death of the bread-winner.

HEALTH OF HONG-KONG DURING 1870.

We learn from the Sanitary Report of Hong-Kong for 1870, by Dr. J. I. Murray, the Colonial Surgeon, that in the early part of the summer and up to August 3 there was a great and unusual increase of fever among the European and American residents, in some instances assuming something of the character of typhus, and proving rapidly fatal. But for the most part it was not of a dangerous type, although, by its tendency to relapse, it caused great prostration. The number of deaths among the foreign residents was slightly larger than during the preceding year, but the death-rate of 3·1 per cent., being calculated on the census of 1869, no allowance being made for the increase supposed to have occurred among this class of inhabitants, was probably not actually increased. The information as to the number of deaths among the foreign residents is merely approximative, the only means of estimating it being from the number of burials in Protestant and Roman Catholic cemeteries. The Colonial Surgeon urges the necessity of a proper system of registration of deaths being enforced by law, and very justly observes that this is a matter of the greatest importance, and really of more interest to every resident in the colony than is generally supposed; for until it is possible to obtain better statistics of the actual mortality and cause of death in all cases, a valuable aid is withdrawn from the Medical Practitioner in the treatment of disease. Opinions varied as to the cause of this fever; it was generally attributed to cuttings having been made in the hill-side, and the cut soil being spread over the roads undergoing repair. Dr. Murray, however, considered that the malady might be traced to the remarkably small fall of rain which had taken place previous to August 3. The very defective drainage also probably contributed towards the causation of the fever. The sewage is discharged along the foreshore through untrapped drains, and its exposure at low tide in a semi-fluid state to the heat of a tropical sun has been pointed out to the colonial authorities, by Dr. Murray and the Sanitary Commission, as a source of disease and death against which no amount of carbolic acid or other disinfectants can ever be of the least avail.

Dr. Adams, the Health Officer of the port, sent in a report on the subject of the connexion between this disease and the ballasting of ships with tidal mud. Of 235 vessels in ballast, twenty carried tidal mud from Shanghai, and in these no fever occurred. One hundred and twenty-four vessels from Yokohama were ballasted with ordinary soil, or with muddy shingle taken from the beach, and in eight of these fever occurred. The disease, however, was already prevalent at Yokohama, and may have been communicated to the crews while on shore, but it is remarkable that no fever was reported while the vessels had cargo on board, general or otherwise. Dr. Murray observes that as Shanghai mud is unquestionably "tidal," and the ballast obtained at Yokohama was not strictly of this character, there does not appear to be any strong evidence afforded in the cases recorded in favour of the theory that it is a frequent source of typhus.

Small-pox commenced to appear in December, 1869, and rapidly assumed the epidemic form in spite of every precaution used by the police to prevent its spreading. Fourteen cases were admitted into the Government Civil Hospital, forty-six into the Seamen's Hospital, besides seven in the gaol. With this exception, no epidemic visited the colony during the year.

The health of the troops serving in Hong-Kong was not so good as in 1869, and did not compare so favourably with that of the police as it did in the previous year; the rate of admissions among the troops having been 1577, and of deaths 20·1 per 1000, and among the police 977 and 16 respectively. Dr. Murray, however, only compares the rates of sickness and mortality among the aggregate of European and black troops, and of European, coloured, and Chinese police. On analysing his tables, we find the following results:—

	Strength.	Number admitted.	Number died.	Ratio per 1000.	
				Admitted.	Died.
European troops .	. 518	1052	6	2031	11.58
do. police .	. 120	178	4	1483	33·33
Black troops .	. 875	1146	22	1310	25·14
Coloured police .	. 301	395	5	1332	16·61
Chinese do. .	. 204	38	1	180	4·90

From the above it will be seen that the comparatively lower rate of sickness and mortality among the police is entirely due to the better health enjoyed in their own climate by the Chinese portion of the force. On consulting the last published Army

Medical Department Report, being that for 1868, we find that among the European troops the admission- and death-rates were respectively 1088 and 14·97 per 1000; so that, although the ratio of admissions during 1870 was considerably higher, that of deaths was a good deal lower, and compares most favourably with the death-rate of European troops in India. The high death-rate of the European police may have been an accidental variation occurring among a small number of men; but it is highly probable that many of them are discharged soldiers, whose advancing age, longer residence, and laxer discipline are unfavourable circumstances. According to the Army Medical Department Report above quoted, an immense improvement has latterly occurred in the health of European troops in China, the average rate of admissions and deaths during the eight years from 1859 to 1867 having been 2085 and 56·10 per 1000. The improvement appears coincident with the very considerable reduction of strength which has been going on since 1866, in consequence of which the amount of barrack accommodation has been proportionately increased.

The death-rate of the black troops, composed of Cingalese or East Indians, has been always high in China, and is a proof of the injurious effects of a foreign residence to men of these races, even in a climate so analogous to their own.

The working of the Contagious Diseases Act in Hong-Kong has been attended by exceedingly satisfactory results. In the Civil and Seamen's Hospital the percentage of contagious diseases contracted in Hong-Kong to all admissions was 8·96, against nearly double that amount in 1869. In the garrison, including European and black troops, the percentage of primary disease to total strength was 5·51, against 6·83 in 1869; and among British ships of war, only 116 cases of contagious disease were contracted in Hong-Kong. In the police a similar improvement has taken place. The type of the disease among the women is undergoing a steady improvement. Deputy Inspector-General Pottinger, of her Majesty's Naval Hospital, judging from his own experience, testifies that syphilis has *all but* disappeared from the colony; during the year and nine months that he has had charge of the Naval Hospital, he has not seen a case of regular Hunterian chancre contracted in Hong-Kong, and only a few soft sores, which healed readily. Dr. Ramsay, Surgeon of the 75th Regiment, gives the following table:—

Statistics of Venereal in H.M.'s 75th Regiment from December 21, 1868, *till December* 21, 1870.

1. Average strength during the above-named period, 428·5.
2. Different forms of venereal and the number of cases of each between the above-named dates:—

Chancre, Hard.	Chancre, Soft.	Secondary Syphilis.	Gonorrhœa.	Total.
5	12	10	39	66

Dr. Ramsay further states that during an experience of sixteen years as an army Medical officer in all climates, he has not seen a similar immunity.

Surgeon-Major Barnier, of the French frigate *Guerrière*, also gives evidence as to the small number and slight nature of the cases of syphilis contracted by Europeans in Hong-Hong.

Dr. Murray considers such evidence very valuable, and gratifying to himself, under whose care the Medical examinations have been carried on for the last twelve years. He claims, also, for the instruments which he employs—which, through his long experience, he has been able to bring to perfection—a special facility and rapidity of bringing the parts thoroughly into view without causing the slightest pain to the subject of the examination.

THE VALUE OF EXTRACT OF MEAT.

Liebig's extract of meat has now been long enough before the world to enable most men to form their own opinions as to its specific value as an article of food and as an article of medicine. Nevertheless, it may not be amiss on our part to point out what has been ascertained as to its worth, and to indicate as exactly as possible the uses to which it ought to be put.

Meat as an article of diet owes its value partly to the mineral substances it contains, partly to the organic compounds, albuminoid and oleaginous. The mineral substances probably undergo little change in the human body, and with the oleaginous we do not now concern ourselves, but the albuminoid, having been ingested, are in the stomach reduced to a uniform substance, termed albuminose or peptone, by means of the acid and pepsine of the gastric secretion. All albuminoid bodies are so reduced—albumen, fibrin, etc.—and this new substance has the special property of diffusibility, a property altogether awanting in albumen itself. But straightway the process of degradation commences, and a multitude of new compounds—kreatin, kreatinin, leucin, tyrosin, etc.—are formed, but the force evolved in the change is the force manifested by the body—in other words, life implies these changes and the ultimate conversion of albumen into urea.

Let us now apply these physiological facts to the study of meat extract, and we shall find something worthy of our attention. Let it be noted, then, that over and above the *juice* of meat there is some available material in its *substance*, for this is soluble in the stomach.

In the extract, substances which exist only in very small quantities in normal meat are increased a hundredfold, whilst the really important and nutritious substances are actually diminished. Animals have no constructive power; that resides in vegetables. Albumen having ceased to be albumen and become kreatin, can never be again converted into albumen in the animal economy; it can only proceed on its retrograde course to end as urea. This being so, it is evident that the nutritive value of meat extract, in respect of its albuminoid constituents, must be but small.

Some time ago, Kimmerich, in an article in *Pflügers Archiv*, astonished, and we might say frightened, the world by announcing that Liebig's extract was actually poisonous. He has, however—so to speak—reconsidered his opinion, and, in a recent article in the *Deutsches Klinik* has been at pains to point out the actual value of this substance. First, then, it causes a sensation of warmth in the stomach; it strengthens the heart's action and the circulation generally,—in short, it acts as a stimulant rather than an article of food. In its action it is allied to tea and coffee rather than to the meat whence it is derived. Those familiar with meat extract know that it consists in considerable part of salts, such as are actual constituents of the animal frame, and in this respect, wherever these salts are deficient, as in rickets, the use of meat extract may be supposed to be beneficial. So, also, in cases of sickness will the solution of extract properly flavoured prove of value as a stimulant, in the same way that a glass of wine will enable a man *immediately* after he has taken it to do what he was incapable of doing before. But however useful in debility, it is now a well-recognised fact that wine is not food, and so with meat extract. We have already pointed out what we considered to be the proper place of extract of meat as an ordinary article of diet—viz., to give taste and relish to a mass of nutritive but insipid material; we now seek to enforce the same view as to its medicinal application. Patients will swallow large quantities of this extract thinking they are imbibing nutriment proportional to the quantity of meat employed in manufacturing the extract. A patient may be swallowing several ounces of extract daily and yet be actually starving; he may feel better for it, but his strength will not return, except he can swallow something else as well. It is needless to point out the importance of this fact to practical men. It carries its own application with it. No patient should be allowed to pass through an illness with this alone as nutriment, except it be subsidised by the addition of other more nutritive material. A bone added to it and boiled in it for a time is a great improvement; thickened with corn flour (not starch alone) it is most valuable; by itself, it is not to be trusted. If these facts be borne in mind, we shall have done good service in again directing attention to Liebig's extract of meat.

THE WEEK.

TOPICS OF THE DAY.

Tuesday's *Gazette* contains the announcement that the Queen has been graciously pleased to give orders for the appointment of Alexander Armstrong, Esq., M.D., Director-General of the Medical Department of the Navy, to be an Ordinary Member of the Military Division of the Second Class, or Knights Commanders of the Most Honourable Order of the Bath; Inspector-General of Hospitals and Fleets Charles Abercromby Anderson, M.D., and Deputy Inspectors-General of Hospitals and Fleets Richard Denton Mason and David Lloyd Morgan to be Ordinary Members of the Military Division of the Third Class, or Companions of the said Most Honourable Order; and Deputy Inspector-General of Hospitals William Campbell Maclean, M.D., Professor of Military Medicine in the Army Medical School at Netley, to be an Ordinary Member of the Civil Division of the Third Class, or Companions of the said Order. We congratulate the Director-General of the Navy Medical Department and the new Companions of of the Most Honourable Order on their well deserved honours.

The members of a deputation from the Poor-law Medical Officers' Association, on the recent changes in the arrangements for public vaccination, who were received by Mr. Forster on Saturday last, have displayed a perseverance which is in the highest degree praiseworthy. They have at last obtained a hearing and a reply. They first applied to the Privy Council, and were thence politely referred to the Poor-law Board. At a considerable loss of time and trouble they obtained an interview with Mr. Stansfeld. That gentleman listened to what they had to say, and then told them they had better again apply to the Privy Council. This time their application was effectual, and they have obtained a confession from Mr. Forster that the new system inaugurated by the Privy Council has provided the country with too few vaccinators, and that in the Bill which he had brought before Parliament a clause would be introduced which would permit Poor-law Medical Officers to act as public vaccinators. Of course, Mr. Forster maintained that the new system of one vaccinator in a district was in general better than the old one of several, although, in a large population like that of St. Pancras, it had been found that the number of vaccinations had greatly decreased since the old vaccinators had been dismissed and a single new one had taken their place. For ourselves, we have no hesitation in saying that working women are more likely to take their children to be vaccinated if they can get it done within a short distance from their houses, than if they have to walk two or three miles for the purpose. In London and our large towns, a supply of fresh lymph can be easily kept up with care in a comparatively limited area—say one yielding 500 births per annum. That a large vaccination station does not necessarily supply pure lymph, is proved by the recent outbreak of vaccine syphilis which Mr. Hutchinson has brought to light. The vaccinifer was here selected at one of the largest vaccinating stations in the metropolis. At any rate, in the face of the present epidemic of small-pox, to diminish the number of vaccinating stations in order to carry out a theoretically more perfect system, is a policy on the absurdity of which it is unnecessary to dilate.

We regret that we cannot report further progress this week in the formation of the Conjoint Examining Board. It is believed, however, that the new difficulties which seem to have been raised will not prove insurmountable.

Dr. Richardson, in continuing his researches on the physiological action of the light hydrides, has recently succeeded in rendering one of the series applicable for the production of general anæsthesia, and has administered the vapour of it to the human subject, for short operations, twice during the present week, and with marked success. He proposes to call the substance hydramyle. We shall shortly have from him a full account of the action and administration of hydramyle for the further information of our readers.

A case of child murder has recently been tried before the High Court of Justiciary at Edinburgh, and the prisoner, the mother of the two children murdered, has been acquitted on the ground of insanity. The case is an important one on several grounds. Professor Laycock and Dr. Heron Watson gave evidence in favour of the prisoner's non-responsibility, and the same view was taken by the other Medical men engaged in the case. The prisoner was a poor woman named Eliza Sinclair. She had been charged with pilfering in a shop; she went home, wrote a somewhat incoherent letter to her husband, killed two children by cutting their throats, and ineffectually cut her own throat. Evidence was given to the effect that she had been weakened by twelve months' lactation, and by a vesico-vaginal malady. It was also known that there was an hereditary tendency to suicide in her family. She had also been the subject of nocturnal epilepsy and somnambulism. But neither of these latter facts could be proved at the trial, on account of some peculiarities in Scottish law. Sir James Moncrieff, the Lord Justice Clerk who tried the case, placed it before the jury in a manner which cannot be improved on by us. We therefore append the principal of his remarks:—

"If the jury should be of opinion that the woman went for the purpose of theft to the shop referred to, and that, being detected, she went home in an agony of despair, and resolved to take her own life, and not to leave her children behind her; if that was the state of mind in which she was—however lamentable, and however much her mind might have been overbalanced by the sense of shame and dread of detection—he had to state his own opinion that that did not amount to a case of insanity, or anything like it. If they came to be of opinion that such was the case—it certainly approached very nearly indeed to that state of the fact, apart from the matters he was now going to call their attention to—that would not be sufficient to support the plea of insanity. . . . . When the Doctors spoke about *a man's uncontrolled impulse, they did not mean an impulse which his mental constitution was not strong enough to combat with, but an impulse which, through mental disease, he had not the power of controlling;* and therefore, before a case could be brought under that category. mental disease must be proved. The question was whether she was of so unsound mind as to prevent her having the power of resisting the criminal impulse when it occurred. He thought it had been proved quite sufficiently for the purpose of the prisoner's case that there was such a form of mental unsoundness as homicidal and suicidal insanity in regard to lactation. If the prisoner was labouring under an attack of paroxysm of that kind, he knew nothing in the shape of legal proposition that could possibly prevent the jury from finding that she was of unsound mind. But the difficulty was upon the fact; for up to the time she was found on March 6, there was not the smallest trace of her having had paroxysms of this kind or any other; and there was not, so far as he could recollect, except for a few minutes, the slightest trace of mental excitement from that time to this. But there were one or two matters of great gravity they should keep in view in judging the case. In the first place, it was a murder of her own children without any impulse, as far as they could see, of the ordinary passions, and that, in a question of sane or insane mind, was of the last importance. It was also proved by Medical men that such paroxysms, although they did not generally, yet sometimes came and went with great rapidity; and, out of sight, the most important piece of evidence for the prisoner was the letter which she wrote to her husband in that agony of despair about the accusations made against her. While it indicated her determination to put an end to herself, she spoke of her children as if they were to survive. It was unquestionably indicative of great excitement, and it showed an incoherency which was consistent with an insane mind. The impulse must undoubtedly have been sudden, and the jury would judge whether it was or was not proof of unsoundness of mind."

Dr. Frederick T. Roberts has been appointed Assistant-Physician to the Brompton Consumption Hospital. The vacancy has been occasioned by the retirement of Dr. Marcet, who, we believe, intends to practise at Nice.

Mr. John Netten Radcliffe has resigned the Secretaryship of the Epidemiological Society, and he is succeeded by Dr. Corfield, Professor of Hygiene in University College.

VACANCIES AT ST. THOMAS'S HOSPITAL.

The Governors of St. Thomas's are to be congratulated upon the prospect of securing the services of such able men as the five Physicians and Surgeons recommended by the Grand Committee during the past week for election by the General Court. Certainly three of the smallest Hospitals in London have furnished this contingent, and they must suffer severely in consequence of being deprived of the services of some of the most prominent members of the Profession. Drs. Murchison, Harley, and Payne deserve well this distinction, as accomplished teachers and good Physicians. Dr. Murchison will no doubt draw students to St. Thomas's. His clinique will be sure to command a large audience. We have already expressed regret at the supposed necessity of going outside the Hospital for the Surgical staff, knowing what good material they had among their own men. We are glad to see that the Grand Committee are of the same opinion as respects the past services of Mr. Croft. This gentleman has filled with much ability the office of Resident Assistant-Surgeon during ten years of a very trying time in the history of St. Thomas's. He has now passed through the grade of Assistant-Surgeon, and no doubt well deserves the distinction which is now awaiting him. If we are to admit that it was desirable to go outside the Hospital for the Assistant-Surgeons, we think the Governors can have no hesitation in confirming the selection of Mr. Mason and Mr. Arnott, both of these gentlemen being Surgeons of great promise. There were about a dozen candidates for the two vacancies. We believe the Hospital staff unanimously and vigorously supported their own men. The vacancy occasioned by the promotion of Mr. Croft will not be announced for some time yet; probably not until the Hospital is in thorough working order. Those who have been expecting promotion for some time at St. Thomas's are no doubt disappointed that they should have been passed over for the present, but we must remind them that the infusion of new blood has been promised for many years. They will no doubt be more successful next time. On the whole, we must commend the action of the Grand Committee.

SAILORS' HOME AT BOMBAY.

It so happened that we lately took up the *Builder* of October 15, 1870, and observed a sketch and ground plan of the building intended for the Sailors' Home at Bombay. The plan presented such serious sanitary defects to our eyes, that we were glad to see that at the above date the building had not been commenced, owing to some difficulties about the site, and we hope that there may yet be time to reconsider and modify its details. The south-east wing, according to the plan, contains, on the same level, dormitories for the healthy and the Hospital for the sick, communicating by a verandah, which forms the approach to the lavatories and earth-closets, common to both, in the rear. The use of the same lavatories and earth-closets by the healthy and sick would render utterly impossible that amount of isolation of the latter which, particularly in such a climate as that of India, is essential for the prevention of the spread of contagious diseases. We observe that the Guicowar of Baroda, in commemoration of the late visit of the Duke of Edinburgh to Bombay, has alone contributed £20,000 towards the expenses of the building; hence all the more reason, for the credit of English sanitary science, that care should be taken to avoid such an obvious infringement of elementary hygienic principles.

TESTIMONIAL TO MR. PAGET.

We are informed that a testimonial to Mr. Paget on his resigning his appointment at St. Bartholomew's Hospital is projected. So universally is this gentleman esteemed, that it is unnecessary on our part to do more than draw our readers' attention to the subject. Subscriptions will be received by Dr. Black, who has kindly undertaken to act as treasurer, or by Mr. Alfred Willett and Mr. John Langton, the honorary secretaries.

QUEEN'S UNIVERSITY IN IRELAND.

A meeting of the members and Senate of this University was held on Tuesday, June 20, in Dublin Castle.

Sir Dominick Corrigan was elected Vice-Chancellor in the room of Sir Maziere Brady, deceased.

The following degrees in Medicine and Surgery were conferred by the Most Honourable the Marquis of Kildare, Chancellor of the University:—

"*Doctors in Medicine.*—Samuel Agnew, B.A., Queen's College, Belfast; Hazlett Allison, do. do.; Robert Blood, do., Galway; D. Graham Browne, B.A., do., Belfast; Wm. Richard Browne, do., do.; Wm. Burke Cuppage, do., do.; James Dawson, do., Cork; Benjamin Derham, do., do.; Thomas Derham, do., do.; Thomas J. Donnelly, do., Belfast; Bernard Doyle, do., do.; Anderson Forsythe, B.A., do., do.; Alexander MacLeod Hamilton, do., do.; Alexander Harbinson, do., do.; Richard Henry, do., do.; J. King Kerr, do., do.; John Knox, do., do.; James Lawrence, do., do.; Robert M'Bride, do., do.; James M'Carthy, do., Cork; John M'Conaghy, do., Belfast; George Henry M'Swinney, do., Galway; Joseph Mark, do., Belfast; John Morrow, do., do.; William Kirkpatrick Murphy, B.A., do., do.; Sutherland Rees-Philips, do., do.; Robert Riddell, do., do.; William Rutherford, do., Belfast and Galway; Richard Ryan, do., Cork; Ebenezer Sloane, do., Belfast; Samuel John Smith, do., do.; John Wilson Steele, do., do.; John Woodrow Watson, do., do.; Alexander M'Cook Weir, do., do.; John Wilson, do., do.; John Bower Wilson, do., Galway; Joseph Wilson, do., Cork; Alexander Young, do., Belfast.

Masters in Surgery.—Wm. O'Reilly, Robert Blood, D. Graham Browne, Wm. R. Browne, J. King Kerr, John Knox, James Laurence, Robert M'Bride, James M'Carthy, John M'Conaghy, George H. M'Swinney, Wm. Kirkpatrick Murphy, S. Rees-Philips, Robert Riddell, Wm. Rutherford, Richard Ryan, J. Wilson Steele, J. Woodrow Watson, Joseph Wilson, and Alex. Young.

The degree of Doctor in Science, *honoris causâ*, was also conferred on Professor Wyville Thompson.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND.

The Senior Medical Exhibitions, given annually by the Professors, have been awarded this year to Mr. Jacob O'Connor and to Mr. Patrick Molony.

TESTS FOR QUALIFICATIONS OF MEDICAL CANDIDATES.

There are seven vacant offices in connexion with the Children's Hospital and the Hospital for Women, in Birmingham, to be filled. There are fourteen candidates. The *Birmingham Daily Post*, in an article on Tuesday last, offers some advice to the governors to assist them in forming a proper choice of the candidates. This advice amounts in brief to the all but complete rejection of the testimonials of "partial friends and old teachers." There are some exceptions, however, to this, one being that the candidate had been the first, or one of the first, men of his time in a distinguished school, numbering, perhaps several hundreds. The first man in such an institution is very probably one of the most industrious and gifted in his Profession. The writer in the *Post* thinks the obtainment of prizes by a candidate a high recommendation of him. It may be or may not be so, as we stated last week; an opinion also entertained by Professor Huxley. We quote the following remarks from the *Post*, as these are very pertinent to the matter:—

"The next point that should attract the scrutiny of governors is the fact of a candidate having been previously a holder of office, or otherwise. If he had been fairly elected to a post of responsibility, and had performed its duties with fidelity in the opinion of competent and veracious persons, he has given a pledge that he is not unfit to enter on other public functions. The earlier a man is in harness, so much the sooner he gets accustomed to the strong pace of public life—the sooner he acquires knowledge and aptitude in using it. The last consideration we would urge is one of great weight, but less generally applicable than those already stated. Has the candidate done anything of note? Has he written papers of merit? Has he been an acceptable teacher? Has he, in short, contributed anything to existing knowledge, or to the instruction of novices? This test is, we repeat, not generally applicable, but where it can be applied it is the most valuable of all. A candidate who has been great as a student, great as a graduate or fellow of his college, great as a public officer, may have done nothing with all his gifts and opportunities; while another, starting with a bad education, and left out of notice by the dispensers of patronage, may have done enough to put all mankind under obligation. These men are not wont to have due honour done to them in such contests; but this springs from an inadequate appreciation of the value of good work, which is, after all, the real stamp of a man's worth. Much more might be said on these topics, but we have adduced enough to prove that the means of coming to sound inferences relative to the merits of claimants for Medical appointments are at hand, if governors choose to employ them. In other contests, those who have won great races are the favourites in subsequent matches; the anxious sportsman asks only about 'public form.' In such lists as those about to be opened in the Hospitals, let public form take the place only too frequently accorded to private favour."

But does not all this show how very unsatisfactory is the present system of electing Medical officers to public institutions? The subject is one surrounded with difficulties; but no plan that could be suggested would be worse than placing the election in the hands of a large body of governors, who are canvassed, worried, and, it may be, occasionally cajoled in favour of a candidate. The candidate himself is placed in a humiliating position, is put to large and unnecessary expense and trouble, and may see a much inferior man at the head of the poll.

MEDICAL MATTERS IN AUSTRALIA.

Coroners' Duties.—Respecting the ministerial duties and remuneration of coroners, says the *Australian Medical Gazette*, the Governor in Council of Victoria has recently made the following (among other) regulations:—"Where the minister is of opinion that, upon the holding of any inquest, Medical evidence has been called in, or a post-mortem examination ordered by any coroner or deputy-coroner without sufficient cause, such coroner or deputy-coroner shall not be entitled to a fee for such inquest."

An Action against a "Herbalist."—In the Melbourne County Court, on March 20 last, Mr. J. W. Evans sued Mr. William Frith, formerly quarryman, now "herbalist," who has practised at Brunswick for a number of years without having any qualification, or even the semblance of a Medical education, for injuries caused by the defendant to the plaintiff's wife. It appears, from the evidence, that in 1868 Mrs. Evans, who was then suffering from the symptoms of uterine disease, at the persuasion of a female friend, placed herself under the treatment of the defendant. He then examined her, and said she was suffering from ulcerated uterus, which he could cure. She was under his treatment at different intervals of time, up to October, 1870. At various times he stated that she was suffering from inflammation of the bladder and ulcerated uterus, which sometimes, he said, was caused by weakness. At one consultation he ordered her to take as much as two bottles of stout a day, and also brandy with egg beaten up in it; at another, he blistered her; at another, he ordered cold-water bandages; and on many occasions he employed caustic. When examining her, he on several occasions used the speculum, which caused her intense pain and agony. Mr. Evans stated that altogether he had paid some £60 or £70 to the defendant for attendance on his wife. Dr. Tracy, who was examined, said Mrs. Evans went to him in November last, and described the symptoms of uterine disease. On examining her, he found that her disease was a tumour existing in the back part of the left side of the uterus. The tumour might have existed for a year or two at least. When he was told of the number of times on which the defendant had used the speculum, he was much surprised, as he did not think any man would have dared to use that instrument unless he had undergone a thorough examination as a Medical man and was fully qualified. The defendant, in reply to the Judge, said that he had got his knowledge of diseases from nature and from his practice. The Judge gave a verdict for the plaintiff, damages £100, with costs.

Phthisis.—A fierce controversy is going on at Melbourne, between Mr. William Thomson, L.R.C.S. Edin., and Dr. Bird, as to the prevalence of pulmonary consumption in Victoria; the controversy, like all others of the class, is carried on with considerable bitterness. Mr. Thomson states that 2163 deaths from phthisis had occurred in five and a half years in a population of 170,000. This, he properly observes, is a high ratio, "showing almost beyond the need of further comment the extent to which the disease prevails in this part of Australia." The above statistics are called into question by Dr. Bird and the *Australian Medical Journal*, who find fault with them and consider the number greatly exaggerated. It appears to us, however, taking all matters into consideration, that consumption is much more prevalent in Australia than is generally supposed.

PARLIAMENTARY.—LUNATIC ASYLUMS—LIFE ASSURANCE—LUNACY REGULATION AMENDMENT BILL—THAMES EMBANKMENT—VACCINATION—SMALL-POX—CHARITIES EXEMPTION BILL.

On Thursday, June 15, in the House of Commons, in answer to Mr. Verner,

Mr. Stansfeld said he had made inquiries into the statement that had appeared in the *Globe* newspaper to the effect "that the new guardians of Kensington had been making discoveries at the Lunatic Asylums, and had found that at least one person had for a long time been confined, of whom there was good ground for believing that he was never a lunatic," and, as far as his information went, there was no ground whatever for it. The information, however, was not quite conclusive on the subject, and therefore he had directed that further inquiries should be made.

The Life Assurance Companies Act (1870) Bill was read a second time.

On Friday, in the House of Lords,

The Lord Chancellor, in moving the second reading of the Lunacy Regulation Amendment Bill, explained that its object was to afford protection to persons who were temporarily afflicted with imbecility. On more than one occasion he had experienced a difficulty in dealing with such cases, because the persons were not so bad that a commission of lunacy should be issued. Under this Bill the Lord Chancellor would have power to deal with the management of the property of such persons, and to secure its temporary character the Bill provided that no order should be made for a longer period than six months. By one clause it would be necessary for the Commissioners in Lunacy to visit each patient twice a year, and at such other times as the Court should appoint.

The Bill was read a second time.

In the House of Commons,

On the motion of Mr. Gladstone, a Select Committee was appointed to inquire whether, having regard to the various rights and interests involved, it is expedient that the land reclaimed from the Thames, and lying between Whitehall-gardens and Whitehall-place, should, in whole or in part, be appropriated for the advantage of the inhabitants of the metropolis, and, in such case, in what manner such appropriation should be effected.

On Monday, in the House of Lords,

Lord Buckhurst moved for the appointment of a select committee to inquire into the present state of the law as regards vaccination.

Earl De Grey suggested that it would not be altogether desirable to undertake at the present period of the session the inquiry by a select committee. Questions connected with that subject had been inquired into by a select committee of the other House, whose report, he believed, had been published, although the evidence it had taken had not yet been made public. Upon that report a Bill had been founded and introduced into the other House by the Vice-President of the Privy Council, and that Bill, he trusted, would, in due course, come up to their lordships. The Bill dealt, at all events, with one of the questions on which the noble lord had touched—namely, that of securing throughout the country the appointment of inspectors of vaccination, who should ascertain the manner in which the law was carried out. At present, boards of guardians had the option of appointing or not appointing such officers, and in very many cases the due appointment of them had been neglected. The Bill to which he had referred would meet that state of things by making obligatory that which was now voluntary. The object of the Privy Council was to see vaccination carried out in the most efficient manner, and it was their earnest desire that the utmost facility, consistently with insuring a supply of good matter, should be given to the public for having their children vaccinated. He would suggest to the noble lord that he should postpone his motion until the Bill on that subject came up from the other House.

Lord Buckhurst, after the explanation just given, had no hesitation in withdrawing his motion.

In the House of Commons,

The Life Assurance Companies Act (1870) Bill was read a third time, and passed.

In the House of Commons, on Tuesday,

In answer to Mr. E. Turnor,

Mr. Bruce said it appeared to be true that a person named Dexter, who kept a milkshop, was guilty of the imprudence of serving a customer while she herself was suffering from small-pox. The 35th section of the Sanitary Act of 1866 enacted that any person subject to a dangerous infectious disease who exposed himself without probable cause in any public place, street, or public conveyance should be liable to the penalties imposed by the Act. The magistrate held—and he thought rightly held—that a shop was not a public place within the purview of the Act; but he thought the Act might be very usefully amended and enlarged so as to include shops.

The Charities, etc., Exemption Bill was rejected on the second reading by a majority of forty-eight.

OPENING OF THE NEW ST. THOMAS'S HOSPITAL BY HER MAJESTY THE QUEEN.

After a week of the most unsettled, tempestuous weather, her Majesty the Queen, by her usual good fortune, secured for the authorities of St. Thomas's a bright and genial morning for the opening of the new Hospital. That her Majesty should have left her quiet retreat in the Highlands for the purpose of presiding over this ceremony, must assure her subjects that she continues to take the same lively interest in works of philanthropy and public charity as during the earlier part of her reign.

Our readers will, ere this, have been made acquainted with the details of the opening ceremony through the medium of the daily press.

We have, on various occasions during the progress of the works, minutely described the principal architectural features of the building, with more especial reference to the sanitary arrangements. The scaffolding removed, and the building completed, we can now form a better estimate of its probable usefulness. We recommend our Professional brethren to take an early opportunity of inspecting this noble range of buildings—the Royal Hospital of St. Thomas. The situation is excellent. The broad façade of the river front provides ample breathing-space for the poor patients. That a large Hospital is needed in this locality there can be no doubt. Lambeth is one of the most densely populated districts of London. Guy's is the only other Hospital on the Surrey side of the Thames. The contingent of unfortunate sufferers who flock to our eleven existing general Hospitals is proportionately on the increase, or rather appears in an increasing proportion, as the proper management of such a vast city and provision for the destitute becomes a more complex question. We know too well how comparatively scanty and insufficient is our Hospital accommodation. Londoners may be deservedly proud, however, of the large amount of gratuitous relief afforded to the sick poor through the various channels of usefulness. While speaking of our general Hospitals, we must not forget to mention the numerous special Hospitals distributed over the metropolis.

The "stamping out" principle is now the order of the day, and it is a satisfaction to us to be able to congratulate the authorities of St. Thomas's upon the completion of a Hospital specially constructed to isolate infectious diseases and to prevent them from spreading to other parts of the Hospital. Replying to the address at the opening ceremony, her Majesty refers in gracious terms to the advantages of this system of block isolation as follows:—

"It gives me pleasure to recognise in the plan of your buildings, so carefully adapted to check the growth of disease, ample and satisfactory evidence of your resolution to take advantage of the best suggestions of science for the alleviation of suffering, and the complete and speedy cure of the sick and disabled."

The most effective part of the ceremony on Wednesday last was that in which her Majesty conferred the honour of knighthood upon the Treasurer of the Hospital. After the address, Viscount Sidney, the Lord Chamberlain, at the command of the Queen, summoned Mr. Hicks to kneel before his Sovereign. Those who were fortunate enough to command a view of the central hall and raised dais witnessed with evident satisfaction this gracious token of her Majesty's interest in the welfare of St. Thomas's—a fitting recognition of the laborious services and painstaking energy of the Treasurer of the Hospital. We congratulate Sir Francis Hicks upon this well-earned and honourable distinction. Those who know what an amount of gratuitous work the Treasurer has undertaken in the interest of the Hospital will understand somewhat the difficult position in which Sir Francis has been placed. Though we have felt it incumbent upon us to criticise and dissent from the recent decision to exclude St. Thomas's men from promotion to the staff, by refusing to even recognise them as eligible candidates for the vacant appointments, we must admit the Treasurer's distinction between *constructing* a staff and *promoting* to the staff. We believe that St. Thomas's men may expect to have the support of the House Committee when other vacancies occur. We credit Sir Francis with an earnest desire for the welfare of this Royal Hospital.

We believe the Profession at large welcome the restoration of this time-honoured institution, and its transference, after a lapse of ten years, from the vicinity of her twin sister Guy's to the more noble and independent position on the Albert Embankment. Sensational journalism might have headed this article with the following startling announcement:—Brilliant and successful operation by the S. E. R.—severance of the twins, St. Thomas and Guy; or, according to the *Standard* nomenclature—operation for the severance of union, "resulting from coalescence of the lateral halves of parts which should remain distinct."

After all the quarrels between Guy's and St. Thomas's, we have no doubt that this operation, which has taken ten years to complete, will prove beneficial to both of these rival institutions. The last connecting-link will be severed by the removal of the administrative department from St. Thomas's-street to the first wing of the new Hospital. Our readers will remember that when the Siamese twins last visited this country it was with the object of being separated, and a gradual process of severance was suggested and seriously contemplated as the only possible chance of obtaining a successful result.

The old students' gift to the new St. Thomas's Hospital is a bust of Mead and one of Cheselden, by Mr. Weekes, R.A. The busts are placed on serpentine columns.

Mrs. Sarah Annie Wigley, who keeps a private seminary at Leicester, was fined 20s. by the magistrates of Leicester, last Friday, for neglecting to have her child vaccinated. She declined the entreaties of the mayor to pay the fine, and was committed to gaol for ten days.

The abstract of the Census returns for the United Kingdom shows that the population on April 2 last amounted to 31,465,480, in the following proportions:—England and Wales, 22,706,108; Ireland, 5,402,759; Scotland, 3,358,613. This is an increase on the returns of 1861 for England and Wales of 2,637,884, being 1,264,144 males, and 1,373,740 females. The population in England and Wales is divided into 11,040,403 males, and 11,663,705 females. The religious census in Ireland shows that of the population of 5,402.759 the Roman Catholics number 4,141,933, the Protestant Episcopalians 683,295, the Presbyterians 558,238, and other denominations 19,283.

DR. GUY'S LECTURES AT THE COLLEGE OF PHYSICIANS, ON WAR IN ITS SANITARY ASPECTS.

Dr. Guy delivered a course of three lectures on the above subject at the College of Physicians, on Wednesday, the 7th, Friday, the 9th, and Tuesday, the 13th inst., at 5 p.m. The period selected by the lecturer for the illustration of the subject was the twenty-two years from 1793 till 1815—the close of the great international struggle which followed the French revolution. In his introductory observations, Dr. Guy gave an able historical sketch of the many important engagements which, during that eventful period, shed such lustre on the British arms, and which, notwithstanding the enormous cost of men and money at which the various successes were attained, procured for England compensating advantages, which we to the present day enjoy. The era which followed, though marked by a sincere desire for peace on the part of this country, and distinguished by a decided progress in all the arts of civilisation, was yet chequered by so many wars, and the events of last year on the Continent have been so rapid in their occurrence and so amazing in their results, that we must acknowledge that war is as natural to mankind now as it ever has been, and that the study of all the subjects connected with it is still a matter of national importance. The study of war naturally divides itself into two heads—armaments and men. It is only with the latter that, as Physicians, we have anything to do. The experiences of peace in all hygienic matters are of considerable value, as illustrative, by contrast and comparison, of the circumstances affecting the health of soldiers and sailors engaged in active warfare. Over-crowding in shops, warehouses, factories, dwellings, and Hospitals, the use of impure water, and the insufficient supply of food, particularly of its vegetable elements, have in civil life borne such disastrous results—in epidemics, and the general deterioration in health of the persons submitted to such influences—that it is no matter for wonder that, when supplemented by the circumstances of war, their results should be immensely aggravated. The lecturer illustrated the immediate and remote effects of over-crowding by many well-known instances, from the Black Hole of Calcutta down to modern times, and for more detailed evidence on the same subject referred his hearers to the course of eight lectures which he delivered last year at King's College, and to his previously published paper on the health of printers in London.

The second lecture was devoted to a statistical comparison between the navy and army, as respects losses by battle and sickness. The subject was illustrated by tables selected from those compiled by Mr. Hodge. While, in both services, the mortality by disease immensely exceeds that caused by battle, the advantage, on the whole, is considerably on the side of the navy; the general result of a series of observations extending over many years of war being, that in the navy the losses by sickness and battle averaged 80 per 1000 annually, while in the army they amounted to 111.

In the third lecture it was shown that this smaller expenditure of life in the naval service continues to the present day, as illustrated by a comparison of the returns of the rates of sickness and mortality of the whole navy and army in the year 1868. In the former the rate of sickness per 1000 was 48, and of deaths per 10,000 was 89; while, in the army, the respective rates were 47 and 148. The history of warfare shows that our soldiers and seamen have other dangers to encounter besides direct conflict with the enemy. Lord Howe's great victory was followed by an outbreak among his crews of contagious fever, communicated by the French prisoners. Similar instances are numerous of disease being imported by soldiers returning from foreign expeditions; among others, the outbreak of fevers among the troops at Newport, Isle of Wight, in 1758, on their return from an attack on France, during which epidemic, Brocklesby, the great army Surgeon, instituted temporary Hospitals of the very cheapest form, and at that early period demonstrated the immense advantages of the hut or tent Hospital system, which, in modern warfare, is now completely established. The spread of epidemics by armies was an ever-recurring and much-dreaded feature of mediæval warfare, and still, even under our improved circumstances, furnishes cause for anxiety. In the remaining portion of the third lecture, Dr. Guy enumerated the various resources of science and art, introduced chiefly by the Medical Profession for the relief of the sufferers in war, and showed how the labours of Ambrose Paré, Woodall, Brocklesby, Howard, Jenner, Captain Cook, Sir George Baker, and a host of other worthies had contributed to the result that our army and navy entered upon the war period selected as the text of his lectures in a state of efficiency very much superior to that of the enemies they had to meet. The lecturer summed up with a reiteration of the importance of maintaining by all our efforts the sanitary condition of the whole country, and concluded with an eloquent tribute to the bravery and endurance of our soldiers and sailors under all circumstances.

At each lecture there was a large and appreciative audience, among whom were several military Medical officers.

SMALL-POX RETURNS OF THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

New Cases of Small-pox occurring in the Public Practice of the undermentioned Districts.

Districts.	No. of Cases week ending May 13.	May 20.	May 27.	June 3.	June 10.	June 17.	June 17. Sent to Hospital.
West—							
Chelsea	16	7	12	?	?	?	—
St. George, Hanover-sq.	11	9	15	17	21	10	5
St. James, Westminster	8	4	3	8	1	5	6
Paddington	24	15	?	?	?	?	—
North—							
St. Pancras	101	117	116	113	77	68	—
Islington	59	42	50	36	52	35	17
Hackney	18	28	17	25	20	?	—
Central—							
City of London	13	11	8	17	10	12	1
St. Giles-in-the-Fields	5	?	?	?	?	?	—
Holborn	13	10	5	8	6	9	9
St. Luke's	13	17	12	13	13	16	14
East—							
Whitechapel	4	23	13	5	18	9	?
Poplar	?	11	14	?	?	?	—
South—							
St. Mary, Newington	28	29	30	35	36	24	21
St. Olave, Southwark	2	2	5	5	2	1	1
St. George-the-Martyr, Southwark	28	?	?	?	?	?	—
Lambeth	?	26	24	22	23	?	—
Clapham	13	16	6	14	11	5	3
Wandsworth	4	1	5	6	2	?	—
Streatham	?	?	2	?	3	?	—
Lewisham	?	?	?	6	?	?	—
Camberwell	?	45	?	?	41	32	16
Greenwich	?	12	?	2	?	?	—
Plumstead	6	6	5	4	6	?	—

The Medical Officer reported to the Vestry of St. Martin's-in-the-Fields on Thursday evening that he found eleven persons of two families were living in one room in a court in the parish. The Vestry decided to proceed at once by law to put an end to such a fearful overcrowding.

Health and the Spectroscope.—An ingenious use of the spectrum analysis appears, by the *Quarterly Journal of Science*, to have been made. The case referred to is substantially as follows:—The water used by the inhabitants of a crowded court, amongst whom several cases of typhoid fever had appeared, was drawn from a rather shallow well, and was highly charged with various unoxidized compounds of nitrogen. It was suspected that, from some defect, the contents of a public urinal obtained entrance to the well. The fact that the well-water contained seven times as much common salt as the normal water of the vicinity, was some confirmation of the suspicion. Professor Church obtained absolute proof by the following method:—He introduced two grammes of a lithium salt into the urinal, and two hours later was enabled readily to detect with the spectroscope the presence of lithium in a litre of the well-water, which by previous examination had shown no trace of this substance.

REVIEWS.

◆

The Physics and Physiology of Spiritualism. By William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System in the Belvue Hospital Medical College, etc. New York. 1871. Pp. 86.

This little book appears at a very opportune period; for spiritualism, although it has not extended here to the enormous bounds it has reached in the United States, is gradually obtaining new disciples in England, including, we regret to say, a few men of high scientific reputation. Dr. Hammond begins by pointing out that there is an inherent tendency in the mind of man to ascribe to supernatural agencies those events which he cannot explain; that there always have been, and probably always will be, individuals whose love for the marvellous is so great, and whose logical powers are so small, as to render them susceptible of entertaining any belief, however preposterous it may be; and that there is a still more numerous class who, staggered by facts which they cannot understand, grasp at any hypothesis which may be suggested, rather than confess their ignorance.

The fact that multitudes may be simultaneously impressed with the same belief, is no guarantee that this belief is founded on reality. We all know that there are thousands of intelligent and well-educated persons who have received the miracles of the Roman Catholic Church—as, for example, the liquefaction of the blood of St. Januarius—in full faith.

Animal electricity, which does not differ in any essential particular from ordinary galvanism, has been asserted to be the basis of spiritualism; but, says Dr. Hammond, "the idea that tables are moved, knocks made, and apparitions produced by the electricity of the body, is simply absurd." Reichenbach's well-known experiments and his *odic* force are then noticed; and while there is undoubtedly a germ of fact in his investigations, there can be no question that, at all events in hysterical women, the principle of suggestion can be made to act with fully as striking effects as those produced by his magnets and crystals. "Hundreds of patients," says our author "affected with diseases of the nervous system, are susceptible to the operation of suggestion; and to the action of this principle many miracles and impostures owe the success with which they have been received. To it many of the phenomena of spiritualism are clearly due."—Page 17.

Sleight of hand is a still more important factor in the production of spiritualistic manifestations. "A short time since," says Dr. Hammond, "I invited several Medical and other friends to witness in my library some surprising spiritualistic exhibitions by a first-class 'medium.' The operator went through all the performances of the Davenport Brothers to the entire satisfaction of the audience. He was securely tied by a gentleman who had been an officer in the Naval Service, and who exhausted his strength and ingenuity in devising bands and knots. A screen was then placed in front of the medium, and in an instant an accordion was played, a bell rung, and a tambourine struck. The performer then requested that the screen might be removed, and on this being done he was found to be tied in precisely the same manner as at first. The gentleman who had bound him declared that not a cord or a knot had been interfered with. In a second attempt the medium, tied with additional care, rang a bell, and was discovered intact in a second afterwards. The 'rapping' of this gentleman was perfect, and he read communications from the dead, made on folded slips of paper, with a skill equal to that of the most orthodox and highly-gifted medium. The astonishment of the audience was great when he informed them that all his performances were deceptions, which he then proceeded to explain in the most satisfactory manner."

The actor in this case was a Dr. von Vleck. We heartily wish he would pay London a visit.

We have already remarked that nervous hysterical women are readily impressed by suggestions. Under this category must be classed persons suffering from natural somnambulism and those who can be readily hypnotised by Mr. Braid's process. In illustration of this view, Dr. Hammond relates a very singular case, which, if it were shorter, we should transfer to these pages. It is that of a young lady whom he cured (by means of bromide of potassium) of natural somnambulism, but who subsequently (owing to excessive mental exertion) had a relapse, in which, besides natural somnambulism, she had the faculty of inducing the hypnotic state at will. Her process was to take up a volume of some philosophical work which she was then studying, select a paragraph requiring intense thought, read it, close the book, fix her eyes steadily, but not directing the foci to any particular object, and then reflect deeply on the sentence she had read. From the reverie thus produced, she gradually passed into the hypnotic state, in which it was asserted that "she answered questions correctly, read books held behind her, described scenes passing in distant places, and communicated messages from the dead." Assuming that the statements were true, she possessed, in every essential respect, the qualifications of either a clairvoyant or a spiritualistic medium. But, alas! when Dr. Hammond put her to the test, like Mr. Home in the presence of the St. Petersburg Professor, she sadly broke down. Having satisfied himself that she was completely hypnotised, he asked if there were any spirits in the room, and, in reply, she stated that the spirits of Socrates, of Plato, and of Schleiermacher were present. She was then asked if Schenkelfürst (an imaginary person who was mentioned as Schleiermacher's bosom friend) was not also present. For a moment she was silent; and then her face was lit up with a smile, and she exclaimed, "I see him," and proceeded to describe his person and dress, and how he embraced his philosophic friend. Bruno then appeared on the stage, and made a few remarks, which she communicated to her audience. It should be mentioned that she had read his life a few weeks previously, and was then studying Schleiermacher's "Introduction to the Dialogues of Plato."

To change the current of her thoughts, the Doctor asked her to tell him who would be his first patient on that day week, where her father then was, etc.; and to these questions she gave answers which proved totally incorrect. The following conversation then ensued:—"Where are you now?" "In New York." "No, you are in a vessel at sea; there is a terrible storm; are you not afraid?" On the suggestive theory, she at once replied, "Yes, I am very much frightened. What shall I do? Oh, save me! save me!"

She wrung her hands, screamed with terror, and apparently suffered intensely from fear; and in the midst of this agitation returned to her natural condition. In this case the senses of touch and hearing were the only ones that were exercised, and they were not in any degree exalted; but, conjointly with integrity of touch, there was inability to feel pain. While there was no correct judgment and no volition, imagination, reverie, the emotions and the faculty of being *impressed by suggestions* were present in a high degree.

From the careful study of this and similar instances, Dr. Hammond is convinced that hypnotism differs from true somnambulism, and is a mixed result of hysteria, catalepsy, and ecstasy, each of which states, as he proceeds to show, suffices to account for many of the phenomena of spiritualism.

Again, persons occasionally come under the notice of the Physician who have the power of voluntarily producing hallucinations of various kinds—a dangerous faculty to possess, because the time comes sooner or later in which they cannot get rid of their false perceptions. Several cases of this nature are described by the author, who believes that "on this principle can be explained many of the instances of spiritualistic hallucinations which have been detailed by inquirers willing to be deceived."

Upwards of twenty pages—abounding in most sensational narratives—are devoted to that remarkable alleged phenomenon of spiritualism known as "levitation," or the faculty of rising in the air against the force of gravity. There are, perhaps, fifty cases of persons rising or being raised in the air without any external apparent agency, including saints, victims to witchcraft, and avowed jugglers (especially in India, where the art has been practised from the time of Apollonius of Tyana, who lived in the first century, to the present era). To which category Mr. Home, who lately failed most deplorably at St. Petersburg in his attempt to rise, belongs, or whether he constitutes a special order, we cannot say. We suspect that Dr. Hammond is correct in his view that all the alleged instances of levitation may be explained by referring them to one or other of the following causes:—

(1). An hallucination on the part of the subject, or of those asserting themselves to have been witnesses.

(2). Unintentional exaggeration, misinterpretation, and inaccuracy of statement.

(3). Insufficient evidence.

(4). Intentional mis-statement; or,

(5). Legerdemain.

Cases in which this mysterious force acts in the opposite direction are less common, and are probably unknown to most of our readers. Dr. Hammond has had under his personal care a lady who declares she cannot rise from her chair; and he records the appalling punishment that was inflicted in former times on the concubine of a rector, who imprudently sat down on the tomb of St. Osanna, and when she attempted to rise found that she stuck to her seat "in such a manner that she could never be parted from it till, in the presence of the people who ran to see her, she had suffered her clothes to be torn from her, and had received a severe discipline on her naked body, and that to a great effusion of blood, and with many tears and devout supplications on her part."

There is nothing in this little book that unfits it for general perusal, and our Medical brethren would do well to recommend it to any of their patients who may have a craving towards this false religion.

GENERAL CORRESPONDENCE.

DR. STALLARD AND DR. GIBBON.

Letter from Dr. Septimus Gibbon.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Stallard is wrong when he states that I was not required to give any Professional opinion whatever as to the removal of a small-pox case. However, it is immaterial, for, whether required or not, I did give both a Medical and a sanitary opinion, which the learned Doctor, although he denies it, is certainly reported in the local journal to have criticised in his place at the Board of Guardians in a style that elicited from one of his colleagues, a respectable butcher, the remark that "he (Dr. Stallard) had his knife in Dr. Gibbon;" and from another colleague, "that it would be more creditable to him if, instead of making sensational speeches, he had gone and talked his complaints over with Dr. Gibbon." Moreover, he moved that the letter containing these opinions could not be considered satisfactory.

If I am not trespassing too much on your patience in commenting on this gentleman's opinions, I should like to observe that what he says are the just complaints of the guardians—*i.e.*, of himself and one of the relieving officers—as to the sanitary arrangements of the Holborn Board of Works, are the most unfounded and unjust I have ever heard of. Patients in the Holborn district are for the most part removed to Hospital as soon as the disease is accurately diagnosed. Disinfection of rooms, etc., is thorough and effective, as proved by the fact that the disease has not spread. No fewer than *four* different kinds of apparatus are provided for disinfection. We have a contractor to remove and thoroughly clean and disinfect the feathers, etc., of beds, etc. Certainly, a costermonger's barrow, belonging to one of our labourers, is used to convey old straw mattresses and other articles, after thorough disinfection in the room, to be burnt in our stoneyard; and very handy and useful it is, because it is the only vehicle which can enter our long and narrow courts and alleys. As to reducing overcrowding in illegally-occupied cellars, we have not done so simply because an additional inspector we have been employing for the last three months has found that it did not exist.

In conclusion, I will ask Dr. Stallard if he has ever seen my inspector or his assistant disinfect a room and the articles in it. I have good reasons for believing that, like the relieving officer who helps him to get up these *just* complaints, he has never witnessed the process. If so, I leave your readers to estimate the value of his criticism.

June 21. I am, &c., Septimus Gibbon.

Letter from Dr. J. H. Stallard.

[To the Editor of the Medical Times and Gazette.]

Sir,—Although Dr. Gibbon has shifted his ground, I do not intend to bandy opinions or facts with him. I merely wish to state that I took no part in the reduction of the number of public vaccinators, nor in the election of Dr. Norton. It will be sufficient to say that the appointment of Dr. Gibbon as Vaccination Inspector did not work smoothly, and, in common with the whole Board of Guardians, I thought it better that a layman should be placed in that post. It was Dr. Gibbon's own fault if the manner of resignation was not as gracious as it might have been. I am, &c.,

7, King's-road, W.C. J. H. Stallard, M.B.

DR. SANSOM ON CHLORALUM.

Letter from Mr. Gamgee.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have read Dr. Sansom's comments on myself and chloralum in his work on "The Antiseptic Treatment," and ask you to afford me space for a brief statement and a few inquiries.

So far as my claim to the introduction of chloralum into Medicine is concerned, Dr. Sansom might have noticed that all works on Materia Medica (without exception, so far as I have been able to discover) are silent on the subject. If anything is known, I should be glad of the information, and trust Dr. Sansom may favour me with it. My attention was first drawn to the compound by reading a description of St. Clair Deville's process for making aluminium; but it was long after this that its numerous applications in the arts and in Medicine dawned on me.

Dr. Sansom may consider it very important to prove that I was not the first to introduce the hydrated chloride of aluminium into commerce. Mr. James Dewar, of Edinburgh, honoured me by reporting that he considered the idea of using it as I had proposed amounted to a real discovery. Dr. Angus Smith, who, as a man of science, loves truth above all things, wrote me last year that my suggestion as to the employment of chloralum as a disinfectant was to all intents and purposes novel. The name of the salt had been broached amongst aluminous antiseptics, and the substance had been used experimentally in dressing calico to prevent mildew; but beyond this nothing was known of it.

I consider it of little moment to prove my claims to originality as compared with the vast objects served by showing up that which, at all events, no one can dispute was hidden from the most advanced chemists and therapeutists.

Is chloralum a safer, a better, more economical and available antiseptic and disinfectant than carbolic acid? No one can have the slightest doubt on this point who has worked at the subject as I have done. Carbolic acid is so poisonous that it is unfit for general distribution as recently practised by sanitary inspectors.

Chloralum, as proved conclusively by many experiments of my own, and quite recently by Professor Haughton's, attacks and destroys offensively odorous matter and secretions which are simply masked by carbolic acid.

Chloralum is a better antiseptic agent for the dressing of wounds and inflamed mucous membranes than carbolic acid. Mr. Lund noticed irritating effects from the use of an improperly prepared specimen of chloralum which smelt strongly of chlorine. My brother, J. Sampson Gamgee, of Birmingham, has fully demonstrated that I was justified in recommending the aluminic chloride as a dressing after Surgical operations, and he has drawn special attention to this fact in his recent pamphlet on ovariotomy.

Whenever we have used chloralum mixed with specific contagious matter, such as that of the foot-and-mouth disease in cattle, the poison has been rendered harmless. It is undoubtedly disinfectant in every sense in which a Medical man uses this word, and from the readiness with which it has found its way into general use by recommendation on the part of the most distinguished sanitary authorities in this country and abroad, it is quite certain that carbolic acid, chloride of zinc, chloride of lime, and other agents used as deodorisers and disinfectants, will be, to a large extent, supplanted by it in every-day life. Time has already amply justified me in all I published last autumn, and time must prove that I am not in the least exaggerating the capabilities of this agent on the present occasion.

I am, &c., John Gamgee.

P.S.—If Dr. Sansom had command of hidden stores of knowledge on chloride of aluminium, how is it he favours us with so bald a statement as that he has published on it?

Dr. Pierce, the Mayor of Denbigh, has presented a new drinking-fountain to the town.

Phthisis and Deaths in the Melbourne Hospital.—During the eight weeks ending March 25 last, fifty-two persons died in the Melbourne Hospital; fifteen deaths, or nearly 29 per cent. were caused by phthisis. The persons who died of consumption had resided 17, 17, 18, 7, 14, 1, 5, 10, 5, 9, 21, 2, 20 and 11 years respectively in Victoria, or an average of nearly 12 years each. The length of residence in the colony of one was not known.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 13.

MR. CURLING, F.R.C.S., President, in the Chair.

MR. JAMES PAGET read a paper on "the Removal of Tumours from Bones." The design of the paper was to show the propriety of removing the majority of non-malignant tumours growing in bones by simple extirpation or enucleation rather than by resection of the bones or by amputation. It was shown that these tumous are as separate from the proper tissue of the bones as are fatty and most other innocent tumours from the connective tissue or other structures in which they grow; and that the same rules of operation are as applicable to the one as to the other set of tumours. Cases were given of successful enucleation of fibrous, myeloid, cartilaginous, and osseous tumours, and some rules were stated for the diagnosis of malignant from innocent tumours in bones, and of those which grow within from those which grow without the bones.

Mr. FAIRLIE CLARKE thought that this and Mr. Little's paper on what might be called "Osteotomy" would have a material influence on future operations. He reminded the meeting of two cases in Syme's "Observations," in which the operation chosen for the latter showed a very material advance on the former. In the one amputation had been performed, in the other excision of a portion of bone merely; but here we had a still greater advance.

Mr. BIRKETT said the paper reminded him of some of the earlier ones read before this Society. It did not afford much room for discussion, being merely a statement of facts. He would say that it had been the practice at Guy's for years to remove all innocent tumours from bone before having recourse to amputation. This was especially the case with tumours of the lower jaw. He referred to one such case, and to one by Mr. Bransby Cooper, published in the *Medical Gazette*, which after removal partly returned; but the patient was again operated on, and lived long after perfectly well. In a case under Mr. Poland, that gentleman removed such a tumour by enucleation, which completely cured it. In another instance a tumour probably fibro-plastic was enucleated, but perhaps imperfectly, for it returned, and amputation was had recourse to, after which there was no return of the growth.

Mr. T. SMITH had a case in which he operated thus, depending on Mr. Paget's judgment, as he would have preferred to amputate. The patient was a young woman, who suffered from pain and swelling of the upper part of the humerus. On examination, a pulsating tumour was seen, but there was no glandular enlargement. Mr. Paget recommended enucleation, and it was had recourse to, but not, perhaps, very effectually, as the incision was too small. After the operation she did fairly well for a year, when a protrusion from the cavity of the bone was detected and removed. Unfortunately, she died of pleuro-pneumonia.

Mr. WEEDEN COOKE considered it worth while to ask if it was necessary to cut beyond a joint to save a patient's life in malignant disease of bone. He had seen cases where it was not so, especially in the forearm.

Mr. BIRKETT said, with regard to Mr. Smith's case, that the principle laid down in the paper was to try enucleation of bony tumours. This principle they acted on at Guy's, and in accordance with it he would have tried the operation in such a case as that referred to.

Dr. O'CONNOR briefly referred to a case of malignant disease of the clavicle operated on by Aston Key and Sir Benjamin Brodie.

Mr. SAVORY considered the most important point in such cases was the diagnosis of the nature of the tumour. So in Mr. Smith's case he considered the question was whether the tumour was malignant or innocent. He thought it recurrent, and therefore advocated amputation. In cases where tubercle was deposited in bone, he thought it might often with advantage be removed by scooping. Some were opposed to this practice, because it would stimulate the formation of the tubercular material; but by wide removal of the affected tissues they might do well.

Mr. CROFT referred to the case of a man of middle age with a tumour of the radius, doubtful in its character. They cut down to make certain, and found a spiculum of bone in the midst of a mass of fibroid tissue.

Mr. PAGET desired to leave the operation to the test of experience. His design was merely to enforce that which was admitted by many, though under a kind of protest. The alternative he considered to be resection rather than amputation. But even that was accompanied with much inevitable damage to the limb, consequently enucleation was, where possible, to be preferred.

Mr. T. SPENCER WELLS communicated "A Fourth Series of One Hundred Cases of Ovariotomy," with remarks on the diagnosis of uterine from ovarian tumours. Following the order of former papers, the author has arranged this fourth series of 100 cases in tables of three series. Series 1. Cases in which ovariotomy was completed—100 cases: 78 recoveries, 22 deaths. Series 2. Cases in which ovariotomy was commenced, but not completed—6 cases: 2 relieved or cured, 4 died. Series 3. Cases where an exploratory incision was made—7 cases: 5 recovered from incision, 2 died. He shows that the mortality after ovariotomy is steadily diminishing. Of his first 100 cases, 34 died; of his second 100 cases, 28 died; of his third 100 cases, 23 died; and of his fourth 100, 22 died. In this fourth series forty-four have been in Hospital and fifty-six in private practice. In private practice the mortality was only 14 per cent., while in Hospital it was 31 per cent. The author believes that the mortality in private practice may be taken as a guide to what may become the general average mortality after ovariotomy, and he is convinced that it may be reduced to about 10 per cent., without excluding those extreme cases where the operation is performed as a forlorn hope. The author then proves that large tumours of the non-gravid uterus have been frequently mistaken for ovarian tumours; and he points out how they may be distinguished from each other. He shows that there is nothing in the *history* of a doubtful case which affords any very decisive assistance, and then examines in detail the signs afforded by inspection and measurement of the abdomen, by palpitation, and by percussion and auscultation, which are of value in diagnosis. He then describes the conditions to be observed in examination by the vagina and rectum—alone or combined—and in conjunction with examination by the abdominal wall, deferring to a future opportunity any account of the results obtained by exploratory puncture or incision.

Dr. WEST, after congratulating Mr. Wells on his signal success, pointed out that the great number of errors fallen into were from not bearing in mind all the precautions to be taken to avoid mistake. We should fall into few errors of diagnosis if we took all the precautions laid down by Mr. Wells. He took the opportunity of publicly acknowledging his mistake in opposing the operation, which nevertheless would never have been the boon to society it now is had it not been for such pains bestowed on its perfection by Mr. Wells. It was not mere dexterity which was required, but to be very sure of what had to be done and what dangers were to be avoided. Sometimes he thought the adhesion of a quondam opponent had its value.

Mr. WELLS, after signifying his gratification at what Dr. West had said, brought before the Society an example of a uterine fibroid which might have been taken for an ovarian tumour. It had, however, been diagnosed, and he had removed it. It weighed 11 lbs. 11 oz. The bleeding had been soon checked, and the patient was then doing well.

OBITUARY.

DR. GEORGE PEACOCKE, SURGEON 63RD REGIMENT.

WE regret to observe the death of this officer at the early age of 40, reported by telegram as having occurred on the 5th inst., from diphtheria, at Hazareebaugh, Bengal. Dr. Peacocke entered the service in January, 1851, and served during the Crimean war and Indian mutiny. He was promoted in January, 1858, and in 1860 joined the 27th Regiment, of which he was in Medical charge at Morar Gwalior during the memorable epidemic of cholera in 1861. He was transferred to the staff in 1862, and shortly afterwards returned to this country in bad health, in consequence of which he was for a year on half-pay. On returning to the active list, he was appointed to the 63rd Regiment, with which he went out to India during the autumn of last year. As a Medical officer, he is said to have been distinguished for the great ability, zeal, and firmness of purpose with which he discharged what he considered to be his duties on all points connected with the welfare of the troops, women, and children under his charge.

LEGAL INTELLIGENCE.

VACCINATION ACT.—ATKINS *v.* DUTTON.

Parent refusing to produce Child.—Order for Vaccination.

An important judgment upon appeal of the Court of Queen's Bench was delivered on May 9, 1871, before Justices Blackburn and Mellor.

The Vaccination Act, 1867 (30 and 31 Vict., c. 84, s. 31), provides that upon an information to a justice of the peace by the appointed officer, that any child under the age of fourteen years has not been successfully vaccinated, and that notice given to the parent or person having the custody of such child to procure its being vaccinated has been disregarded, "the justice may summon such parent or person to appear with the child before him at a certain time and place, and upon the appearance, if the justice shall find, after such examination as he shall deem necessary, that the child has not been vaccinated, nor has already had the small-pox, he may, if he see fit, make an order under his hand and seal directing such child to be vaccinated within a certain time," and a penalty is imposed for disobedience of the order. The respondent was summoned under the above section to appear with his child before a magistrate. He appeared, but refused to produce the child. The magistrate was satisfied on the evidence given before him that the child was a year and eleven months old, and had not been vaccinated, nor had had the small-pox, but he thought that he had no jurisdiction, upon the appearance of the defendant without the child, to make an order for the vaccination. The stipendary magistrate for Wolverhapton stated the case for the decision of the Court.

The case having been argued, the Court held that the production of the child before the magistrate was not a condition precedent to the making of the order. "It would be very absurd," said Mr. Justice Blackburn, "if the Legislature had said that the appearance of the child should be a condition precedent." "And," added Mr. Justice Mellor, "it may be very advisable that the child should be brought, but if the parent will not bring it, his contumacy cannot be supposed to obstruct the operation of the Act of Parliament." The case was accordingly remitted for the magistrate to make the order.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, June 15, 1871:—

Deeping, George Davidson, Newark.
Dunstan, Robert, Liskeard, Cornwall.
Fisher, Frederick Alfred, Upper Holloway.
Freston, Robert Smirke, Rotherhithe.
Fulford, William Edward, Swansea.
Heygate, William Harris, West Haddon, Northamptonshire.
Piggott, Edward Alfred, Argyll-street, Regent-street.
Van Waterschoodt, Charles, High-street, Deptford.

The following gentleman also on the same day passed his first Professional examination:—

Woodhouse, Robert Hall, Middlesex Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Allwood, John Philip, M.R C.S. Eng., L.S.A. Lond.—House-Surgeon to the Macclesfield Dispensary.

Baickwell, John, jun., M.R.C.S. Eng., L.S.A., of Slough, Bucks.—Medical Officer and Public Vaccinator for the Stoke District, Eton Union.

Campbell, A. C., M.B., L.R.C.S.E.—Surgeon to the Dundee Royal Infirmary, *vice* John R. Bigg, whose term of office has expired.

McLean, Malcolm, M.B., C.M.—Medical Officer and Public Vaccinator to the parish of Bracadale, Inverness.

Roberts, Frederick T., M.D., M.R.C.P.—Assistant-Physician to the Hospital for Consumption, Brompton.

NAVAL AND MILITARY APPOINTMENTS.

Alexander Armstrong, M.D., Director-General of the Medical Department of the Navy, to be K.C.B.

Charles Abercromby Anderson, M.D., Inspector-General of Hospitals and Fleets, and Deputy-Inspectors Richard Denton Mason and David Lloyd Morgan, to be C.B. of the Military Division; and Deputy Inspector-General of Hospitals William Campbell Maclean, M.D., Professor of Military Medicine in the Army School at Netley, to be C.B., of the Civil Division of the Order.

BIRTHS.

Manifold.—On June 9, at Edgbaston, near Birmingham, the wife of Staff Surgeon-Major M. F. Manifold, F.R.C.S., of a son.

Murray.—On June 14, at Tenbury Wells, Worcestershire, the wife of William Berkeley Murray, M.D., of a son.

Noble.—On June 17, at Kendal, the wife of S. C. Noble, M.R.C.S. Eng., L.S.A., of a daughter.

Paton.—On June 15, at Elmbank, Letham, Forfar, the wife of David Paton, M.D., of a daughter.

MARRIAGES.

Brookes—Robson.—On June 13, at St. Matthew's, Oakley-square, N.W., Robert Charles Brookes, M.R.C.S., L.S.A., eldest son of Charles Brookes, M.R.C.S., L.S.A., of Westminster-bridge-road, Lambeth, to Frances, only daughter of the late Frederick Robson, Esq., of Ampthill-square, N.W.

Bruce—Young.—On June 14, at 13, Rupert-street, Glasgow, William Bruce, M.D., of Dunfermline, to Marion Ord, eldest daughter of the late John Young, Esq., Glasgow.

Cooke—Howard.—On June 13, at Rodborough Church, Alfred Square Cooke, M.R.C.S., L.S.A., of Stroud, to Margaret, youngest daughter of John Howard, Esq., Walbridge House, Stroud.

Ketchen—Ritchie.—On January 10, at Thorndale, Peterhead, James Ketchen, of Kingillie, Nairn, Captain Bombay Infantry, to Jemima Lumsden, daughter of George Ritchie, M.D.

Miles—Wilson.—On June 17, at St. John's Church, Brixton, Henry Alexander Miles, of Sutton, Surrey, youngest son of the late John Miles, Surgeon, of Harlow, Essex, to Emily, third surviving daughter of the late Henry Wilson, Surgeon, of Runcorn, Cheshire.

DEATHS.

Baker, Thomas Franklin, M.R.C.S., younger son of Mr. Charles Baker, of Eastfield House, Doncaster, at Auckland, New Zealand, on Feb. 14.

Bloomfield, Charles, M.D., and J.P. for the Parts of Kesteven, Lincolnshire, at Coddenham, Suffolk, in his 78th year, on June 15.

Bright, Sophia, the beloved wife of James Bright, M.D., and daughter of the late John Hatchard, Esq., of Clapham-common, Surrey, at 12, Wellington-square, Cheltenham, on June 14.

Bunny, Anna, the youngest daughter of the late Joseph Blandy Bunny, Surgeon, in the London-road, Newbury, aged 64, on June 14.

Daun, Robert, M.D., Deputy Inspector-General of Hospitals, at 6, Picardy-place, Edinburgh, aged 86, on June 14.

Dickson, Wm. Newell, youngest son of James Dickson, M.D., Ballynahinch, at Newcastle, county Down, on June 12.

Duigan, Mary, wife of Dr. Duigan, Staff Surgeon Royal Navy, at 19, Tavistock-crescent, Westbourne-park, Bayswater, in her 26th year, on June 7.

Gowing, William Green, M.R.C.S., at his residence, 3, Alfred-place West, South Kensington, aged 79, on June 19.

Haffield, H. B., A.M., F.R.C.S.I., at his residence, Charlemont-street, Dublin, on June 11.

Hatfield, R. B., M.D., of 119, Cleveland-street, Fitzroy-square, at the Manor-house, Sawtry, very suddenly, in his 55th year, on June 13, deeply regretted.

Hill, William, L.R.C.S. Edin., at 1, Union-place, Portobello, Edinburghshire, aged 68, on June 10.

Lodge, Charles Edward, Esq., only son of the late Charles Lodge, M.D., at Montreal, accidentally drowned while boating, aged 25, on May 24.

Stuaton, Elizabeth, the beloved wife of William Sturton, M.R.C.S. Eng., L.S.A., late of Greenwich, at 14, St. German's-road, Lewisham, aged 66, on June 16. Friends will kindly accept this intimation.

Wilkes, Arthur William, the beloved son of Aunie and Edwin Wilkes, Assistant-Surgeon Royal Artillery, at Salisbury, of measles, aged 9 months and 21 days, on June 10.

Wyatt, Charlotte, wife of Dr. G. R. Wyatt, and daughter of the late Herbert Mayo, F.R.S., some time Professor of Physiology in King's College, and Surgeon to the Middlesex Hospital, London, at the Palazzo Calabritto, 7, Strada Sta Caterina, Naples, on June 13, of diphtheria. At the same place, also of diphtheria, Jessie and Katherine, daughters of the above.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Brighton and Hove Dispensary, Queen's-road, Brighton.—Resident House-Surgeon; must have both Medical and Surgical qualifications and be registered. Applications and testimonials to the Chairman of the Committee of Management, on or before June 26. Election on July 4.

Broadmoor Criminal Lunatic Asylum.—Assistant Medical Officer; must be legally qualified in Medicine and Surgery. Applications to the Superintendent, on or before July 5.

Guisborough Union.—Medical Officer; must be duly qualified according to the General Orders of the Poor-law Board. Applications, with diplomas and testimonials, to William Weatherill, Clerk, on or before July 10.

"Hamadryad" Hospital Ship for Seamen of all Nations.—Port of Cardiff.—Resident Assistant Medical Officer. Candidates must be unmarried, and possess a Surgical qualification. Applications, with testimonials, on or before Monday, June 26, to David Roberts, Secretary, 17, Church-street, Cardiff.

Hereford General Infirmary.—House-Surgeon; must be Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Dublin, and Licentiate of the Apothecaries' Society of London. Applications and testimonials to the Secretary's Office, Savings Bank, Hereford, on or before June 28.

Holsworthy Union, Devon.—Medical Officer. Applications, with testimonials, to be sent to George Braund, Clerk, on or before July 4.

Huddersfield Infirmary.—Physician; must be a Graduate in Medicine of one of the Universities of the United Kingdom, or a Fellow or Member of one of the Colleges of Physicians, and be duly registered. Applications and testimonials to John Marsden, Esq., Hon. Sec., on or before July 28.

Leeds Public Dispensary.—Junior Resident Medical Officer. Candidates must be unmarried, and possess at least one legal qualification. Applications, with testimonials, to be sent to Mr. John Horsfall, 31, Albion-street, Leeds, on or before July 15.

Liverpool Dispensaries.—Assistant Resident House-Surgeon; must be duly qualified, and unmarried. Applications and testimonials to the Secretary, on or before June 29. The attendance of candidates will be required on the following day at 2 o'clock p.m.

Liverpool Northern Hospital.—Junior House-Surgeon; must possess a Medical and Surgical qualification from one or more British colleges or institutions recognised under the Medical Act. Applications and testimonials to the Chairman of the Committee, on or before June 29.

Parish of Great Yarmouth.—Medical Officer for the North District; must be registered under the Medical Act, and possess the qualifications prescribed by the Order of the Poor-law Board. Applications, with testimonials, to John L. Cufaude, Clerk, on or before Monday, July 10.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Holsworthy Union.—Mr. T. R. Huston has resigned the Fourth District; area, 17,283; population, 1841; salary, £26 8s. per annum.

APPOINTMENTS.

Atcham Union.—Cuthbert H. C. Huddart, L.M. and L.S. Trin. Coll. Dub., to the Alberbury District.

Bicester Union.—Edward V. Hemingway, M.R.C.S. Eng., L.S.A., to the Heyford District.

Darlington Union.—Wm. H. Walker, M.D. St. And., L.R.C.P. Edin., M.R.C.S. Eng., to the Barton District. Also, Thomas E. Parsons, M.R.C.S. Eng., L.S.A., to the Haughton-le-Skerne District.

Newhaven Union.—Eugene J. Hart, M.R.C.S. Eng., L.S.A., to the Second Division of the Third District.

Northleach Union.—Daniel Iles, L.R.C.P. Lond., L.S.A., to the First Division of the Third District.

St. Marylebone Parish.—William S. Britton, M.R.C.S.E., L.S.A., to the St. John's District.

Wellington (Som.) Union.—George Kidgell, M.R.C.S. Eng., L.S.A., to the First District and the Workhouse.

Worksop Union.—Francis C. Crosslé, B.M. and M.C. Univ. Dub., to the Whitwell District.

Dr. Barnes has been elected sole Honorary Member by the Society of Physicians of St. Petersburg.

Mr. Edgar Sheppard, M.D. St. Andrews, M.R.C.P. London, has been appointed Professor of Psychological Medicine at King's College, London.

Mr. M'Illree, Inspector-General of Hospitals, has been appointed principal Medical officer of the Southern District, in the place of Inspector-General Gordon, transferred to Dover.

Mr. G. Rowland, M.R.C.S., has been appointed House-Surgeon to the St. Mark's Hospital for Fistula, City-road.

Mr. Thomas Claye Shaw, M.D. Univ. Lond., M.R.C.P. Lond., has been appointed Lecturer on Mental Diseases, *vice* Mr. Richard Thorne Thorne, M.B. Univ. Lond., M.R.C.S. Lond., resigned.

Mr. J. A. Bloxam is a candidate for the appointment of Assistant-Surgeon to St. Bartholomew's Hospital.

Henry Edmonds, M.D., Staff Surgeon, died on the 15th inst. He had been employed in the *Dædalus* Royal Navy Reserve drill-ship at Bristol since January 25, 1868. He became Assistant-Surgeon in 1838, Surgeon in 1848, and Staff Surgeon in 1863.

The Statistical Society propose Dr. Farr in succession to Mr. Newmarch as President.

It is proposed to make the following two appointments to Professorships of the University of Durham, for the College of Physical Science at Newcastle-upon-Tyne :—1. A Professorship of Experimental Physics, value £400 per annum, and two-thirds of the students' fees. 2. A Professorship of Pure and Applied Mathematics, value £300 per annum, and two-thirds of the students' fees. It is also proposed to make an appointment to a Professorship of Chemistry, value £300 a year, and two-thirds of the students' fees, at the College of Physical Science, at Newcastle-on-Tyne.

The annual Congress of the Social Science Association, will be held at Leeds from October 4 to October 11 next.

By news which arrived on Wednesday, we learn that yellow fever was decreasing at Buenos Ayres. Monte Video is perfectly healthy. Ships from Buenos Ayres are still placed in quarantine.

Four hundred pounds has been subscribed for the purpose of erecting a monument to the five Medical men who died during the fever epidemic in Greenock.

It is said that the Royal Commission on the Contagious Diseases Act decided on Monday, by a majority of more than two to one, to recommend the repeal of the Acts of 1866 and 1869.

It was reported to the Shoreditch Vestry last week that the temporary small-pox Hospital, recently erected, was no longer required.

The Birmingham Board of Guardians have resolved to establish the dispensary system, which is to come into operation on September 30.

The Worshipful Company of Fishmongers have contributed eighty guineas to the National Hospital for Consumption, Ventnor, this being their second contribution to this institution.

Royal College of Surgeons.—The next Primary and Pass Examinations for the diploma of Membership will commence on Saturday, July 15, and Friday, July 21, respectively. During the present week 340 candidates have undergone their preliminary or Arts Examinations, conducted by the College of Preceptors, at the Whittington Club, Arundel-street, Strand, the result of which cannot be known for some weeks.

Royal General Dispensary, Bartholomew Close.—At the last quarterly general meeting, the rules were altered so as to vest all future elections of resident Medical officers in the Committee, instead of the general body of subscribers.

The Yellow Fever.—The barque *Alvington*, from Bahia, May 4, put into Plymouth Sound on Monday morning. She had lost five seamen at sea by the yellow fever, but the last case occurred thirty-five days since. She parted company with the *Lady Agnes* barque, also from Bahia for Liverpool, at sea, with the yellow fever on board. Two of her crew were dead, and four ill.

Whiskin *v.* The Pharmaceutical Society.—An application was made on the 12th inst. to the Court of Queen's Bench, to show cause against the rule granted in this case by the Court on the 5th inst., and noticed by us at the time. The Lord Chief Justice now said that as the applicant had failed to show that there was anything arbitrary or unjust in what the Council had done, the Court could not take it upon itself to review the jurisdiction which was clearly vested in them by the Act of Parliament. Rule discharged with costs.

Small-pox Hospital, Hampstead. — "A woman," says the *Hampstead and Highgate Express*, "who had occupied a bed in one of the wards, was reported to her husband as being dead. The necessary funeral arrangements were accordingly made by the widower, who himself followed the supposed remains of his deceased wife to the grave. To his astonishment, the lady whose obsequies had thus been celebrated returned home about a fortnight after her funeral, in a state of extreme surprise at not having received any intelligence during that period from her husband and family, whom she found in deep mourning. The explanation of this misadventure was, that the woman had been removed to a convalescent ward, and another patient, who afterwards died, had been put into the bed she originally occupied. The name of the first patient having been inadvertently left up at the head of the bed caused the mistake which gave rise to so much pain and pleasure."

Small-pox is very much on the increase in the Darlington Union.

Epidemiological Society.—At the annual meeting of this Society, held on the 14th inst., the following gentlemen were elected office-bearers for Session 1871-72 :—*President :* Inspector-General Lawson. *Honorary Vice-Presidents :* The Earl of Shaftesbury, K.G.; Lord Lyttelton; the Right Honourable W. Cowper, M.P.; Edwin Chadwick, Esq., C.B. *Vice-Presidents :* Gavin Milroy, M.D., F.R.C.P.; Sir Wm. Jenner, Bart., M.D., D.C.L., F.R.S., Physician-in-Ordinary to Her Majesty the Queen; Henry W. Acland, M.D., F.R.S., Regius Professor of Medicine in the University of Oxford; Alex. Bryson, M.D., C.B., F.R.S., Director-General Navy Medical Department; William Farr, M.D., D.C.L., F.R.S.; Sir Thomas G. Logan, M.D., K.C.B., Director-General Army Medical Department; Sir J. Ranald Martin, C.B., F.R.S., Physician to the Council of India; John Simon, Esq., D.C.L., F.R.S., Medical Officer of the Privy Council; Sir Thomas Watson, Bart., M.D., F.R.S.; Benj. W. Richardson, M.D., F.R.S.; Alexander Armstrong, M.D., Director-General Navy Medical Department; Edward C. Seaton, M.D. *Treasurer :* Dr. Buchanan, 24, Nottingham-place, W. *General Secretary :* Professor Corfield, 11, New Cavendish-street, Portland-place, W. *Secretary for Navy :* Dr. Mackay, R.N., F.R.S.E., Admiralty, Somerset House, W.C. *Secretary for Army :* Deputy-Inspector

General Dr. Crawford, 6, Whitehall-yard, S.W. *Foreign and Colonial Secretaries:* France, Belgium, and Italy, Dr. Waller Lewis; Germany and Russia, Dr. Hermann Weber; Sweden, Norway, and Denmark, Dr. W. Daniel Moore; Portugal and the Brazils, Dr. Donnet, R.N.; East Indies, Dr. John Jackson, Dr. John Macpherson; West Indies and North America, Dr. Dickson, R.N.; China and the Pacific, Inspector-General Dr. Smart, R.N., C.B. *Other Members of Council:* F. J. Burge, Esq.; Dr. Haward; Deputy Inspector-General Dr. Massy, C.B.; Dr. Letheby; J. F. Marson, Esq.; Dr. J. Burdon-Sanderson, F.R.S.; J. N. Radcliffe.

PHARMACY.—The Bill intituled an Act to amend the Pharmacy Act, 1868, now before Parliament, enacts that:—"Whereas under the Pharmacy Act, 1868, persons selling or keeping open shop for retailing, dispensing, or compounding poisons are required to conform to such regulations as to the keeping, dispensing, and selling of poisons as may from time to time be prescribed by the Pharmaceutical Society, with the consent of the Privy Council: And whereas the Pharmaceutical Society have failed to submit for the consent of the Privy Council any regulations for the above purposes, and it is expedient to make further provision for the making of such regulations: The recited powers of the Pharmaceutical Society of Great Britain under the principal Acts shall cease, and the council of the said Society may from time to time submit to the Privy Council regulations as to the keeping, dispensing, and selling of poisons within the meaning of the principal Act, and as to revoking or amending any such regulations previously made, and the Privy Council may, if they think fit, by order approve of such regulations. If at any time it appear to the Privy Council that there are no regulations for the time being in force under the principal Act as to the keeping, dispensing, and selling of poisons within the meaning of the principal Act, the Privy Council may serve a notice on the Council of the Pharmaceutical Society requiring them to frame and submit for the approval of the Privy Council regulations as to the matters aforesaid, and if the Council of the Pharmaceutical Society, within the time limited by such notice, not being less than two months from the date of the service of the notice, make default in framing such regulations, or obtaining the approval of the Privy Council thereto, the Privy Council may themselves frame regulations as to the matters aforesaid. All regulations approved or framed by the Privy Council in pursuance of this section shall have the same effect as regulations prescribed in manner specified in the principal Act."

POISONOUS MUTTON.—We see by the Adelaide papers that the mayor of that city has brought an important subject under public notice. This is the alleged fact that some families had been poisoned by eating mutton which had been rendered unfit for human food by the sheep having fed on a poisonous herb. At the last meeting of the corporation, the mayor brought up a report on the matter, from which the following is an extract:—"I have the honour to report, for the information of the city council, that on the 8th inst. I received reliable information that several families were suffering from symptoms of poisoning by eating meat sold in the city by the butchers as wholesome. I immediately made inquiry, and find as the result that a number of sheep have, in travelling, been fed upon the plants known as the native cucumber, or 'colocynth,' the native melon, and also the 'lotus Australis,' which plants are now growing most luxuriantly in all parts of the colony. In the course of this inquiry I find one whole family, consisting of nine individuals, varying in age from 70 years to an infant, completely prostrated, the symptoms being violent sickness, purging, and pains in the limbs. I have also reliable evidence to show that other families have suffered in the same way, and are now suffering from the same cause." In reply to various questions, his worship subsequently added that "he was told that sheep died within half an hour of their feeding on these plants. The wild cucumber, wild melon, and lotus Australis, all poisonous plants, which he had placed on the table, came from the Botanic Garden, but the park lands abounded with them. He thought it very likely that the meat in question had been sold by the butcher without a knowledge of the state the animals were in."

POISONOUS FISHES.—An article recently appeared in *All the Year Round* on this subject, in which a long list of poisonous fishes is given. An Australian perch was mentioned in that paper as being occasionally a dangerous article of food. To this we must add the cat-fish; two boys at Randwick, N.S.W., having been recently poisoned by eating these fish, which they caught in Coogee Bay, and cooked upon the beach. They walked home in great agony, and died almost immediately.

OZONIC ETHER AS A DEODORISER AND DISINFECTANT.—In a letter to the editor of the *Australian Medical Journal*, Dr. John Day, of Geelong, strongly advocates the employment of this preparation. He states that for the last six years he has kept water-closets perfectly free from all offensive odours, by hanging a piece of sponge against the wall and occasionally pouring over it a few drops of a mixture of ozonic ether and oil of cassia, in the proportion of twenty drops of the latter to an ounce of the former. In the sick-room he found ozonic ether of great value as a deodoriser and disinfectant, particularly for the purpose of purifying the air after the night-stool has been used, when all that is necessary is to pour three or four drops of it on a piece of paper and throw it into the vessel. If used in large quantities it is liable to produce headache. In the proportion of one or two ounces of the ether to a pint of water, Dr. Day employs it with advantage as an injection in those uterine diseases which are accompanied by offensive discharges, and he finds that it not only at once deodorises the discharge but acts as a most agreeable sedative. He finds that ozonic ether added to pus gives rise to decomposition, accompanied with pretty active effervescence, and that after a time the corpuscles become shrunken or altogether destroyed. May not this fact have an important practical bearing in checking the spread of those diseases that are assumed to originate in the presence of pus-cells with air?

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

D.C. Oxon. is thanked. The man in the red tie was properly hissed, if "his presence and his costume were understood to be a flaunting of Red Republican or Communistic notions in the face of the undergraduates."

An Inquirer.—The fees for education and examinations and registration can be cut down to £110. Of course a man can live as he likes. The shortest time to obtain a diploma is four years.

P.—The late Mr. Jones, of Jersey, was, we believe, the first to give digitalis in large doses for delirium tremens. Venesection in pleurisy and pneumonia relieves the pain and dyspnœa quickly in the right cases. We believe that moderate bleeding would shorten the duration of many diseases. If ice cause aching, the case is probably neuralgic or anæmic, and not fit for antiphlogistic measures.

Clarke v. *Buchanan.*—This case, arising out of the sale of a Medical practice at Staines, came before Mr. Justice Hanneu, at Westminster, on Tuesday last, and was ordered to be referred to Dr. Baxter Langley as arbitrator, with full powers and costs at his discretion; the costs of legal proceedings up to date to follow upon his award.

Mr. Jones, Llandudno.—The result of your son's examination in Arts, etc., for the diploma of Fellowship of the Royal College of Surgeons, cannot be known for some weeks, owing to the *many hundred papers* to be examined.

Dr. M.—The distinguished Professor of Dermatology is in no degree to be censured for the trade advertisement in our facetious contemporary *Judy*. The silly threat of one of the "young gentlemen who wield the thunder" of a Medical contemporary to "show him up," will be treated with the contempt it deserves. Mr. Wilson at once gave us a perfectly satisfactory explanation of all the circumstances connected with the publication of the little *brochure* in question.

E. C., R. T. L., etc.—It would be quite out of our province to enter more deeply into the question of marriage. As for the "deceased wife's sister" question, "E. C." believes such matches to be contrary to religion, whilst "R. T. L." holds the contrary opinion. We are not going to attempt to decide. It is quite within the province of any social body to lay down regulations as to marriage, circumcision, vaccination, and the like. The durability of such regulations, and the respect in which they are held, must depend on whether the thing prohibited is not merely *malum prohibitum*, but *malum in se*, or the converse. Marriage, as usually celebrated in England, consists of three definite parts, each of which is distinguishable, though commonly combined into one rite. First, there is the promise of a man and woman, and their mutual consent to live together as man and wife. This is "natural" matrimony; and, of course, if a man or woman were together in a desert island, with no society about them, and no lawyer or parson, nothing else would be possible or requisite. But, secondly, forasmuch as society is deeply interested in the validity and permanence of marriage, so it has a right to demand that the contract between man and wife shall be entered into with certain formalities, before witnesses, and be properly registered and attested. Marriage, with the formalities required for its recognition by the State, is commonly called *civil marriage*. It exists as a separate ceremony in most Continental countries. But, thirdly, inasmuch as civilised man believes in a God above him, so his religious sentiments require that the nuptial union shall be consecrated by religious rites. In marriages in the English Church, the religious and the civil element are intertwined into one ceremony; or, rather, the strictly religious part, which confers the benediction and elevates the sexual contract into the dignity of a sacrament, immediately follows the "consent" and "troth" before witnesses, which are the "natural" and "civil" elements. Mr. Weightman shows with great clearness that the religious element, important as it is, cannot of itself make a marriage valid, without the formalities which the law enjoins.

Corrigendum.—In the recent election of Medical Officer to the Royal Asylum of St. Anne's Society, Mr. George Harrison was the successful candidate, and not Dr. Saudford, as previously announced.

Chloride of Ammonium.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Can any of your readers inform me of the use of chloride of ammonium—or *sal ammoniac*, as it used to be called—in acute disease (as bronchitis)?

I am, &c., Texax.

The Handel Festival.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am glad that you called the attention of your Medical brethren to this great celebration, as I am sure that there is no kind of recreation which more thoroughly refreshes the mind, sweeps the cobwebs out of melancholy corners, and sets every fibre in our frames vibrating with pure pleasure. I look upon such gatherings of the public as pre-eminently conducive to the public health; to a sturdy, vigorous, anti-hysterical frame of mind, alien alike from coarse debauchery and from the subtle influences of that sensualism which lurks in sensational novels and *leggy* theatricals.

I am, &c., Amphion.

COMMUNICATIONS have been received from—

Mr. John Dix; Dr. Whitelaw; Dr. Despine; Dr. Marcet; Dr. James Morris; Dr. Stothard; Mr. E. A. Laurence; Dr. Barnes; Mr. W. Hume-Rothery; An Inquirer; Dr. Albert A. Gore; Mr. A. S. G. Jayakar; Messrs. A. and M. Zimmermann; Messrs. A. and C. Black; Dr. J. P. Durand; Mr. Samuel Clarke Noble; Mr. Moody; Mr. George Harrison; Mr. Metcalfe Johnson; Mr. Nicolson; Mr. J. N. Radcliffe; Dr. Willoughby Aading; Dr. Stallard; Dr. Sedgwick; Dr. Handfield Jones; Dr. J. R. Hardie; Dr. Moxon; Mr. J. Chatto; Professor Laycock; Mr. Teevan; Mr. C. F. Maunder; Mr. H. Arnott; Dr. Baxter Langley; Dr. Paton; Mr. A. C. Campbell; Dr. Gibbon; Dr. Day.

BOOKS RECEIVED—

Sansom on the Antiseptic System—Farquharson on some Forms of Pneumonia—Stricker's Medizinische Jahrbucher—How to Live on Sixpence a Day, by Dr. Nichols—St. George's Hospital Reports, vol. v.—Dr. Hawkes on Public Lunatic Asylums—Fenton and Wood's Process of Utilising the Sewage of Towns.

PERIODICALS AND NEWSPAPERS RECEIVED—

Chemist and Druggist—Journal of the Scottish Meteorological Society, No. 30, for April—Gazette des Hôpitaux—Pharmaceutical Journal—Mechanics' Magazine—Australian Medical Gazette, March—Melbourne Argus—Melbourne Daily Telegraph—Melbourne Age—Leamington Chronicle—Gazette Hebdomadaire—Food Journal—Medical Press and Circular—Birmingham Daily Post—Southport Independent.

APPOINTMENTS FOR THE WEEK.

June 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free, 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.

26. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 2½ p.m.; Royal London Ophthalmic, 11 a.m.

27. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. William Ogle, "On Dextral Pre-eminence." And other Papers by Dr. F. B. Nunneley, Mr. Spencer Watson, and Mr. Francis Mason.

28. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2.30 p.m.; King's College Hospital (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.

Society of Arts, 4 p.m. Annual General Meeting.

29. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; West London, 2 p.m.; University College Hospital, 2 p.m.; Royal London Ophthalmic, 11 a.m.

30. *Friday*.

Operations at Westminster Ophthalmic, 1½ p.m.; Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 17, 1871.

BIRTHS.

Births of Boys, 959; Girls, 949; Total, 1908.
Average of 10 corresponding weeks, 1861-70, 1965·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	733	616	1349
Average of the ten years 1861-70 . . .	651·3	560·0	1211·3
Average corrected to increased population .	...	...	1332
Deaths of people above 90	...	...	...

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	458125	8	1	3	...	8	1	...	1	3
North ...	618210	109	2	3	6	5	1	4	3	7
Central ...	383321	14	2	1	...	2	...	1	...	2
East	571158	32	8	5	...	9	...	2	2	5
South	773175	77	8	5	3	5	1	6	...	7
Total	2803989	240	21	17	9	29	3	13	6	24

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·706 in.
Mean temperature	59·5°
Highest point of thermometer	77·2°
Lowest point of thermometer	47·0°
Mean dew-point temperature	54·8°
General direction of wind	Variable.
Whole amount of rain in the week	1·05 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 17, 1871, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population in middle of the year 1871.*	Persons to an Acre. (1871.)	Births Registered during the week ending June 17.	Deaths Registered during the week ending June 17.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3258469	41·8	1908	1349	77·2	47·0	59·5	15·28	1·05	2·67
Portsmouth ...	125464	13·2	49	32	72·2	43·2	57·5	14·16	1·47	3·73
Norwich	81787	10·9	55	35	79·0	43·5	58·4	14·66	0·24	0·61
Bristol	173364	37·0	125	60	...	...	...	...	...	...
Wolverhampton ...	74438	22·0	38	16	74·0	44·8	56·3	13·50	1·05	2·67
Birmingham ...	378574	48·3	252	141	68·1	42·4	55·9	13·28	0·99	2·51
Leicester	101367	31·7	58	41	77·0	41·2	58·7	14·83	3·29	8·36
Nottingham ...	90480	45·3	40	32	75·6	43·2	58·5	14·72	2·23	5·66
Liverpool	526225	103·0	308	259	72·9	47·3	57·8	11·33	0·78	1·98
Manchester ...	379140	84·5	321	207	74·0	48·5	60·8	16·00	0·99	2·51
Salford	123851	23·9	97	61	71·4	44·6	58·1	14·50	0·96	2·44
Bradford	148030	22·5	83	73	70·5	43·2	58·0	14·44	1·18	3·00
Leeds	266108	12·3	157	97	70·0	43·0	57·3	14·05	1·75	4·44
Sheffield	255247	11·2	172	103	69·0	43·7	56·5	13·61	3·01	7·65
Hull	135195	38·0	70	62	75·0	35·0	54·6	12·55	1·51	3·84
Sunderland ...	103037	31·2	57	77	...	...	...	...	...	...
Newcastle-on-Tyne	136293	25·5	73	72	64·0	44·0	52·5	11·39	1·27	3·23
Edinburgh	179944	40·6	148	107	66·7	42·0	53·2	11·78	1·00	2·54
Glasgow	477627	94·3	348	325	69·8	43·2	57·4	14·11	1·01	2·57
Dublin (City, etc.)	322321	33·1	163	118	73·9	42·8	58·8	14·89	0·12	0·30
Total of 20 Towns in United Kingd'm	7336961	34·4	4522	3270	79·0	35·0	57·2	14·00	1·33	3·38

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·71 in. The highest was 29·89 in. on Monday at noon, and the lowest was 29·34 in. at the end of the week.

Note.—The population of Cities and Boroughs for 1871 is estimated on the assumption that the increase since 1861 has been at the same annual rate as between the censuses 1851 and 1861; at this distant period, however, from the last of these two censuses, it is probable that the estimate may in some instances be erroneous. The estimates for Leicester, Nottingham, Leeds, Bradford, and Hull are based upon a local enumeration of the inhabited houses.

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* The actual numbers (unrevised) of the population of these cities and boroughs, as enumerated on April 3, will probably be available before the middle of the year, and will then be substituted for these estimates.

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